

MN-302 • (041901) • ECR 9214

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The purpose of this publication is to assist with the installation and maintenance of the LoadLifter 5000 series air spring kits. All LoadLifter 5000 series kits utilize sturdy, reinforced, commercial-grade single or double, depending on the kit, convolute bellows.

The air springs are manufactured like a tire with layers of rubber and cords that control growth. LoadLifter 5000 kits provide up to 5,000 pounds (2,268kg) of load-leveling support with air adjustability from 5-100 PSI (.34-7BAR).

It is important to read and understand the entire installation guide before beginning installation or performing any maintenance, service or repair.

#### NOTATION EXPLANATION

PERSONAL INJURY OR DEATH.

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.

A WARNING

**CAUTION** 

DANGER

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

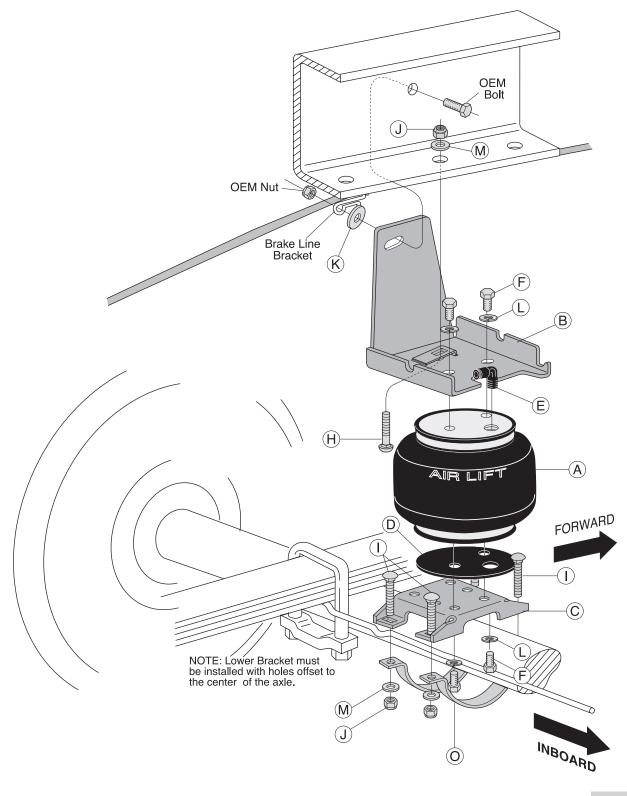
INDICATES HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN SEVERE

NOTE

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



# **Installation Diagram**





#### HARDWARE LIST

Item	DescriptionQty	Item	DescriptionQty
A	Air Springs2	L	3/8" Lock Washer8
B1	Upper Bracket-Driver Side 1	М	3/8" Flat Washer13
B2	Upper Bracket-Passenger Side1	N*	Thermal Sleeve 1
С	Lower Brackets2	0	Axle Strap4
D	Roll Plate2	AA*	Air Line Assembly1
E	Elbow Fitting2	BB*	Tie Strap6
F	3/8" x 7/8" Bolt8	CC*	Valve Caps2
G*	3/8" x 1 1/2" Bolt 1	DD*	M8 Flat Washer2
Н	3/8" x 2" Carriage Bolt2	EE*	Rubber Washer2
1	3/8" x 2 1/2" Carriage Bolt8	FF*	Small Star Washer 2
J	3/8" Nylon Lock Nut 11	GG*	5/16" Hex Nut 4
К	3/8" Large Flat Washer2		

\*Not shown on Figure 1

#### **TOOL LIST**

DescriptionQty
5/16", 7/16", 9/16" open-end or box wrenches
Adjustable Wrench 1
Ratchet with 9/16", metrics, and 1/2" deep well sockets1
3/8" and 5/16" drill bits (very sharp)1
Heavy Duty Drill1
Torque Wrench 1
Hose Cutter, Razor Blade, or Sharp Knife1
Hoist or Floor Jacks 1
Safety Stands2
Safety Glasses1
Air Compressor, or Compressed Air Source
Spray Bottle with Dish Soap/Water Solution1





# **Installing the LoadLifter 5000 System**

NOTE Failure to maintain correct minin

Failure to maintain correct minimum pressure (or pressure proportional to load), bottoming out, overextension, or rubbing against another component will void the warranty.

A 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.

