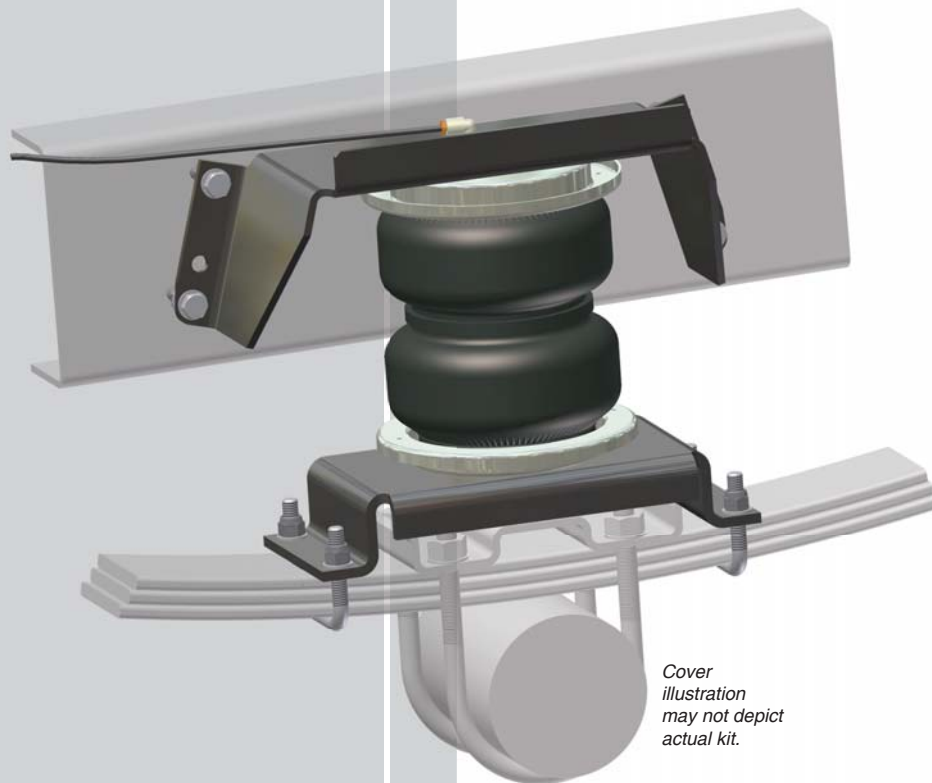


# **SuperDUTY**

by AIR LIFT®

## **Kit Nos. 57212 & 57411**



*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 SuperDuty System. 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  $\frac{3}{4}$  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, 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 online at [www.airliftcompany.com](http://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.

