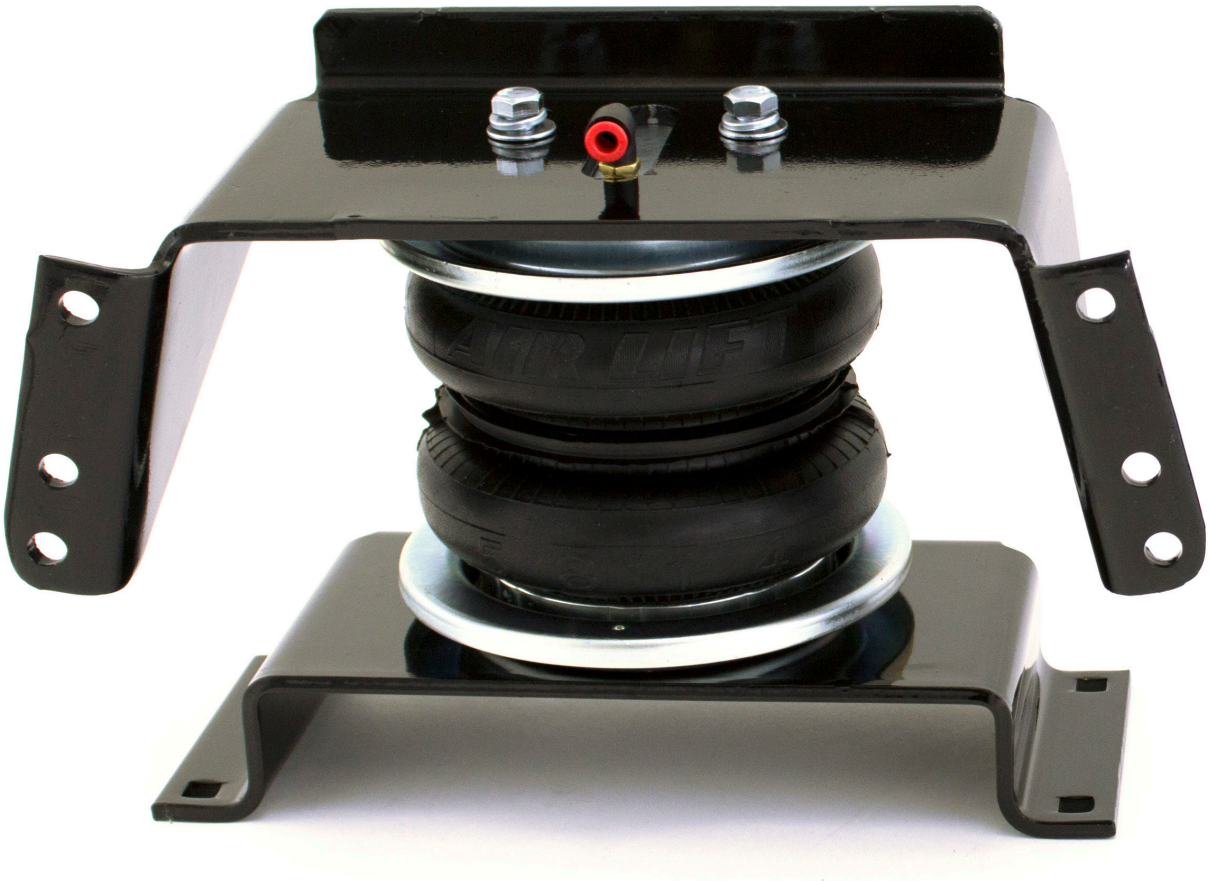
LoadLifter 5000™ SERIES

AIR LIFT® Since 1949

Installation Guide



Ford E-450, E-Super Duty Commercial Chassis

Watch the video
Info on Table of Contents page

Kits 57242 | 88242

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.

MN-1162 • Revision 012110 • ECR 9900

Protect your Air Lift Purchase by Completing your Warranty Registration

Thank you for purchasing an Air Lift load support product!

