

Load**LIFTER** 5000™ **ULTIMATE**

ADJUSTABLE AIR HELPER SPRINGS

TOW AND HAUL WITH SAFETY AND COMFORT™



Kit Number
88340

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.

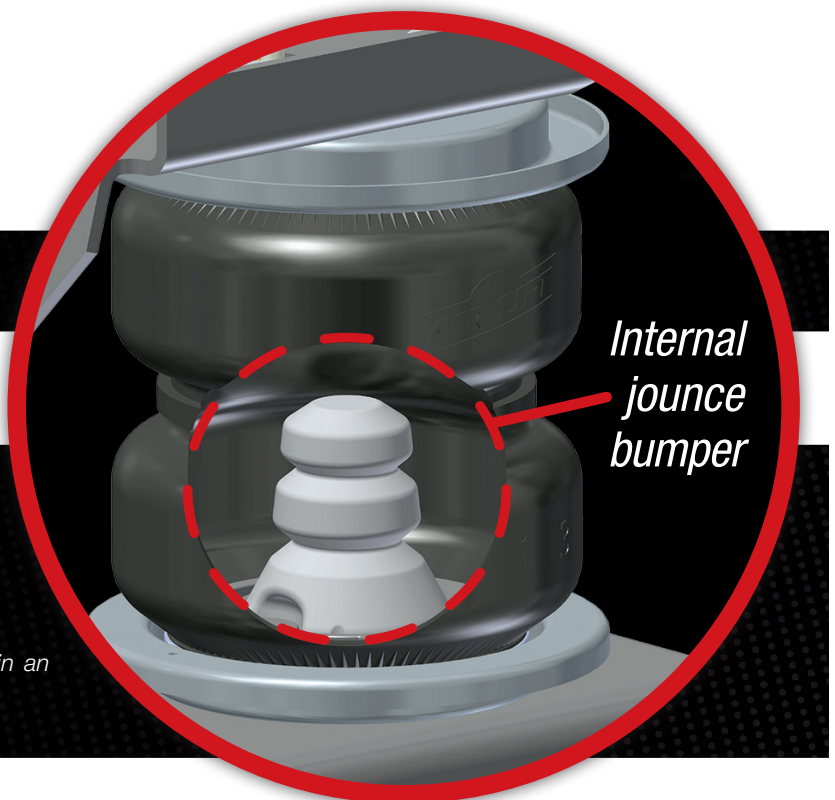
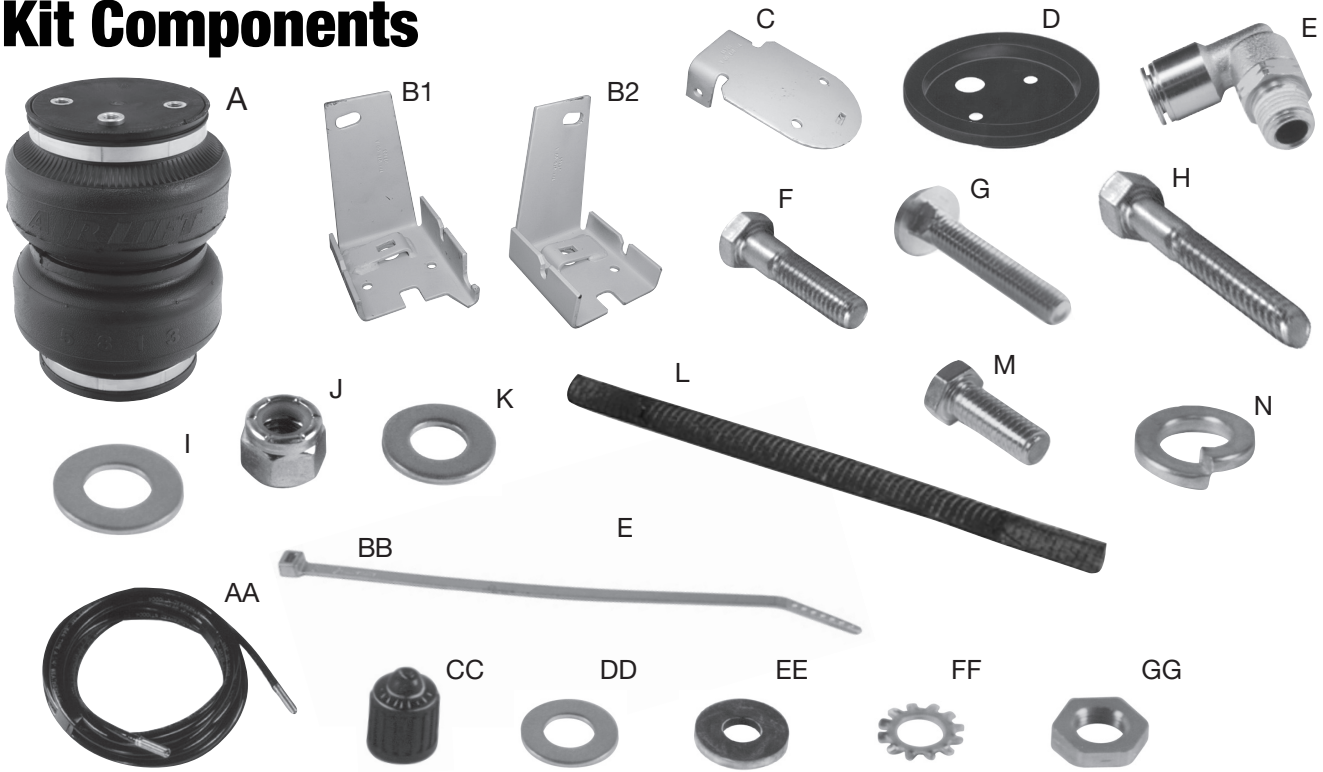