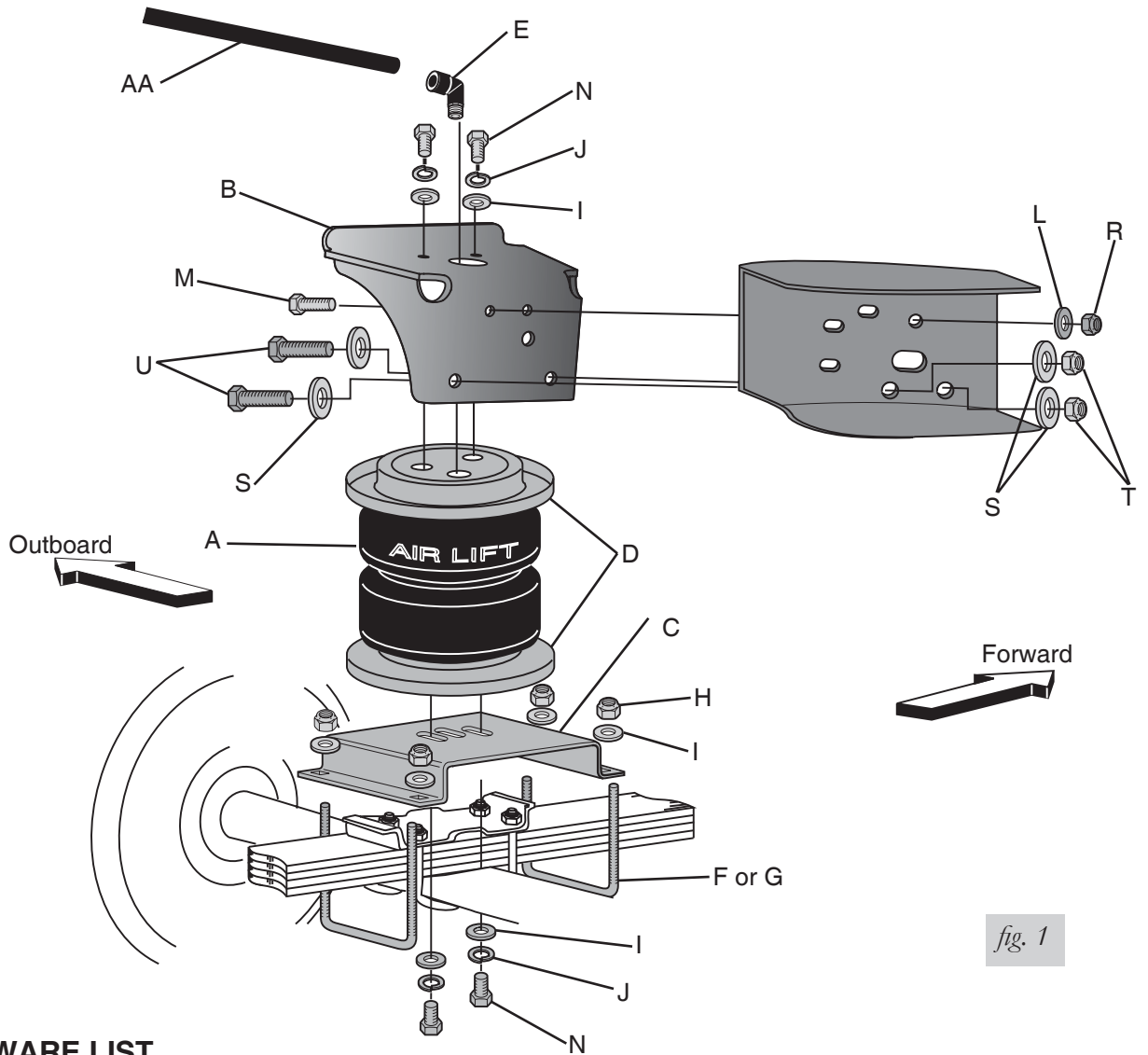
### CAUTION

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

## NOTE

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

# Installation Diagram



## HARDWARE LIST

Item	Part #	Description.....	Qty	Item	Part #	Description.....	Qty
A	58437	Bellow (57212) .....	2	P	17202	3/8" - 16 x 1.25 Hex head cap screw ..	2
	58419	Bellow (57411) .....	2	Q	18468	3/8" Flat washer .....	8
B	07178	Upper bracket .....	2	R	18435	3/8" Nyloc washer .....	4
C	03102	Lower bracket .....	2	S	18207	1/2" Large flat washer .....	8
D	11951	Roll plate.....	4	T	18460	1/2" Nyloc nut.....	4
E	21837	Elbow fitting.....	2	U	17247	1/2" - 13 x 1.75 Hex head cap screw ..	4
F	10594	2" U-bolt .....	4	V	10465	5/8" Dia. clip.....	1
G	10561	4.5" U-bolt .....	4				
H	18435	Nyloc nut.....	10	<b>Air Line Assembly Parts</b>			
I	18444	3/8" Flat washer .....	8	AA	20086	Air line assembly.....	1
J	18427	3/8" Lock washer.....	8	BB	10466	Tie strap.....	6
K	10014	Jounce bumper spacer .....	2	CC	21230	Valve caps .....	2
L	18447	3/8" Large flat washer .....	2	DD	18405	5/16" Flat washer .....	2
M	17159	3/8" x 1.5" WHFB .....	2	EE	21234	Rubber washer.....	2
N	17203	3/8" x 7/8" Hex head cap screw .....	8	FF	18411	Small star washer .....	2
O	01525	Spacer bar .....	4	GG	21233	5/16" Hex nut .....	4



