Air Lift 1000™

Installation Guide

A representative image is shown here

Universal fitments

Watch the video
Info on Table of Contents page

Kits 60900-60927

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-1002 • Revision 022311 • ECR 9821

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 and then scan the QR code to complete your online warranty registration.

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Video-enhanced installation guides

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

* Subject to availability

Hardware and Tools Lists

KIT	CYLINDERS	CYLINDER SIZE	SPACER (THICKNESS)	HEIGHT RANGE
60900	46149	3 X 5.5"	None	5.5"
60901	46143	3 x 8"	None	8"
60902	46144	3 X 9"	None	9"
60903	46166	3.44 X 5.5"	09333 (.25") and 09112 (.50")	5.55" to 6.25"
60904	46136	3.44 X 7"	09333 (.25") and 09112 (.50")	7" to 7.75"
60905	46135	3.44 X 8.75"	09333 (.25") and 09112 (.50")	8.75" to 9.5"
60906	46125	4 X 4"	09447 (.50")	4" to 5"
60907	46091	4 X 5"	09447 (.50")	5 to 6"
60908	46141	4 X 6"	09447 (.50")	6 to 7"
60909	46137	4 X 7"	09447 (.50")	7 to 8"
60910	46129	4 X 8"	09447 (.50")	8 to 9"
60911	46130	4 X 9"	09447 (.50")	9 to 10"
60912	46155	4 X 10"	09447 (.50")	10 to 11"
60913	46131	4 X 11"	09447 (.50")	11 to 12"
60914	46165	4.35 X 5.5	09447 (.50")	5.5 to 6.5"
60915	46172	4.35 X 6.5"	09447 (.50")	6.5 to 7.5"
60916	46161	4.35 X 8"	09447 (.50")	8 to 9"
60917	46159	4.35 X 9"	09447 (.50")	9 to 10"
60918	46160	4.9 X 4.25	09191 (.50")	4.25 to 5.25"
60919	46127	4.9 X 6"	09191 (.50")	6 X 7"
60920	46128	4.9 X 8"	09191 (.50")	8 to 9"
60921	46123	4.9 X 10"	09191 (.50")	10 to 11"
60922	46147	5.35 X 4.5"	09191 (.50")	4.5 to 5.25"
60923	46151	5.38 X 6.5"	09191 (.50")	6.5 to 7.5"
60924	46150	5.38 X 7.5"	09191 (.50")	7.5 X 8.5"
60925	46133	5.38 X 8.5"	09191 (.50")	8.5 to 9.5"
60926	46434	5.38 X 9.5"	09191 (.50")	9.5 X 10.5"
60927	46132	5.38 X 10.5"	09191 (.50")	10.5 to 11.5"

TOOLS LIST

Description	Qty
Flat tire spoon	1
Pliers	1
Sharp knife or scissors	1
Safety glasses	1
5/16" drill bit (very sharp)	1

Description	Qty
Heavy-duty drill	1
Hoist or floor jack	1
Safety stands	2
Spray bottle with dish soap/water solution	1

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 Air Lift 1000 air spring kit.

Air Lift 1000 kits utilize a cylinder-style air bag that provides up to 1,000 pounds (454kg) of load-leveling support when installed into the vehicle's coil springs. Each cylinder is rated at a maximum of 35 PSI (2.4BAR).

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 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 installation 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 VEHICLE OR MINOR PERSONAL INJURY.

Used to help emphasize areas of procedural importance and provide helpful suggestions.

Tips for Measuring Coil Springs for Air Spring Cylinders

The Air Lift 1000 Universal kit is designed to fit numerous vehicles with shock absorbers rather than struts (Fig. 1). Solid axle, independent and front applications are the most common.

This kit will not fit vehicles with coil-over shocks or coil springs with internal jounce bumpers.