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Kit Components



HARDWARE LIST

Item	Description	Qty	Item	Description	Qty
A	Air Spring.....	2	L	Thermal Sleeve.....	1
B1	Upper Bracket - Driver's Side.....	1	M	3/8" x 7/8" Hex Head Bolts.....	8
B2	Upper Bracket - Passenger's Side.....	1	N	Lock Washers.....	8
C	Lower Bracket.....	2	Air Line Assembly Parts		
D	Roll Plate.....	4	AA	Air Line Assembly.....	1
E	Swivel Air Fitting.....	2	BB	Zip Tie.....	6
F	3/8" x 1 1/2" Hex Head Cap Screw.....	2	CC	Valve Caps.....	2
G	3/8" x 2" Carriage Bolts.....	2	DD	5/16" Flat Washer.....	2
H	3/8" x 3 1/2" Hex Head Cap Screw.....	2	EE	Rubber Washer.....	2
I	3/8" Flat Washer - Large O.D.	2	FF	Star Washer.....	2
J	3/8" Nylon Lock Nut.....	6	GG	5/16" Hex Nut.....	4
K	3/8" Flat Washer.....	9			

TOOL LIST

Description.....	Qty
7/16", 9/16" open-end or box wrenches.....	1
5/16", 7/16", 9/16" and 19mm open-end or box wrenches.....	1
Adjustable Wrench.....	1
Ratchet with 9/16" and 1/2" deep well sockets.....	1
3/8" and 5/16" drill bits (very sharp).....	1
Heavy Duty Drill.....	1
Torque Wrench.....	1
Hose Cutter, Razor Blade, or Sharp Knife.....	1
C-clamp.....	1
Hoist or Floor Jacks.....	1
Safety Stands.....	2
Safety Glasses.....	1
Air Compressor, or Compressed Air Source.....	1
Spray Bottle with Dish Soap/Water Solution.....	1



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

Introduction

The purpose of this publication is to assist with the installation and maintenance of the LoadLifter 5000 Ultimate air spring kits. All LoadLifter 5000 Ultimate kits utilize sturdy, reinforced, commercial-grade single or double, depending on the kit, convolute bellows. They also incorporate an internal jounce bumper.