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

# Installing the SuperDuty System

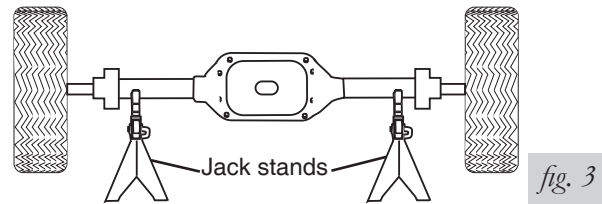
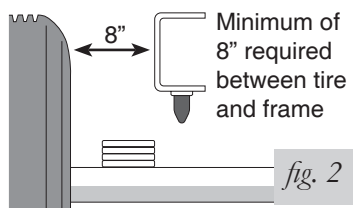
**⚠ DANGER**

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.

## GETTING STARTED

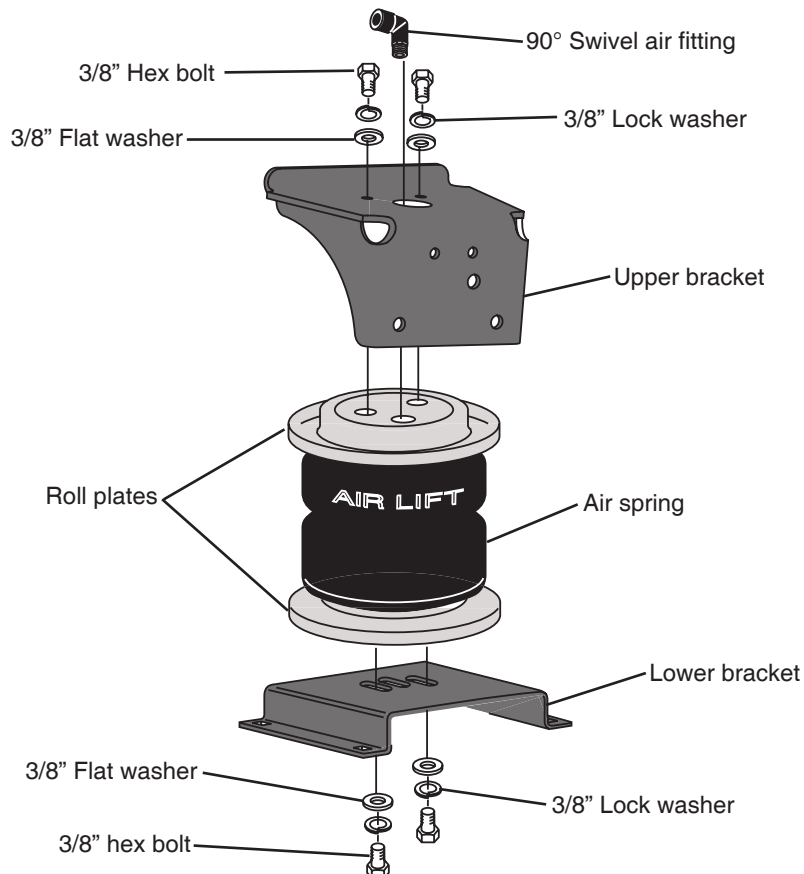
**IMPORTANT:** There must be at LEAST 8" between the tire and the frame to install this SuperDuty kit (fig. 2).

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



## ASSEMBLING THE AIR SPRING UNIT

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 so that the air spring is seated in both roll plates (fig. 4).
2. Install a 90° swivel air fitting (E) finger tight plus 1½" turns (fig. 4). Do not overtighten.
3. Place the upper bracket (B) onto the top of the bellow and roll plate with the legs facing down.



4. Set the air spring on the lower bracket (C) aligning the two holes in the base of the air spring with the two outer slots in the top of the lower bracket (fig. 4).
5. Attach the upper bracket to the assembly using flat washers (I), lock washers (J), and hex head bolts (N). Tighten securely.
6. Loosely attach the lower bracket to the assembly using flat washers (I), lock washers (J), and hex head bolts (N) (fig. 4).

