

# ***Air Lift*1000**

by AIR LIFT®

# **No. 81560**



## **INSTALLATION GUIDE**

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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.*

# Introduction

The purpose of this publication is to assist with the installation, maintenance and troubleshooting of the Air Lift 1000 air spring kit.

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, tools list, step-by-step installation information, installation checklist, maintenance tips, safety information and a troubleshooting guide.

## IMPORTANT SAFETY NOTICE

The installation of this kit does not alter the Gross Vehicle Weight Rating (GVWR) or payload of the vehicle. Check your vehicle's owner's manual and do not exceed the maximum load listed for your vehicle.

**Gross Vehicle Weight Rating:** The maximum allowable weight of the fully loaded vehicle (including passengers and cargo). This number — along with other weight limits, as well as tire, rim size and inflation pressure data — is shown on the vehicle's Safety Compliance Certification Label.

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

## NOTATION EXPLANATION

Hazard notations appear in various locations in this publication. Information which is highlighted by one of these notations must be observed to help minimize risk of personal injury or possible improper installation which may render the vehicle unsafe. Notes are used to help emphasize areas of procedural importance and provide helpful suggestions. The following definitions explain the use of these notations as they appear throughout this guide.

 **DANGER**

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

 **WARNING**

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

 **CAUTION**

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

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**NOTE**

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

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**HARDWARE LIST**

Item	Part #	Description.....Qty
A	#	Air spring..... 2
B	#	Upper & lower protectors ..... 4
C	10551	Air line clip..... 2
D	10466	Tie strap ..... 4
E	#	Valve cap ..... 2
F	21233	5/16" Hex nut ..... 4
G	21234	Rubber washer..... 2
H	18411	Star washer..... 2
I	18405	5/16" Flat washer ..... 2
J	18422	3/8" Lock nut ..... 2

**TOOLS LIST**

Description.....	Qty
Hoist or floor jacks.....	2
Safety stands.....	1
Safety glasses.....	1
Air compressor or compressed air source.....	1
Spray bottle with dish soap/water solution.....	1

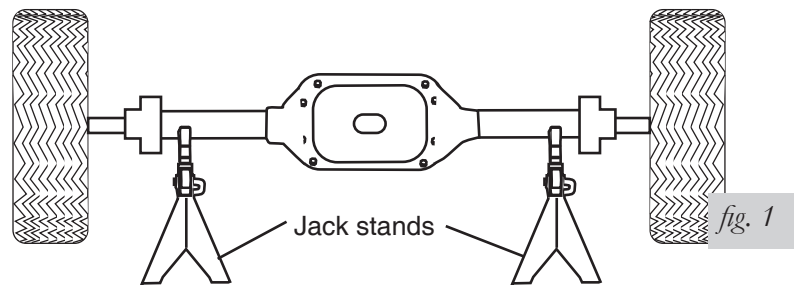
# Installing the Air Lift 1000 System



**COMPRESSED AIR CAN CAUSE INJURY AND DAMAGE TO THE VEHICLE AND COMPONENTS 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. Set the brake, block the wheels and jack up front of vehicle. Place safety stands under the frame and allow the suspension to be fully extended.



**If replacing black O.E.M. air springs:**

2. Deflate air springs by removing the valve cores using a tooled valve cap or a knife to puncture the air spring.
3. Use 1" - 1½" hole saw cutter (drill bit removed), to cut the valve out of the air spring.
4. Use vise grips and clamp onto the bottom of the air spring and pull the air spring through the hole, twisting as you pull. Spraying the air spring with a soapy water solution may ease removal.
5. Remove the upper protector through the side of the coil.

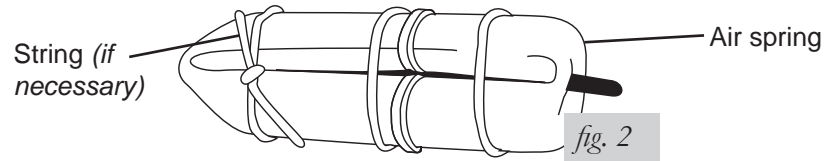
## INSTALLING THE AIR SPRING

1. Remove black valve cap and roll the air spring (A) up toward the stem end to exhaust as much air as possible.
2. Install black valve cap to maintain this compressed shape.