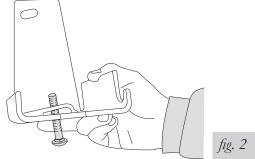
#### ASSEMBLING THE AIR SPRING UNIT

1. Install 90 degree air swivel fitting (E) to the top of the air spring. This fitting is precoated with sealant. Using an open-end wrench, tighten 1 1/2 turns (Figs. 1 and 3).

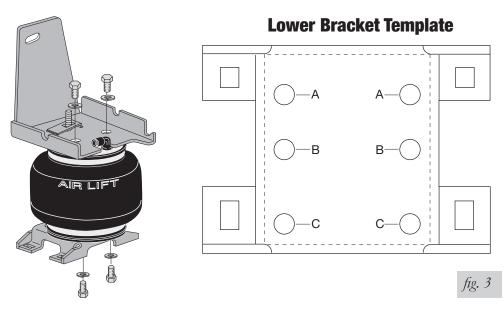
NOTE

IMPORTANT: Tighten on the metal hex nut only. Do not over tighten.

 Insert a carriage bolt (H) up through the driver's (left) side upper bracket (B1). Refer to Figure 2.



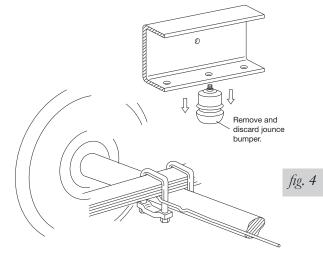
- 3. Set bracket and carriage bolt assembly on top of the air spring. Attach with two bolts (F) and lock washers (L).
- 4. Set roll plate (D) on the bottom of the air spring (Fig. 1).
- 5. Use the lower bracket template to determine the proper mounting location for the air spring. Use the holes marked "C" for mounting. Attach lower bracket (C) and roll plate to the bottom of the air spring. Attach so that the bracket offsets to the outside of the axle. Use two bolts (F) and lock washers (L). See Figure 3.



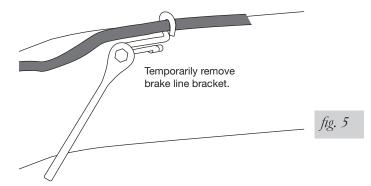
6. Tighten both the upper and lower brackets to the air spring to 15 lb.-ft. (20.3Nm).

#### LOWERING THE SUSPENSION

1. Remove the jounce bumper (Fig. 4). The air springs will mount in place of the jounce bumper.



2. On the driver's (left) side only, unbolt the emergency brake cable. Remove the nut and cable bracket and pull the cable loose from the frame (Fig. 5). Hold onto fasteners so that the cable bracket can be reattached later.



- 3. Lower the suspension so that clearance is provided to install the air spring unit. Do this by lowering the axle or raising the frame.
  - a. If the vehicle is raised with an axle contact hoist, then place safety stands under the frame and lower the axle as needed.
  - b. If the vehicle is raised with a frame contact hoist, then place safety stands under the axle and raise the frame as needed.
  - c. If the vehicle is raised with a jack and supported with safety stands on the frame, then use a floor jack to lower the axle.

#### ATTACHING THE UPPER BRACKET

 NOTE
 The unit previously assembled will be installed on the driver's (left) side of the vehicle.

 1. Set the assembly in place by inserting the carriage bolt (H) up through the jounce bumper hole (Fig. 1). The bracket fits flush against the outside of the frame.

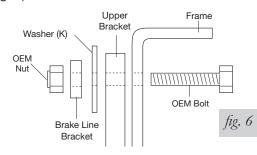
 MAKE SURE THAT THE EMERGENCY BRAKE CABLE IS NOT CAUGHT BETWEEN THE UPPER BRACKET AND FRAME.

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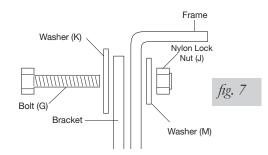


 Insert the existing emergency brake cable bolt through the frame and slot in the upper bracket. Install a large washer (K) over the bolt and push it against the upper bracket. Install the emergency brake line bracket back in place and finish by installing the OEM nut to the outside (Fig. 6). Leave loose at this time.

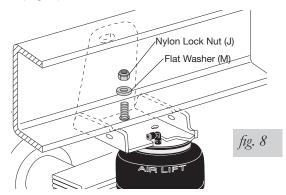


NOTE

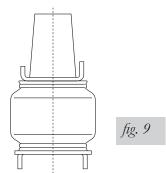
The passenger's (right) side will use bolt (G), large washer (K) on the outside of the frame, washer (M) on the inside of the frame, and nut (J) to attach the upper bracket to the existing hole on the side of the frame (Fig. 7).