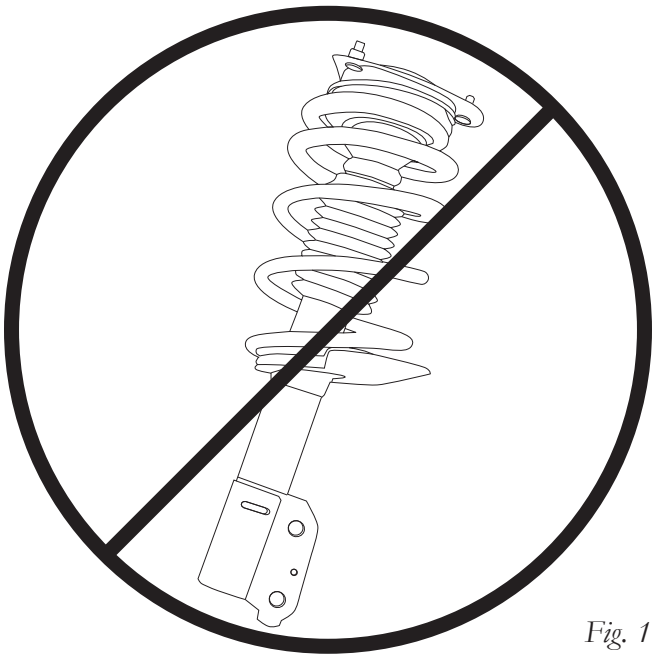

Fig. 1

If this is a lifted vehicle, check to see if Air Lift Company has an existing kit first, then review/follow the installation guide instructions for the stock kit installation. Also, note the size of the cylinder in the stock kit in comparison to what is needed for the lifted application.

1. To determine the size of the air bag needed for this application, first measure the inside diameter of the stock steel coil springs. Measure a middle coil, rather than top or bottom, if the top and bottom coils are reduced in size.
2. Measure from whatever the air spring cylinder, once installed, will touch at the top and the bottom of the spring seats (Fig. 2). This is the length of the air spring required for this application.
3. The measurements need to be taken on an un-laden vehicle (no load) condition. If this is not possible, jack the vehicle up to its stock height and take measurements at this time.

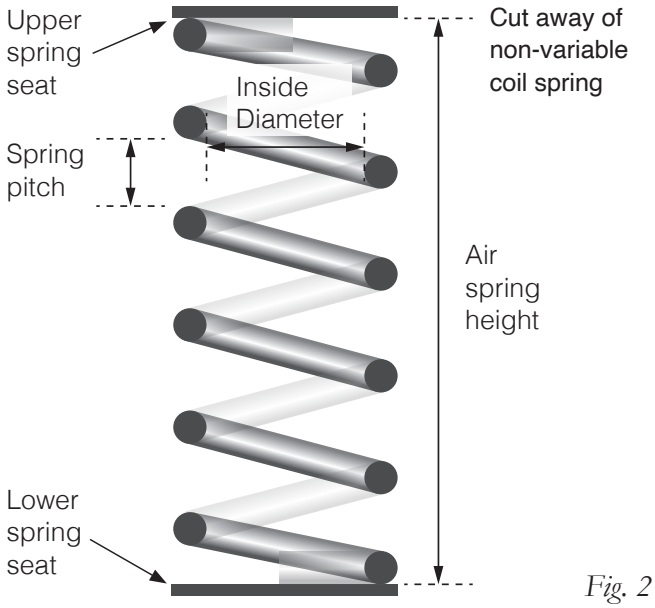

Fig. 2

4. Even though it may be perceived that the air spring cylinders work by pushing up and down on the upper and lower spring seats (they also do this), the “lifting or supporting” of the vehicle actually comes from the air spring cylinders, being inflated, slightly bulging in between the coil springs and “pushing or spreading” them thus helping support the vehicle’s sprung weight (Fig. 3). With this in mind, it is not necessary to fit the inside diameter of the steel spring exactly, and it is recommended that the air spring cylinder be a little undersized. Do not put an air spring cylinder with a larger outside diameter in a smaller ID coil spring. This will likely cause the early failure of the air spring cylinder.