**NOTE**

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

**POSITIONING THE BRACKETS**

1. There must be 6½ to 8 inches between the upper bracket and the lower bracket (distances X and Y) to install the air spring (fig. 5). It is best to use the highest envelope available between the upper and lower bracket.

**NOTE**

*Failure to mount the air spring at or higher than 6½ inches can result in the air spring bottoming out.*

2. If you are installing this kit on a 2008 or later model it will be necessary to drill the 3/8" locating hole for locating the upper bracket to the frame rail. Use the template provided at the end of this manual to properly locate the 3/8" hole, center punch and drill a 3/8" hole through the frame.

**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.**

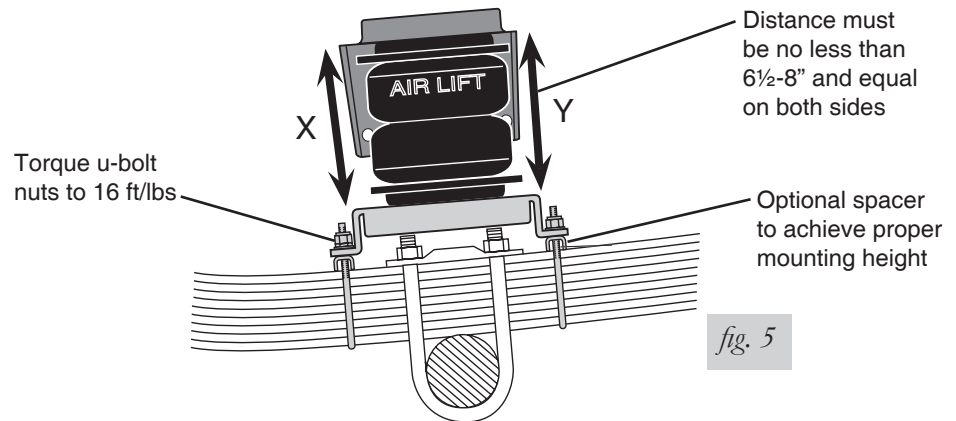


fig. 5

3. Set the air spring assembly on the leaf spring over the axle (fig. 6).

**NOTE**

*On some models it may be necessary to relocate a line bracket on the inside of the frame on the driver's side. Move the bracket back far enough to clear the upper bracket and remount.*

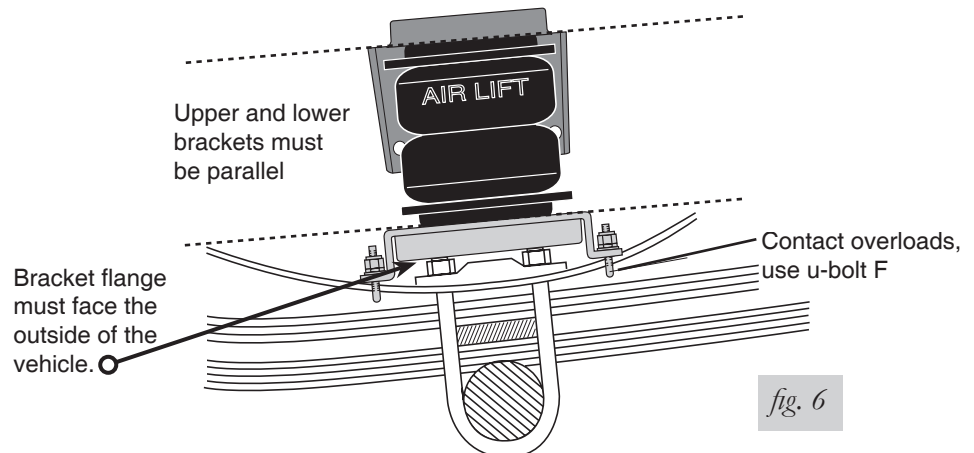
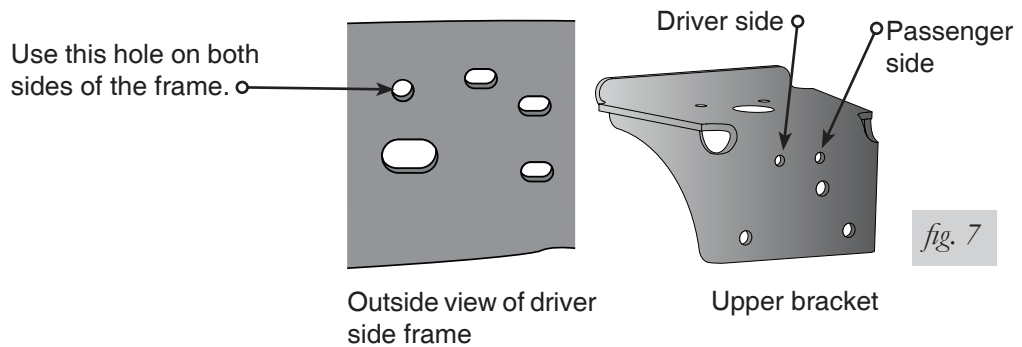