Take a photo of your sales receipt before scanning the QR code as it is required to complete the warranty registration. Scan the QR code to register the warranty online.

Your registration also helps us to keep you up to date on product information and offers.

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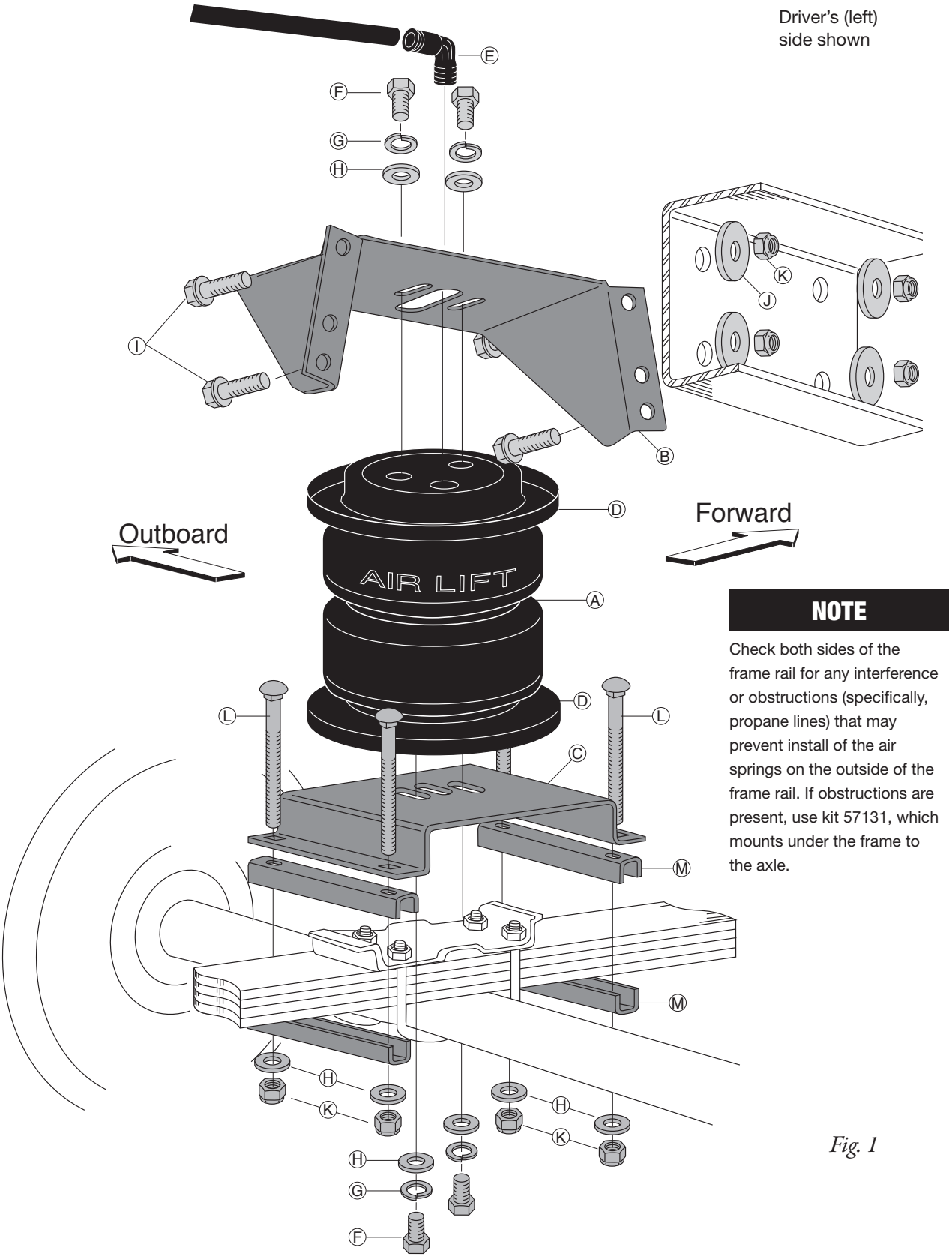
Video-enhanced installation guides

Visit airliftcompany.com/workshop/category/install-videos to access our installation video archive*.