Air Lift 1000 kit installed

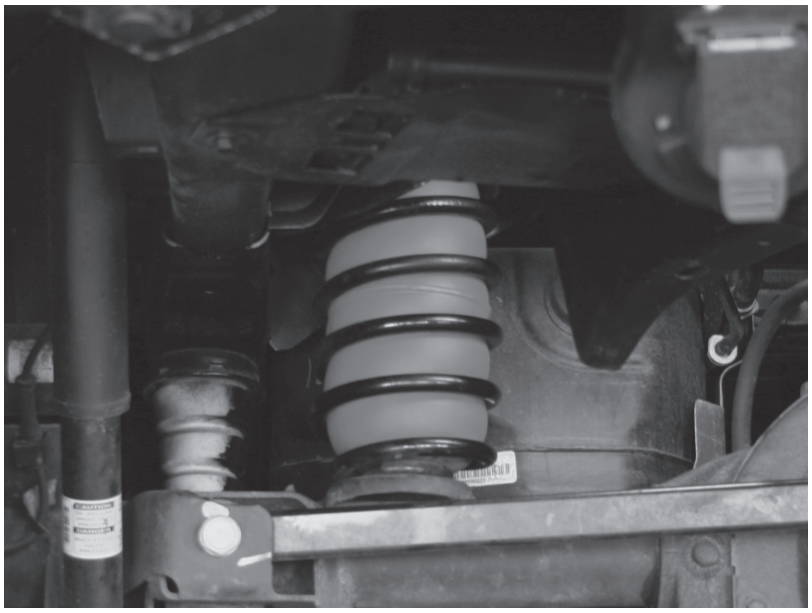

Fig. 3

5. If the length of the air spring is slightly short, use the spacer in the kit (if supplied) (Fig. 4) to make up the difference in length. Also, do not choose an air spring cylinder that is too long. Refer to the Hardware List on page 2 for sizing options. The spacers that are provided also serve as protectors, if there is a sharp object at the top or the bottom spring seat that could cut a hole in the air bag, factor in the height of this spacer or protector and use it in the stack up for the installation.

Typical spacers which may be included with Air Lift 1000 Universal kit

Fig. 4

6. The air line for each air bag will need to be routed either through the top or bottom coil spring seats. The air line cannot exit between spring coils. If there is not a hole or easy access to the existing hole, it may be necessary to drill or grind a hole in the lower or upper spring seat to create access to the stem on the air spring cylinder. Typically, a 9/16" to 3/4" diameter hole is used for the air line access. In some cases, this hole may need to be offset from the center based on the articulation of the suspension (common in independent suspensions). If this is the case on this installation, with the cylinder and air line in position, cycle the suspension up and down and observe the air line to make sure it does not cut or kink in the access hole created for the air line routing.

7. Air line routing depends on the installation of the air spring. It is recommended to keep the air line at least 12" away from any heat source. Leave sufficient slack in the air line so it can move when the suspension is in motion. Do not route the air line through any holes in the frame or near sharp objects. Zip-tie the hose to existing harnesses or frame/component parts along the routing to the tee, inflation valve or valves. Cap the inflation valve with the cap supplied to keep contaminants out of the core in the valve.

8. Use a soapy water solution to lubricate the fittings on the air cylinders and tee (if used) for installing the air line, and always use the clamps supplied to secure the air line over the barbed end of the fittings.

9. Most universal kits come with a heat shield for the exhaust (Fig. 5). If the exhaust is less than 3" away from the coil spring, it will be necessary to install the heat shield in between the exhaust and the coil spring to shield the air spring from heat. See the instruction manual in the heat shield kit for installation instructions.