fig. 6

- Loosely attach the upper bracket to the frame using the bracket holes and existing frame holes as specified in fig. 7. Use a 3/8" bolt (M), flat washer (L), and nyloc nut (H) to attach the upper bracket. Leave loose.



- If the lower bracket hits the tops of the stock u-bolts and does not fit flush to the leaf spring, or, the mounting distance is over 8 inches, use a spacer (O) to space the lower bracket so it will clear the stock u-bolts (fig. 6).
- Measure the X and Y distance (mounting envelope) (fig. 6). If this distance is less than 6½ inches, you will have to cut the tops of the u-bolts off and remove the spacers previously installed. The lower bracket must sit flush on the leaf spring.
- Adjust the brackets so they are parallel to each other and the X and Y distances are equal. Do this by rotating the upper bracket and/or pushing the lower bracket forward and backward.
- Mark the frame using the two ½" holes in the lower bracket as a template.

### 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.

- Remove the assembly and drill two ½" holes in the frame where marked.

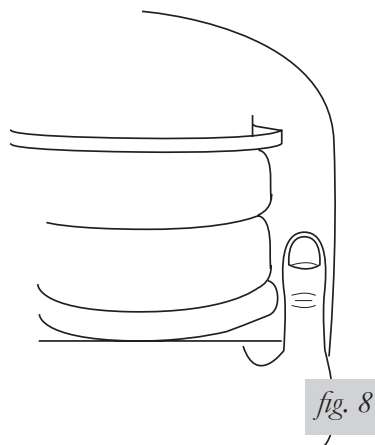
## ATTACHING THE UPPER BRACKETS

- Set the assembly back on the spring and attach the upper bracket using one 3/8" bolt (M), flat washer (L) and nyloc nut (H). Also, attach using two 1/2" bolts (U), four flat washers (S) and two nyloc nuts (T). Torque the 3/8" bolt to 44 ft/lbs. Torque the 1/2" bolts to 95 ft/lbs.

## ATTACHING THE LOWER BRACKETS

- Position the lower bracket so that it is parallel with the upper bracket, and so that the air spring is perpendicular to both. Do this by using the same method as before, but also move the air spring in and out using the slots in the lower bracket (fig. 8).

Move the air spring in the slots of the lower brackets to align and make sure there is at least a thumbs width of clearance between the uninflated bag and the frame.



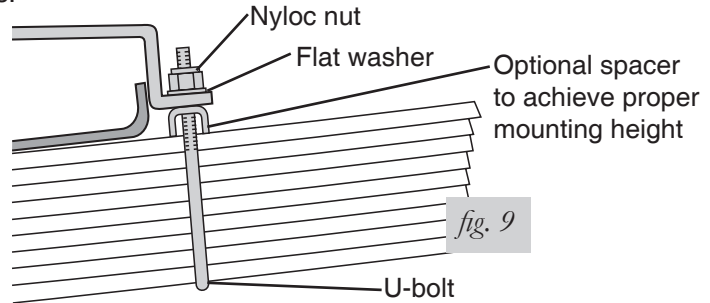


- If the spacer is not used, attach the lower bracket securely using the provided u-bolts (F or G), flat washers (I), and nyloc nuts (H) (fig. 9). Torque to 16 ft/lbs.