3. Install nut (J) and washer (M) onto the carriage bolt that was inserted through the jounce bumper bracket hole (Fig. 8).



- 4. Raise the axle or drop the body to the normal ride height.
- 5. Align the upper bracket forward or back, ensuring that the upper and lower brackets are lined up evenly with the air spring (Fig. 9).



6. Tighten the upper bracket mounting hardware to 16 lb.-ft. (21.7Nm).

C. License plate or

#### ATTACHING THE LOWER BRACKET

- 1. In a similar fashion to the upper bracket alignment, carefully move the bottom bracket inward and outward so as to align it to the air springs and upper bracket (Fig. 9).
- 2. Attach the axle straps (O) to the lower bracket using washers (M) and nylon lock nuts (J). Refer to Figure 1.

IT MAY BE NECESSARY TO SLIGHTLY BEND THE BRAKE LINES SO THAT THEY DO NOT RUB ON THE CARRIAGE BOLTS.

3. Tighten the nuts evenly. Torque to 16 lb.-ft. (21.7Nm).

#### FINISHING THE ASSEMBLY INSTALLATION

- 1. For the driver's (left) side emergency brake cable only: Set the emergency brake cable into the hook on the driver side and install a cable tie to keep the cable from chafing on the air springs.
- 2. Return to section I (Assembling the Air Spring), step 1 and repeat entire installation procedures for the passenger's (right) side. It will be unnecessary to lower the suspension for the passenger's (right) side installation, as it should already be lowered.

A. Inside fuel tank filler door

3. After both sides are installed, continue by installing the air lines.

### **Installing the Air Lines**

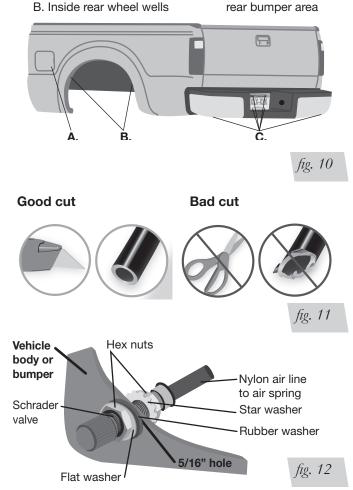
Choose the locations for the Schrader valves and drill a 5/16" (8mm) hole, if necessary (Fig. 10).

1. Cut the air line in half. Make clean, square cuts with a razor blade or hose cutter (Fig. 11). Do not use scissors or wire cutters.

#### 🛝 CAUTION

KEEP AT LEAST 6" (152MM) OF CLEARANCE BETWEEN ALL AIR LINES AND THE EXHAUST SYSTEM. AVOID SHARP BENDS AND EDGES.

- Use zip ties to secure the air line to fixed points along the chassis. Do not pinch or kink the air line. Leave at least 2" (51mm) of slack in the air line to allow for any movement that might pull on the air line. The minimum bend radius for the air line is 1" (25mm).
- Install the Schrader valve in the chosen location (Fig. 12).





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## **Before Operating**

#### **INSTALLATION CHECKLIST**

- □ **Clearance test** Inflate the air springs to 40-60 PSI (2.8-4.1BAR) and make sure there is at least 1/2" (13mm) 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 40-60 PSI (2.8-4.1BAR) 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" (152mm) 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 (16km) 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.

### **Maintenance and Use Guidelines**

- 1. Check the air pressure weekly.
- 2. Always maintain normal ride height. Never inflate beyond 100 PSI (7BAR).
- 3. If the system develops an air leak, use a soapy water solution to check all air line connections and the inflation valve core before deflating and removing the air spring.

Minimum Pressure	Maximum Air Pressure
5 PSI (.34BAR)	100 PSI (7BAR)

#### 

CAUTION

FOR SAFETY AND TO PREVENT POSSIBLE DAMAGE TO THE VEHICLE, DO NOT EXCEED MAXIMUM GROSS VEHICLE WEIGHT RATING (GVWR) OR PAYLOAD RATING, AS INDICATED BY THE VEHICLE MANUFACTURER.

ALTHOUGH THE AIR SPRINGS ARE RATED AT A MAXIMUM INFLATION PRESSURE OF 100 PSI (7BAR), THE AIR PRESSURE ACTUALLY NEEDED IS DEPENDENT ON LOAD AND GROSS VEHICLE WEIGHT RATING.

### **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 at **www.airliftcompany.com/warranty**.

For additional warranty information contact Air Lift Company customer service.

# **Need Help?**

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



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

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