* subject to availability

Installation Diagram



NOTE

Check both sides of the frame rail for any interference or obstructions (specifically, propane lines) that may prevent install of the air springs on the outside of the frame rail. If obstructions are present, use kit 57131, which mounts under the frame to the axle.

Fig. 1

Hardware and Tools Lists

Common Parts Included in All 3 Kits

Item	Part#	Description	Qty
B	07475	Upper bracket	2
C	03102	Lower bracket	2
E	21837	Air fitting	2
F	17203	3/8"-24 X 7/8" Bolt	8
G	18427	3/8" Lock washer	8
H	18444	3/8" Flat washer, SAE	16
I	17159	3/8"-16 X 1.5" Frame bolt	8
J	18447	3/8" Oversized flat washer	8
K	18435	3/8"-16 Nylon lock nut	16
L	17163	3/8"-16 X 7" Carriage bolt	8
M	01426	Clamp/spacer bar	8
AA*	20086	Air line assembly	1
BB*	10466	Zip tie	6
CC*	21230	Valve cap	2
DD*	18501	M8 Flat washer	2
EE*	21234	Rubber washer	2
FF*	18411	Star washer	2
GG*	21233	5/16" Hex nut	4

* These parts are not shown in the Installation Diagram (Fig. 1).

TOOLS LIST

Description	Qty
1/2", 9/16" Open-end or Box wrenches	Set
Adjustable wrench	1
Ratchet with 9/16" and 1/2" Deep well sockets	1
5/16" Drill bits (very sharp)	1
Heavy duty drill	1
Torque wrench	1
Hose cutter, razor blade, or sharp knife	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

The photos in this manual show the LoadLifter 5000 Ultimate kit.

Unique Parts in Each Kit

LoadLifter 5000™ KIT 57242

Item	Part#	Description	Qty
A	58439	Air spring	2
D	11951	Roll plate	4

LoadLifter 5000™ ULTIMATE KIT 88242

Item	Part#	Description	Qty
A	58494	Air spring	2
D	11967	Roll plate	4

STOP! 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 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

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.

IDENTIFYING THE DIFFERENCES BETWEEN KITS

Should you need to contact Air Lift customer service, you will need to know which kit you are inquiring about: standard LoadLifter 5000 or LoadLifter 5000 Ultimate. The kits are easily identifiable by looking at the roll plates and air lines.

- ☐ Standard **LoadLifter 5000** — Zinc-plated steel roll plates and black nylon air lines.
- ☐ **LoadLifter 5000 Ultimate** — Black powder-coated roll plates and black nylon air lines.

LoadLifter 5000 silver zinc-plated steel roll plate

LoadLifter 5000 nylon air line

LoadLifter 5000 Ultimate black powder-coated roll plate

LoadLifter 5000 Ultimate nylon air line

Installing the System

IMPORTANT: The 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 the 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.

IMPORTANT: Check both sides of the frame rail for any interference or obstructions (specifically, propane lines) that may prevent install the air springs on the outside of the frame rail. If obstructions are present, use kit 57131, which mounts under the frame to the axle.

⚠ 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

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.

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 the leaf springs are sagging badly), use a jack to raise the rear end so that the vehicle achieves the original “as delivered” ride height.

1. Measure the distance between the center of the hub and the bottom edge of the wheel well (see Fig. 2). This is the Normal Ride Height. Enter the measurement below:

   NORMAL RIDE HEIGHT: _____ inches

2. Measure the distance between the frame and the tire. This kit requires a minimum of 7.5" (191mm) of clearance for a fully inflated air spring (Fig. 3).