**NOTE**

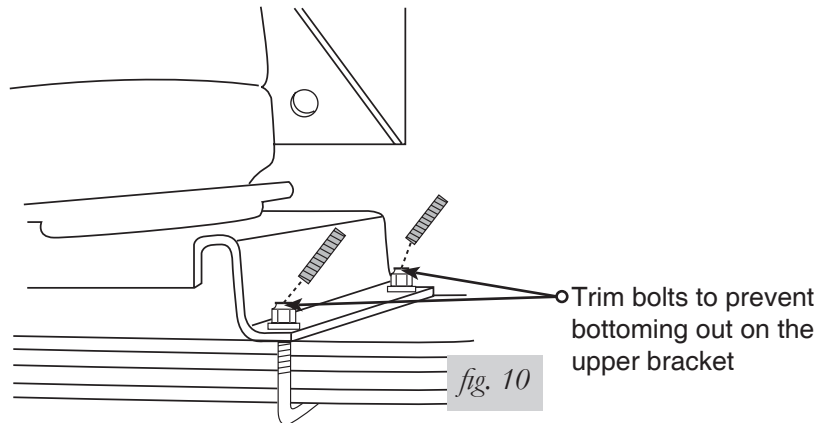
*You can use the shorter u-bolts (F) when attaching to frame contact overloads.*

- If the spacer is used, place the spacer (O) on the leaf spring and attach the lower bracket securely using the provided u-bolts (F or G), flat washers (I), and nyloc nuts (H) (fig. 9). Torque to 16 ft/lbs.



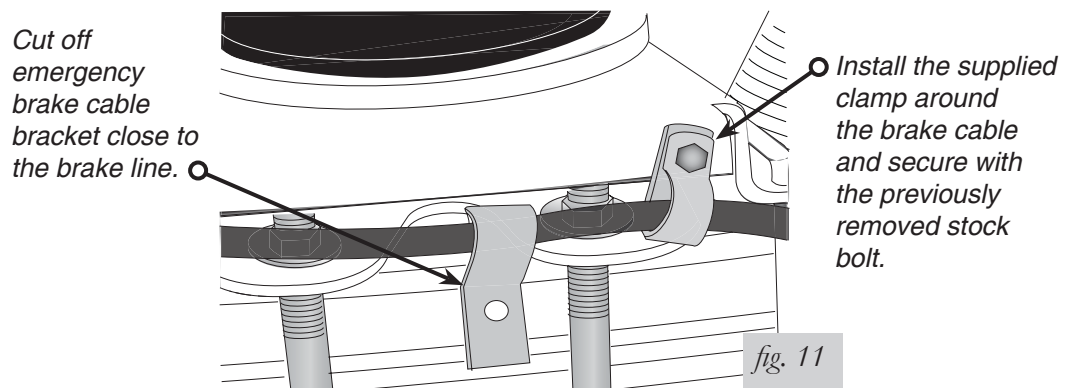
**SECURING THE AIR SPRING TO BRACKETS**

- Secure the air spring to the lower bracket using a 9/16" open ended wrench.
- Depending on the thickness of the leaf spring stack, it will be necessary to trim the U-bolts (fig. 10).
- Check to ensure that all hardware is secure and repeat the process for the remaining side of the vehicle.



**SECURING THE EMERGENCY BRAKE CABLE**

- Attach the supplied clamp (V) around the emergency brake cable and secure it to the lower bracket using the previously removed stock bolt. Tighten securely. (fig. 11).
- Cut off the existing emergency brake cable bracket close to the brake line.



## INSTALLING THE AIR LINES

**NOTE**

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 valve are:

The wheel well flanges; The license plate recess in bumper; Under the gas cap access door; Through license plate (fig. 12).

**NOTE**

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

2. Drill a 5/16 " hole to install the inflation valves.
3. Cut the air line assembly (AA) 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. 13).