The air springs are manufactured like a tire with layers of rubber and cords that control growth. LoadLifter 5000 Ultimate 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

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.

 **CAUTION**

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

 **WARNING**

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

Installing the LoadLifter 5000 Ultimate System

NOTE

Your vehicle may be equipped with a rear brake proportioning valve. Any type of load assist product could affect brake performance. We recommend that you check with your dealer before installing this type of product. If your vehicle DOES NOT have a rear brake proportioning valve or is equipped with an anti-lock type brake system, installation of a load assist product will have NO EFFECT ON BRAKE SYSTEM PERFORMANCE.

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. Determine the normal ride height. The normal ride height is the distance between the bottom edge of the wheel well and the center of the hub with the vehicle in the “as delivered” condition. In some cases, normal ride height is not perfectly level. (See images below.)
 - a. Remove unusual loads and examine your vehicle from the side to ensure it is on a level surface.
 - b. If necessary (in cases where your leaf springs are sagging badly), use a jack to raise the rear end so that the vehicle achieves the original “as delivered” ride height.
2. Measure the distance between the center of the hub and the bottom edge of the wheel well. This is the normal ride height. Enter the measurement below:

NORMAL
RIDE HEIGHT: _____ inches/millimeters



ASSEMBLING THE AIR SPRING UNIT

1. Set the roll plate (D) on the top and bottom of the air spring.
2. Install the swivel air fitting (E) into the top of the air spring (A). This fitting is pre-coated with sealant. Tighten finger-tight plus 1 1/2 turns with an open-end wrench.

NOTE

Use a 7/16" open-end wrench being careful to tighten on the metal hex nut only. DO NOT OVERTIGHTEN.

3. Insert carriage bolt (G) up through the driver's (left) side upper bracket (B1) (Fig. 1).

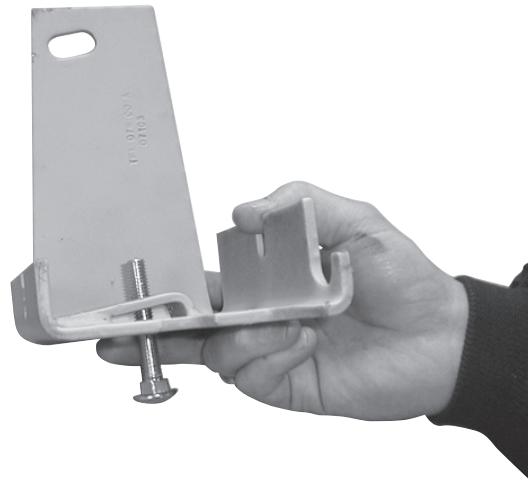


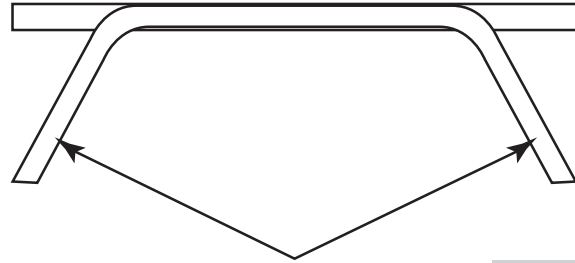
fig. 1

4. Set the upper bracket and carriage bolt assembly on top of the air spring. Attach with two bolts (M) and lock washers (N) (Fig. 2).



fig. 2

5. On late model Excursions, it may be necessary to splay the tabs on the lower bracket to fit the jounce bumper strike plate properly. Do this by putting the bracket in a vice and bending the tabs slightly with an adjustable wrench (Fig. 3b). Check fit by sliding lower bracket onto the jounce bumper strike plate. It may be necessary to tap into place using a hammer (Fig. 7).
6. Attach the lower bracket (C) to the bottom of the air spring with the tabs down. The tabs should be on the same side as the tall edge of the upper bracket (Fig. 3a). Use two bolts (M) and lock washers (N). Tighten upper and lower brackets to the air spring to 15 lb.-ft. (20Nm).


fig. 3a


Splay the legs of the lower bracket for late model Excursions

fig. 3b

REMOVING THE JOUNCE BUMPER AND LOOSENING THE BRAKE CABLE

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


fig. 4

2. The driver's (left) side emergency brake cable must be unbolted. Remove the nut and cable bracket, pull loose from the frame (Fig. 5). Retain the fasteners for reattaching the cable bracket.



fig. 5

LOWERING THE SUSPENSION

NOTE

It will be necessary to lower the suspension to provide clearance to install the air spring unit. This can be done by lowering the axle or raising the frame.