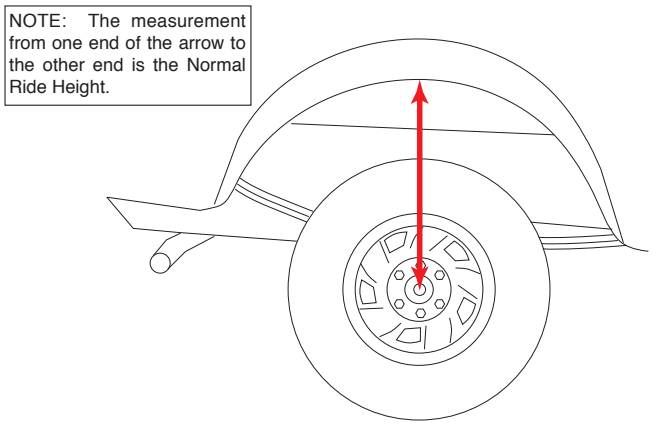


Fig. 2

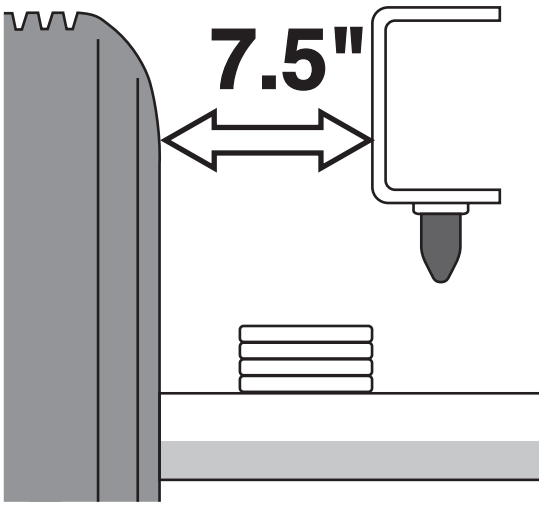


Fig. 3

RAISING THE VEHICLE

1. Raise the vehicle (Fig. 4) and remove the wheels.
2. Check the distance between the center of the hub and the bottom edge of the wheel to ensure that it is at the normal ride height recorded above. If not, raise the frame or lower the axle as necessary to restore the original distance.
   a. If the vehicle is raised with an axle contact hoist, then place axle stands under the frame and lower the axle as needed.
   b. If the vehicle is raised with a frame contact hoist, then place axle stands under the axle and lower the frame as needed.
   c. If the vehicle is raised with a jack and supported with axle stands on the frame, then use a floor jack to lower the axle.

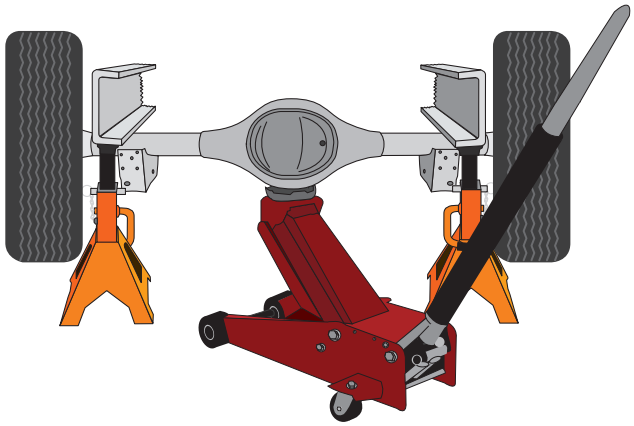


Fig. 4

ASSEMBLING THE AIR SPRING UNIT

1. Place a roll plate (D) on the top and bottom of the air spring (A) so that the air spring is seated within the roll plates.
2. Install the air fitting (E) finger-tight plus 1 and 1/2 turns (Fig. 5). Use a 7/16" open end wrench, being careful to tighten on the metal hex nut only. Do not overtighten. This fitting is precoated with sealant.
3. Attach the upper bracket (B) with the legs down using two flat washers (H), two lock washers (G), and two bolts (F). Refer to Figure 1. Leave loose for adjustment.
4. Place the lower bracket (C) on the bottom of the air spring and roll plate so that the flat edge of the lower bracket mounts toward the legs of the upper bracket (inboard). Refer to Figure 1.
5. Attach the lower bracket to the air spring assembly using two flat washers (H), two lock washers (G), and two bolts (F). Refer to Figure 1. Leave loose for adjustment.