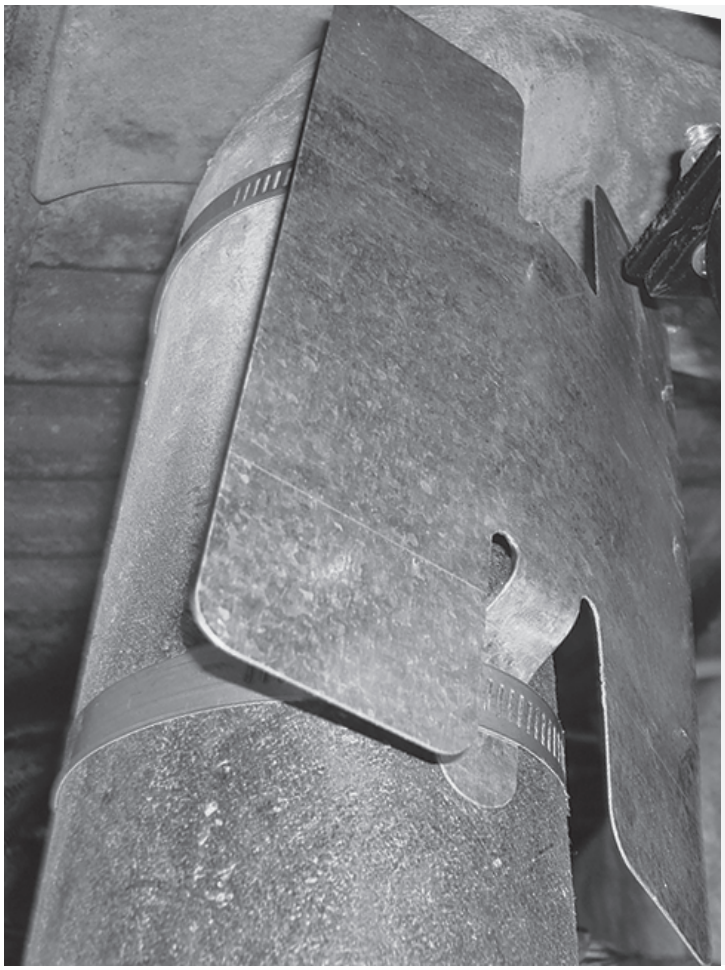

Fig. 5

10. Air pressure in the system will depend on the pitch of the stock coil spring (Fig. 2). Pitch is the gap or distance between the coils. Some springs have a “variable” rate in which the gap or distance between the coil springs will vary. For these springs, it is recommended to measure the largest opening and use this as the guide to choose what pressure to use.

11. The rule of thumb on the pressure is a maximum 35 PSI (2.41 Bar) if the gap is 1 inch or greater. If the pitch is 1 inch or less, use up to 50 PSI (3.45 Bar). The minimum is 5 PSI (0.34 Bar). If this minimum is not maintained, the air spring may fail prematurely.

12. Pressure may be varied within the specified range depending on the load.

13. Although not required, Air Lift recommends installing one of its air management systems to control the air springs. The control system allows the operator to adjust the air springs on the fly to help improve ride and handling.

Installing the System

PREPARE THE VEHICLE

1. Jack up the front or rear of the vehicle or raise on a hoist. Support the frame or axle with safety stands. Lower the axle or raise the body of the vehicle until the suspension is fully extended (Fig. 6). In some cases, it may be necessary to unbolt the sway bar.

OBSERVE TENSION ON THE BRAKE LINES. DO NOT STRAIN.

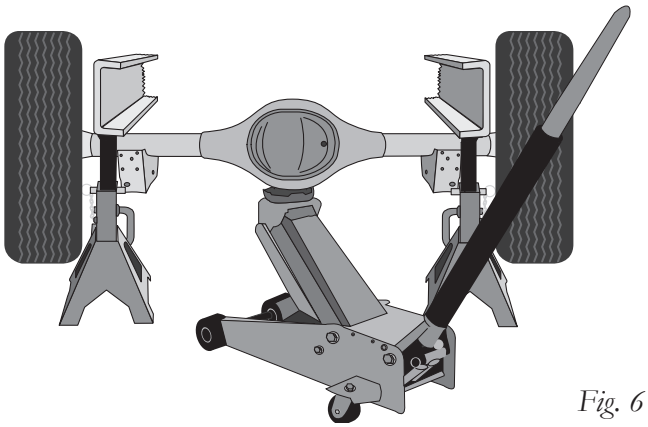

Fig. 6

2. Remove the plastic cap from the barbed stem on the end of the air spring. Exhaust the air from the air spring by rolling it up toward the barbed stem. Replace the cap on the stem to hold the flat shape (Fig. 7). Fold the air spring into a hot dog bun shape as shown.