1. If the vehicle is raised with an axle contact hoist, place safety stands under the frame and lower the axle as needed.
2. If the vehicle is raised with a frame contact hoist, place safety stands under the axle and raise the frame as needed.
3. If the vehicle is raised with a jack and supported with safety stands on the frame, use a floor jack to lower the axle.

INSTALLING THE AIR SPRING

1. The previously assembled air spring unit will install on the driver's (left) side. Set the unit in place by inserting the carriage bolt up through the jounce bumper hole (Fig. 6). Make sure the emergency brake cable is not caught between the upper bracket and the frame. The bracket should fit flush against the outside of the frame. The tab on the lower bracket straddles the jounce bumper strike plate.



fig. 6

2. Push the lower bracket towards the spring so that the tab locks around the strike plate as illustrated in Figure 7.

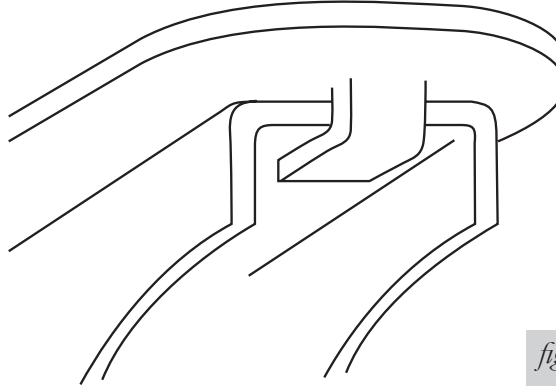


fig. 7

3. Insert the existing emergency brake cable bolt through the frame and slot in the upper bracket. Install washer (K) over the bolt, and push against the upper bracket (Fig. 8).