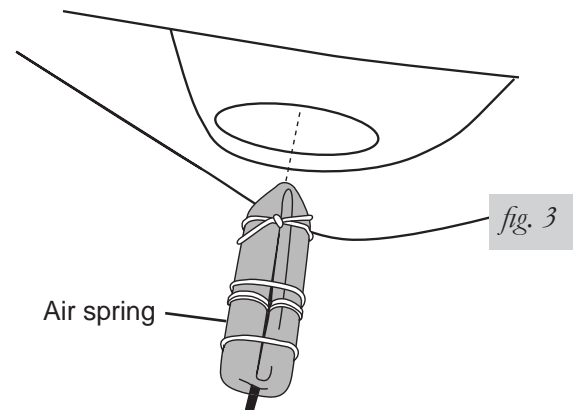
### NOTE

*You may notice some discoloration of the cylinder in the "rolled up" condition. This is normal and does not harm or indicate damage to the cylinder in any way. The "discoloration" actually reflects the natural color of the polyurethane material before we add the red pigment*

3. Unroll the air spring and fold it lengthwise (fig. 2). Use string to hold it in this position, if necessary.

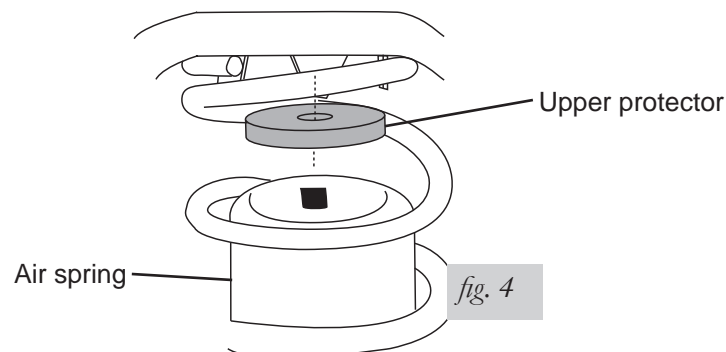


4. Check the hole in the lower control arm and deburr edge, if necessary, to prevent damage to the air spring. Insert the air spring through the hole in the lower control arm (valve stem facing down). Spraying the air spring with a soapy water solution may ease installation.
5. Push the air spring up with a twisting action into the coil, leaving about 2" extended out of the bottom of the coil (fig. 3).



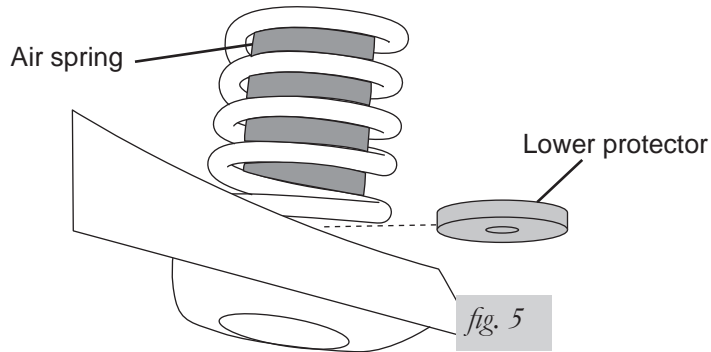
## INSTALLING THE UPPER PROTECTOR

1. Before pushing the air spring completely into the coil, insert and position the upper protector (B) on the stud on the top of the air spring (fig. 4). A light coating of grease on the top side will help hold it in place.



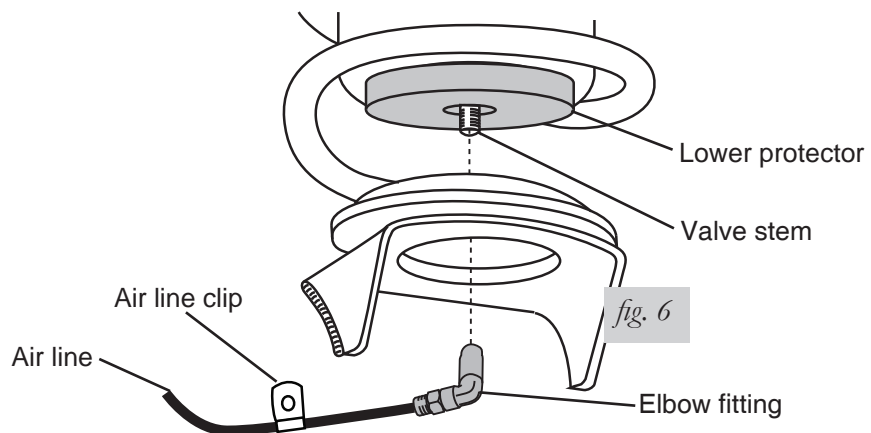
## INSTALLING THE LOWER PROTECTOR

1. Push the air spring into coil spring. If previously used, remove the string from the air spring.
2. Once the air spring is in place, insert and position the lower protector (B) by pushing the air spring up and sliding the protector under the air spring (fig. 5).



## INSTALLING THE AIR LINE

1. Lower the air spring, guiding the valve stem through the hole in the lower protector (fig. 6).
2. Attach the elbow fitting on the air line (AA) to the valve stem. Orient the elbow and air line to line up with the existing sway bar attaching bolts. Finger tighten the elbow nut.
3. Place the supplied clip (BB) around the air line (fig. 6).