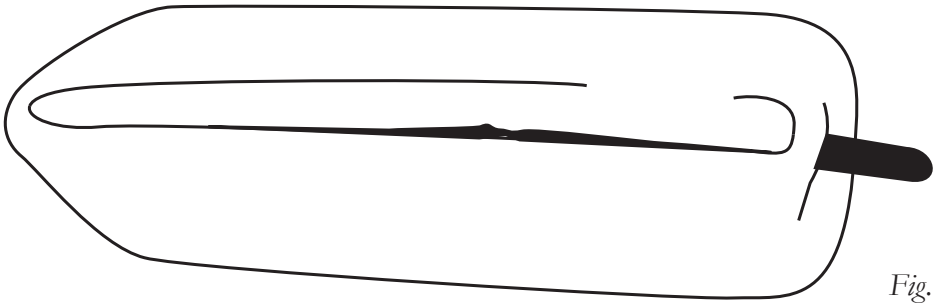

Fig. 7

3. If necessary, additional clearance between the spring's coil (pitch) may be obtained by disconnecting the shock absorbers from the lower shock mounts. This will allow the suspension to drop even further. If removal of the springs is necessary to install the air spring cylinders, refer to the manufacturer's manual for step-by-step instructions before proceeding.

AGAIN, OBSERVE TENSION ON THE BRAKE LINES. DO NOT STRAIN.

INSTALLING THE AIR SPRING

1. Establish the routing for the air line to the air spring. It will either go in through the top spring seat or the bottom spring seat.

2. Insert the flattened (hot dog bun-shaped) air spring into the side of the coil spring through the lowest opening with the stem pointing in the direction established for the air line routing. (Figs. 8 and 9)

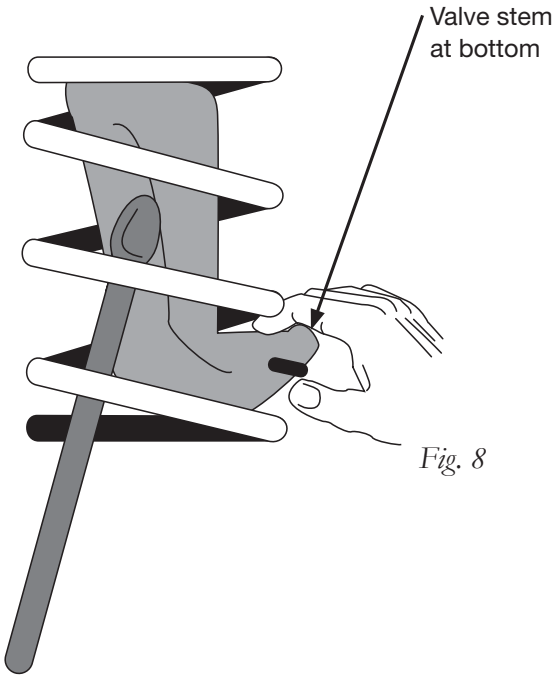

Fig. 8

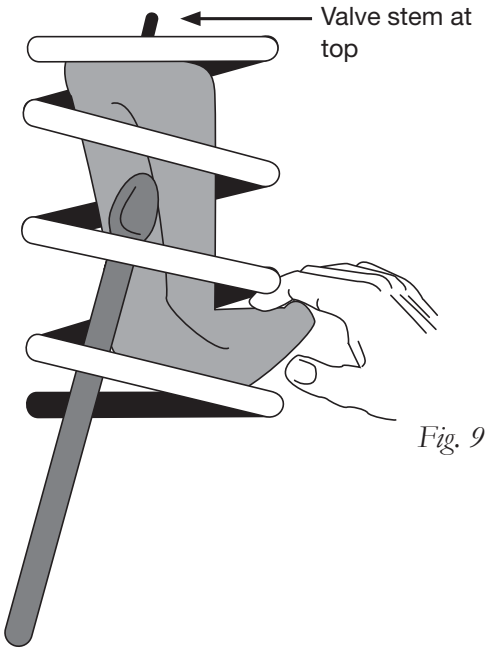

Fig. 9

3. Push the air spring up or down within the coil by hand or with a blunt instrument such as a spoon-type tire iron.

4. When the air spring is completely within the coil, remove the cap and allow the air spring to assume its "as-molded" shape.