fig. 8

4. Install the previously removed emergency brake cable and nut (Fig. 9). Leave loose at this time.

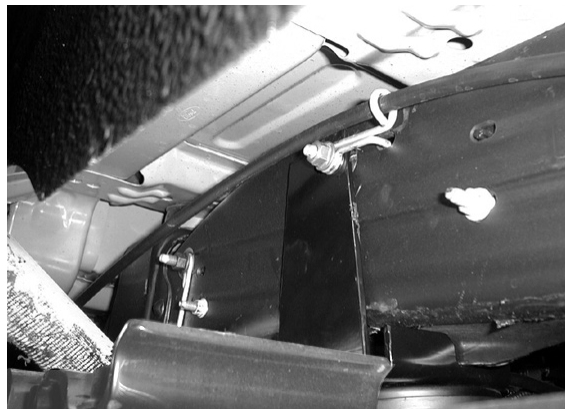


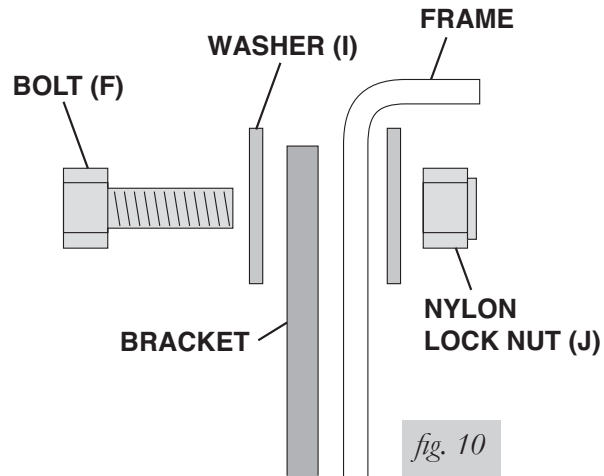
fig. 9

NOTE

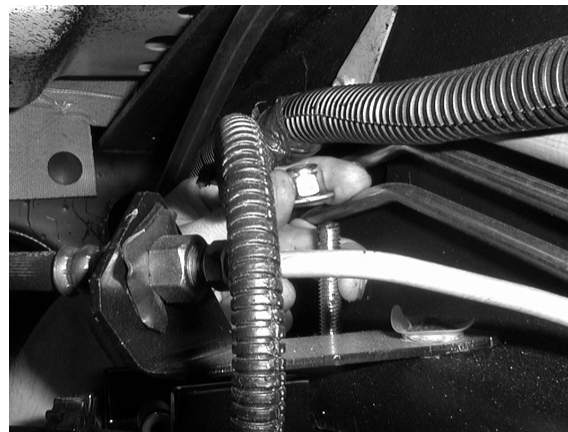
In late-model vehicles, a self-tapping bolt may have been used to attach the emergency brake cable bracket. If this is the case for your vehicle, remove the self-tapper and use the supplied bolt, washers, and lock nut to reattach the brake cable bracket and the upper bracket to the frame.

NOTE

Passenger's (right) side will use bolt (F), washers (I), and nylon lock nut (J) to attach the upper bracket to the existing hole on the side of the frame (Fig. 10).



5. Install nylon lock nut (J) and washer (K) on the carriage bolt inserted through the existing jounce bumper bracket hole (Fig. 11).



6. Raise the axle or drop the body to the previously recorded normal ride height.
7. Align the upper bracket forward or backward, ensuring the upper and lower brackets are lined up evenly with the air spring (Figs. 12 & 13). Tighten the upper bracket mounting hardware to 15 lb.-ft. (20Nm).



- As in the previous step, move the bottom bracket inward and outward so as to align it with the air spring and the upper bracket (Fig. 14).

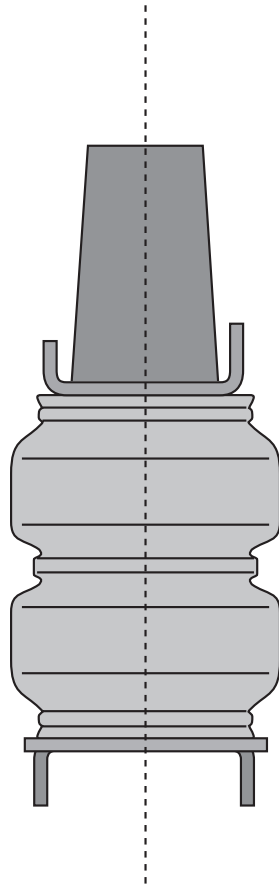


fig. 13

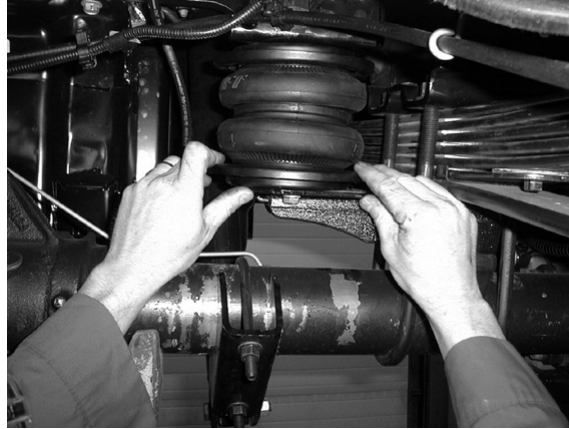


fig. 14

- Clamp the lower bracket to the strike plate with C-clamps or locking pliers. Drill a 3/8" hole through the strike plate using the existing holes in the lower bracket as a template (Fig. 15).