Fig. 5

ATTACHING THE AIR SPRING ASSEMBLY

1. Set the assembly on the leaf spring over the axle. The upper and lower brackets must be positioned with 4.5" to 6.5" (114mm to 165mm) between the brackets at normal ride height (Fig. 6).

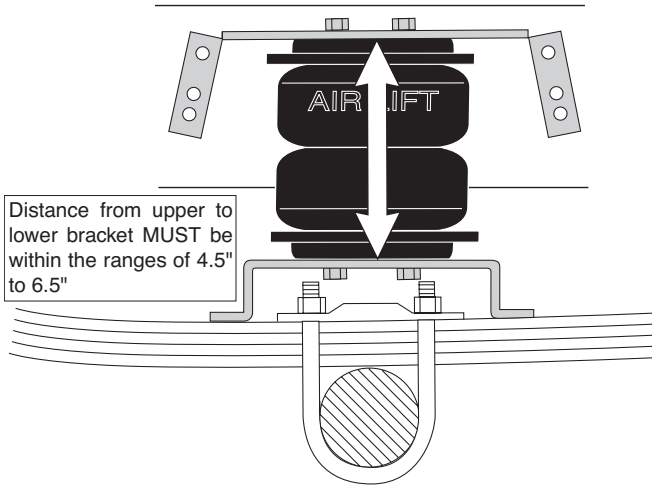


Fig. 6

NOTE

If the measurement is not within the specified parameters or if the stock u-bolts hit on the lower bracket, use two spacer bars (M) provided under the lower bracket to achieve the distance of 4.5" to 6.5" (114mm to 165mm) (Fig. 1).

2. Position the upper bracket so that at least four bolt holes (two on each side) are on the flat section of the frame rail. Use the widest spacing possible to achieve the required distance of 4.5" to 6.5" (114mm to 165mm) making sure that the holes do not fall on the radiused edges of the frame rail.

3. Attach the lower bracket using two clamp bars (M), four carriage bolts (L), four flat washers (H), and four nylon lock nuts (K). Refer to Figure 1. Torque to 16 lb.-ft. (21.7Nm).

4. Position the upper bracket as high on the frame as possible and so that it is parallel with the lower bracket. If the correct mounting height can not be achieved with the top hole and one of the two lower holes, then position the top holes above the frame and use the two sets of lower holes for mounting. Align the assembly both vertically and horizontally. Be sure that there is sufficient clearance between the air spring, the frame, the tire and brake drum at the maximum inflated diameter (6.5" [165mm]).

NOTE

The kit will be mounted on the same angle as the leaf springs.

5. Clamp the upper bracket to the frame rail with a C-clamp or welding clamp and center punch one mounting hole (Fig. 7).

6. IMPORTANT: Do not drill any holes into the frame without first checking for interference such as hydraulic lines, gas lines, and/or electrical wires. If there are any such interferences, move them aside to proceed with the installation.

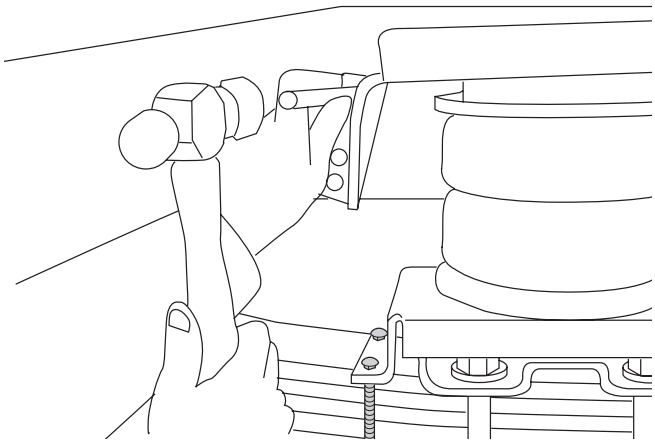


Fig. 7

7. Check the upper to lower bracket measurement to ensure that it is still between 4.5" to 6.5" (114mm to 165mm) on the side of the center punched hole (in Fig. 8, measurement X must equal measurements Y, as well as between 4.5" to 6.5" [114mm to 165mm]).