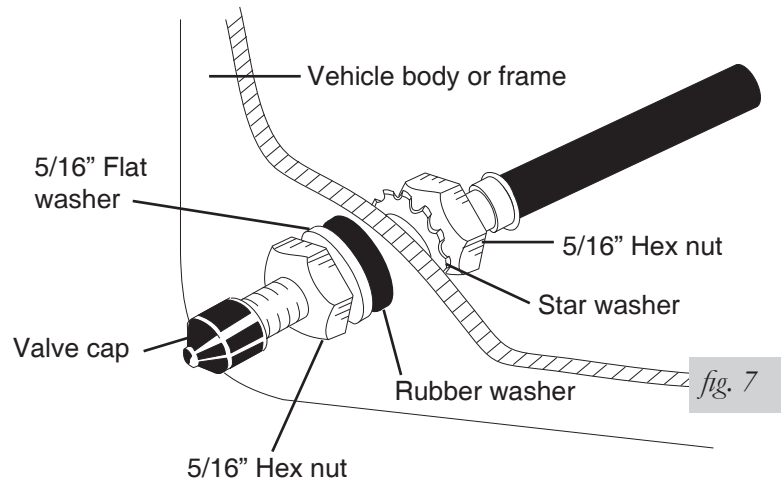
4. Attach the clip to the existing sway bar attaching bolt with the provided 3/8" lock nut (II).
5. Tighten the 3/8" lock nut (II) using a 9/16" ratchet.
6. Route the air line up the lower control arm toward the center of the vehicle.

### CAUTION

BE SURE THAT THE AIR LINE GOES OVER THE TOP OF THE CONTROL ARM AND ALONG THE SUPPORT FRAME.

7. Route the air line through the frame to a selected valve stem mounting location. Secure the air line with plastic tie straps (CC), away from brake lines and battery.
8. Choose a convenient location for mounting the inflation valves. Make sure there is enough clearance around the inflation valve for an air chuck. Popular locations for the inflation valve are the front bumper, license plate recess or under the hood on a radiator bracket.
9. Drill a 5/16" hole for the inflation valve.

10. Mount inflation valve as illustrated (the rubber washer is for outside weather seal). Tighten the outside hex nut (EE) with an  $\frac{1}{2}$ " wrench (fig. 7).
11. Repeat installation on the other side of the vehicle.



## INFLATION DECAL

1. Install the minimum/maximum air pressure decal in a highly visible location. We suggest placing it on the driver side window, just above the door handle.

## CHECKING FOR LEAKS

1. Inflate the air spring to 60 p.s.i.
2. Spray all connections and the inflation valves with a solution of  $\frac{1}{5}$  dish soap and  $\frac{4}{5}$  water. Spot leaks easily by looking for bubbles in the soapy water.
3. Adjust the air pressure for optimal comfort and performance - see page # for minimum and maximum pressures.
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 p.s.i.

# Before Operating

## POST INSTALLATION CHECKLIST (To be completed by owner)

- Overnight leakdown test — Recheck the air pressure after 24 hours. If the pressure has dropped more than 5 p.s.i., there is a leak that must be fixed. Either fix the leak yourself (see page 6) or return to the installer for service.
- Air pressure requirements — Be sure to adhere to the minimum and maximum recommended air pressure requirements below. Exceeding the maximum recommended air pressure will result in the air spring "bulging out" between the coils spring which may cause the air spring to be pinched or may rub a hole into the air spring.

**Technician's Signature** \_\_\_\_\_

**Date** \_\_\_\_\_

# Troubleshooting Guide

Problems maintaining air pressure, without on-board compressor.

1. Leak test all air line connections. Repair or replace as needed.
2. Inspect the air line for holes and cracks. Replace as needed.
3. Inspect the air line to be sure it is not pinched. Tie straps may be too tight. Replace strap as needed.
4. Check for a kink or fold in the air line. Reroute as needed.
5. Leak test the inflation valve for leaks at the air line connection and look for dirt or debris in the valve core. See page 6 for repair.

# Maintenance and Servicing

Minimum Air Pressure	Maximum Air Pressure
<b>Motorhomes and Commercial Chassis</b>	
40 p.s.i.	90 p.s.i.
<b>Trucks and Passenger Vans</b>	
10 p.s.i.	50 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**

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

1. Check the air pressure weekly.
2. Always maintain at least the recommended minimum air pressure to prevent the air spring from being pinched. Never inflate beyond the maximum air pressure.
4. If you develop an air leak in the system, use a soapy water solution of 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.
5. Always add air to springs in small quantities, checking the pressure frequently. Sleeves require less air volume than a tire and inflate quickly.