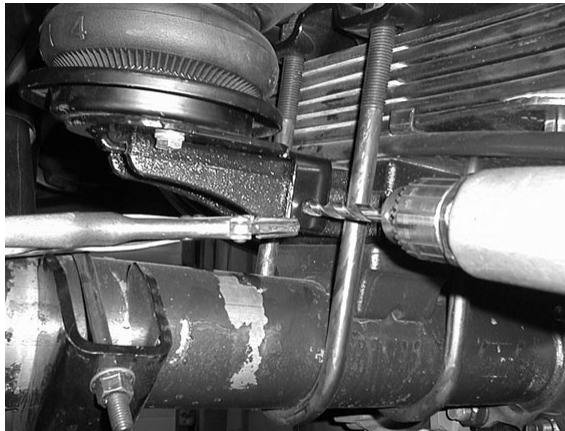


fig. 15

NOTE

Use a C-clamp or welding clamp to assist in keeping the lower bracket as flat to the strike plate as possible before drilling.

10. Insert a bolt (H) and washer (K) through the bracket and strike plate. Install a washer (K) and nylon lock nut (J) and torque to 16 lb.-ft. (22Nm) (Fig. 16).



fig. 16

EMERGENCY BRAKE CABLE

This step is for the driver's (left) side only.

1. Set the emergency cable into the hook on the driver's (left) side and install a zip tie to keep the cable from chafing on the air spring (Fig. 17).
2. The finished driver's (left) side install is shown in Figure 18.



fig. 17

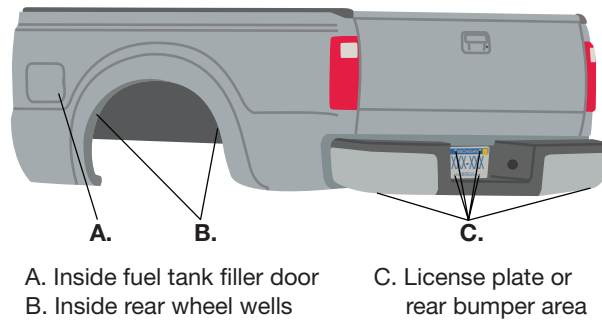


fig. 18

Installing the Air Lines

Choose the locations for the Schrader valves and drill a 5/16" (8mm) hole, if necessary (Fig. 19).

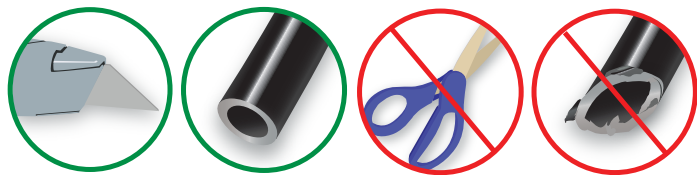
1. Cut the air line in half. Make clean, square cuts with a razor blade or hose cutter (Fig. 20). Do not use scissors or wire cutters.


fig. 19

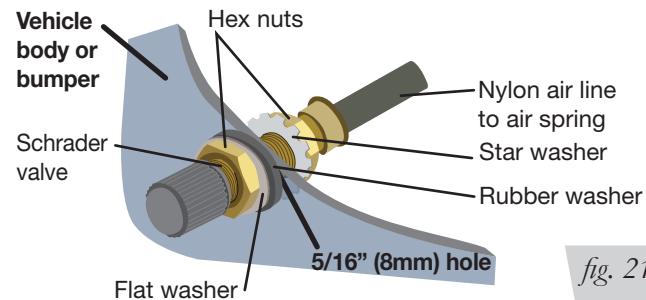
CAUTION

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

2. 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).


fig. 20

3. Install the Schrader valve in the chosen location (Fig. 21).


fig. 21

4. Install the thermal sleeve over the air line on the passenger's side where it is closest to the exhaust.

INSTALLATION CHECKLIST

- Clearance test** — Inflate the air springs to 40-60 PSI (2.6-4.1BAR) 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 (2.6-4.1BAR) 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

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

1. Check 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.



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.

Need Help?

Contact Air Lift Company customer service department by calling (800) 248-0892.

For calls from outside the USA or Canada, dial (517) 322-2144.



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



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