8. Drill one 3/8" hole in the previously marked location and loosely install a frame bolt (I), an oversized flat washer (J), and a nylon lock nut (K).

9. Measure the upper to lower bracket clearance on the other side of the upper bracket. This measurement should be equal to the measurement of the other side of the upper bracket (in Fig. 8, measurements X must equal measurement Y, as well as be between 4.5" to 6.5" [114mm to 165mm]).

10. Center punch and drill a hole on the other side of the upper bracket and install a frame bolt (I), an oversized flat washer (J), and a nylon lock nut (K). Refer to Figure 1.

11. Remove the clamps and drill the remaining two holes and install a frame bolt (I), an oversized flat washer (J), and a nylon lock nut (K). Tighten all upper bracket hardware to 44 lb.-ft. (59.7Nm).

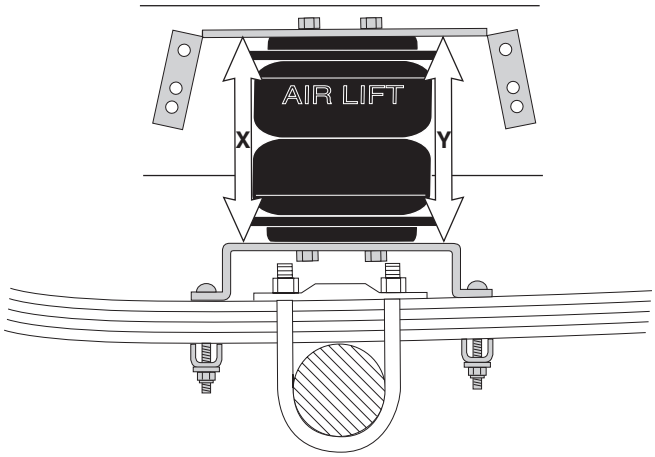


Fig. 8

CHECKING THE AIR SPRING ALIGNMENT

1. With the air spring hardware still loose, align the air spring inboard and outboard using the slotted holes for adjustment so that it is uniformly positioned between the brackets (Fig. 9).

NOTE

Maintain at least a thumb's width of clearance between the air spring and frame when uninflated.

2. When fully aligned, secure the air spring to the upper and lower brackets by tightening the mounting hardware with a 9/16" wrench. Torque to 20 lb.-ft. (27.1Nm).

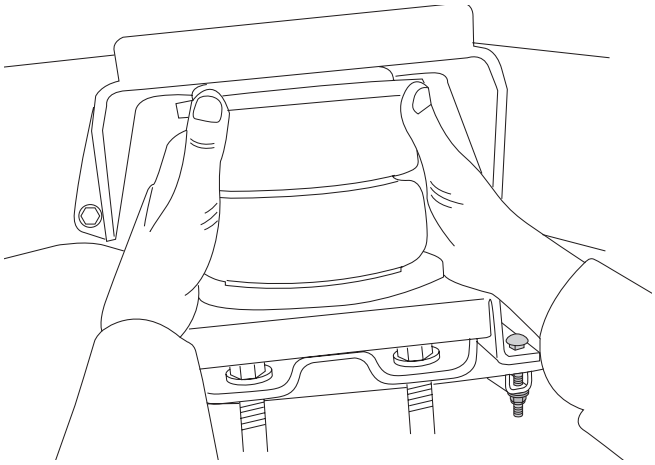


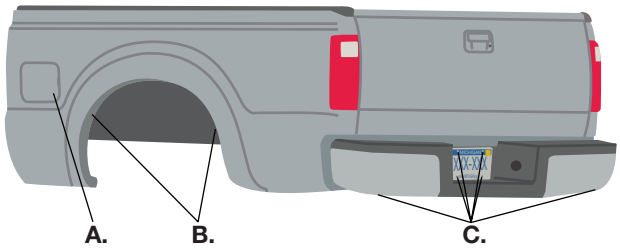
Fig. 9

Installing the Air Lines

Air lines are routed from the air springs to Schrader valves. Begin by choosing locations for the Schrader valves and drill a 5/16" (8mm) hole, if necessary (Fig. 10).