5. If used, insert the spacer at the top or bottom. This spacer or protector may have to be installed on the air line side of the cylinder, depending on the air spring for this application. (Figs. 10 and 11)

NOTE *The spacer or protector can be inserted into the coil spring facing in either direction.*

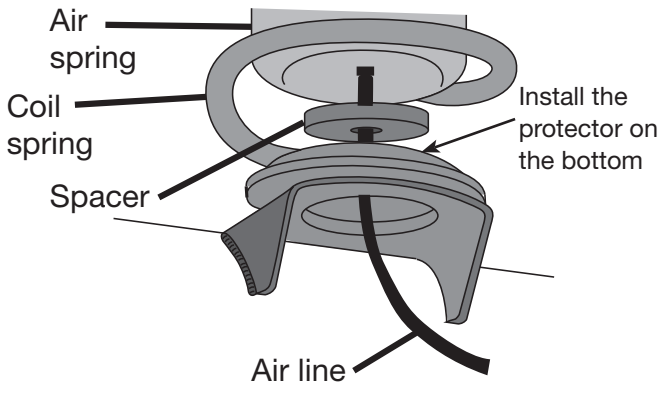

Fig. 10

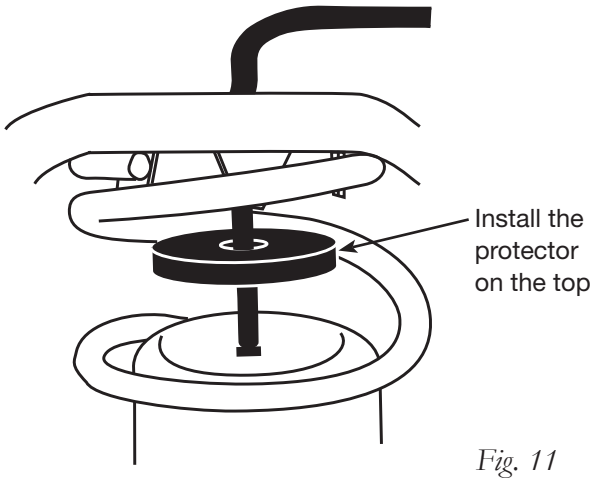

Fig. 11

Installing the Air Lines

1. A single-path air line installation is recommended for vehicles that typically have even weight distribution (Fig. 12). If weight in the vehicle varies from side to side and unequal pressures are needed to level the load, use a dual-path installation. For dual-path air line installations, eliminate the tee fitting (L) and route separate air lines for both air springs (Fig. 13).