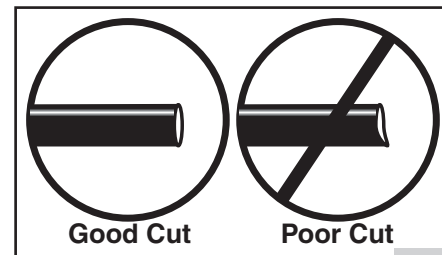
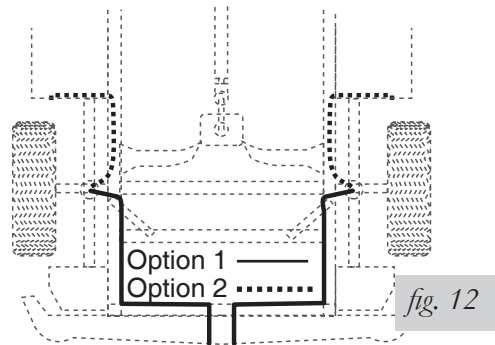
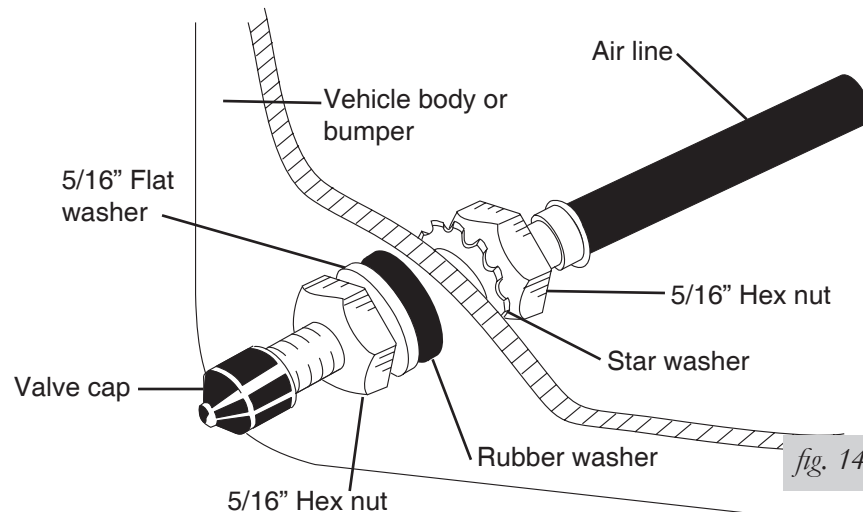


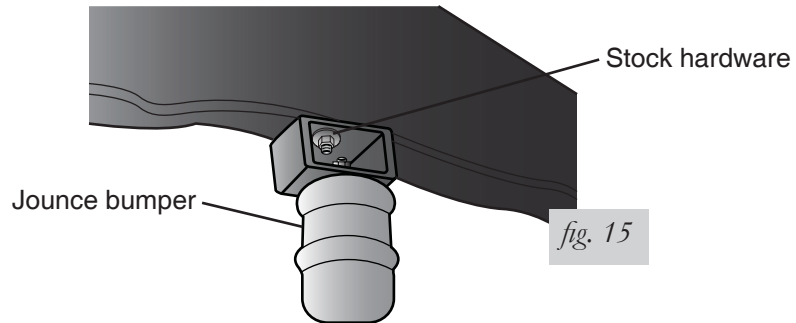
fig. 13

4. Install the inflation valves as shown in fig. 14.
5. 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.
6. 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 (9/16" of air line should be in the fitting).



## ATTACHING THE JOUNCE BUMPER

1. One end of the jounce bumper spacer (K) has two holes in it. Attach the previously removed jounce bumper to this end using the previously removed hardware. Tighten securely.
2. Attach the assembly to the vehicle using the supplied 3/8" bolt (P), two 3/8" flat washers (Q), and a 3/8" nyloc nut (R) (fig. 15).
3. Repeat steps 1-2 for the other side of the vehicle.



## 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 to 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. 11). 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.

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

# Maintenance and Servicing

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.	