⚠ CAUTION

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



A. Inside fuel tank filler door

B. Inside rear wheel wells

C. License plate or rear bumper area

Fig. 10

INSTALLING NYLON AIR LINES

1. For nylon air line, it is recommended that the air line be routed along the top of the frame, forward of the axle, then down to the fitting.
2. 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.
3. Use zip ties (BB) to secure the air line to fixed points along the chassis. Do not pinch or kink the air line. The minimum bend radius for the air line is 1" (25mm). Leave at least 2" (51mm) of slack in the air line to allow for any movement that might pull on the air line.
4. Install the Schrader valve in the chosen location (Fig. 10).

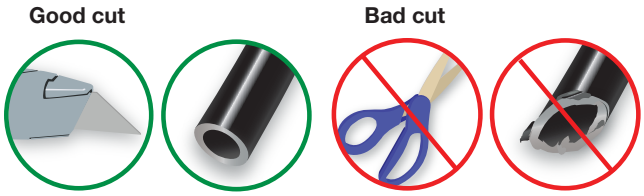


Fig. 11

INSTALLING THE HEAT SHIELD

1. Bend tabs to provide a dead air space between exhaust pipe and heat shield. (Fig. 12) Attach the heat shield to the exhaust pipe using the clamps. Bend the heat shield for maximum clearance to the air spring.

NOTE

Some vehicles have large resonators in this area; it will be necessary to double up on the clamps to fit these models (Fig. 12).

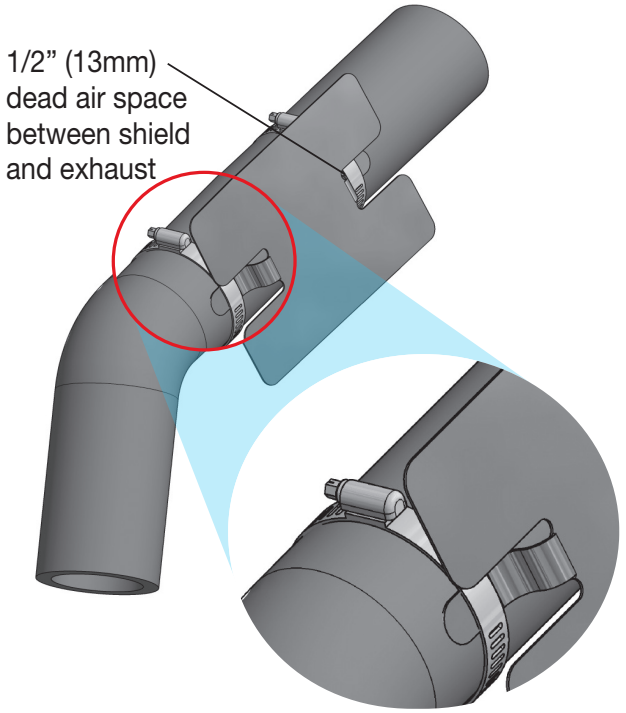


Fig. 12

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** — After 500 miles (800km), recheck all bolts for proper torque.
- ☐ **Road test** — The vehicle should be road tested after the preceding tests. Inflate the air 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 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.
4. Upon successful completion of the installation, follow these pressure requirements for the air springs.

⚠ 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.

Notes

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.

Thank you for purchasing Air Lift Products — the Authorized Installer's choice!

Need Help?

Contact Air Lift Company Customer Service at (800) 248-0892
or email service@airliftcompany.com.

For calls outside the U.S. or Canada, dial (517) 322-2144.

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