## 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 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.

### 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.

# 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 Lift Company for verification.

Air Lift will repair or replace, at its option, defective products or components. A \$10.00 minimum shipping and handling charge will apply to all warranty claims. Before returning any defective product, you must call Air Lift, at (800) 248-0892 U.S. and Canada, 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 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.)*

<b>Air Lift 1000*</b> .....	<b>2 Year Limited</b>	<b>RideControl Plus*</b> .....	<b>2 Year Limited</b>
<b>SureSet*</b> .....	<b>2 Year Limited</b>	<b>Load Controller (I)*</b> .....	<b>2 Year Limited</b>
<b>SuperDuty*</b> .....	<b>2 Year Limited</b>	<b>SmartAir*</b> .....	<b>2 Year Limited</b>
<b>Other Accessories</b> .....	<b>2 Year Limited</b>	<b>Load Controller (II)*</b> .....	<b>2 Year Limited</b>
<b>RideControl*</b> .....	<b>2 Year Limited</b>	<b>EasyStreet Systems</b> .....	<b>1 Year Limited</b>
<b>SlamAir</b> .....	<b>2 Year Limited</b>	<b>RoadTamer Systems</b> .....	<b>2 Year Limited</b>

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

## Replacement Information

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](mailto:sales@airliftcompany.com) or on the web at [www.airliftcompany.com](http://www.airliftcompany.com).

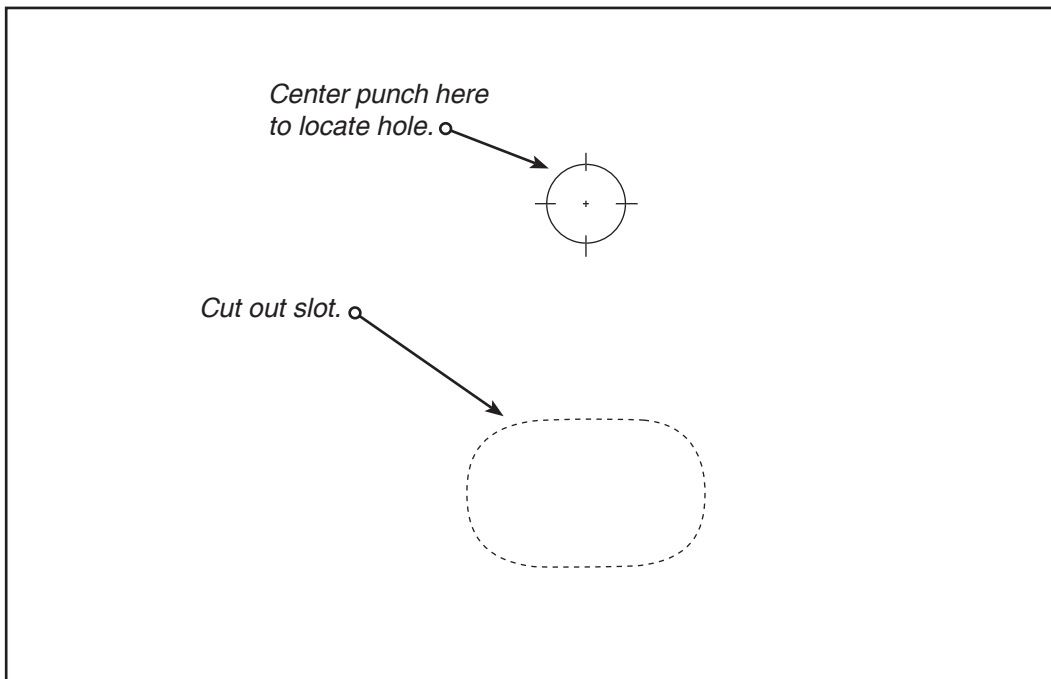


# Template

## UPPER BRACKET POSITIONING FOR 2008 AND LATER FORD VEHICLES

1. Cut out slot.
2. Align slot from template with the slot on the frame that is located above the axle.
3. Center punch and drill a 3/8" hole that will be used to locate the upper bracket to the frame.
4. Repeat for opposite side.

*Upper bracket  
locating template*



## 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](http://www.airliftcompany.com/warrantyreg.htm)**



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

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