Single-Path Air Line Routing

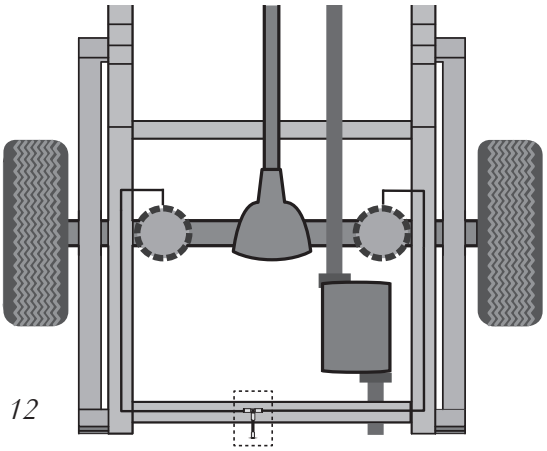

Fig. 12

Dual-Path Air Line Routing

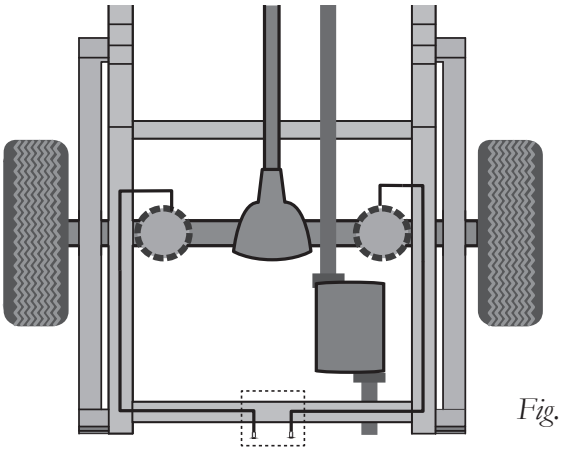

Fig. 13

TO PREVENT THE AIR LINE FROM MELTING, MAINTAIN AT LEAST 6" (152MM) FROM THE EXHAUST SYSTEM TO THE AIR LINE.

2. If installing a single-path air line, choose a location for the tee fitting on the wheel well or rear bumper. Determine and cut adequate length of air line (D) to reach to the tee from left and right side air springs. Make clean, square cuts with a razor blade or hose cutter (Fig. 14). Do not use scissors or wire cutters.

3. Leave sufficient air line slack to prevent any strain on the fitting during axle motions.

4. Use this procedure (Fig. 15) for all air line connections:

   a. Slide the air line clamp (F) onto the air line.

   b. Push the air line and air line clamp over the barbed stem so that the air line covers all the barbs.

   c. Compress the ears on the air line clamp with pliers and slide it forward to fully cover the barbs.

5. Select a location for the Schrader valve (M), ensuring that the valve will be protected and accessible with an air hose (Fig. 16). Drill a 5/16" (8mm) hole, if necessary. Determine and cut adequate length of air line to reach from the tee to the Schrader valve or from the air springs to the valve if using a dual-path installation.

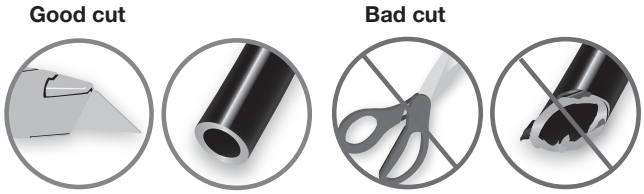

Fig. 14

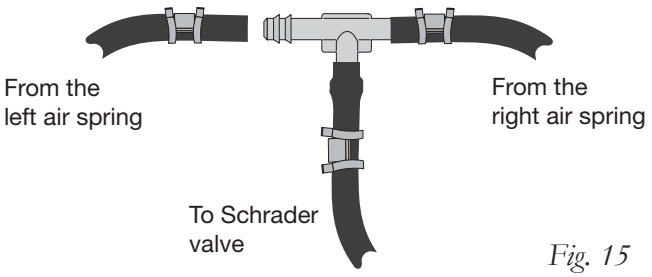

Fig. 15

A. Inside fuel tank filler door
B. Inside rear wheel wells
C. License plate or
rear bumper area

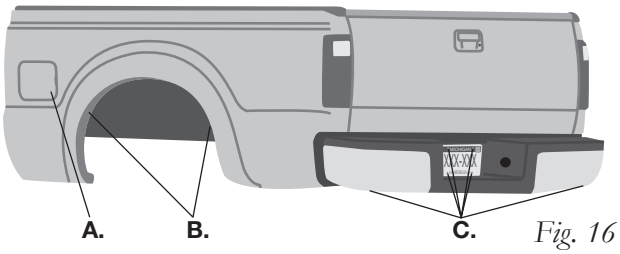

Fig. 16

6. Drill a 5/16" (8mm) hole for the Schrader valve and mount as shown (Fig. 17). Install the air line on the Schrader valve first. The rubber washer (K) serves as an outside weather seal.

DO NOT INFLATE THE AIR SPRINGS BEFORE READING THE MAINTENANCE AND USE GUIDELINES IN THIS INSTALLATION GUIDE, AS WELL AS THE USER GUIDE INCLUDED WITH THIS KIT.

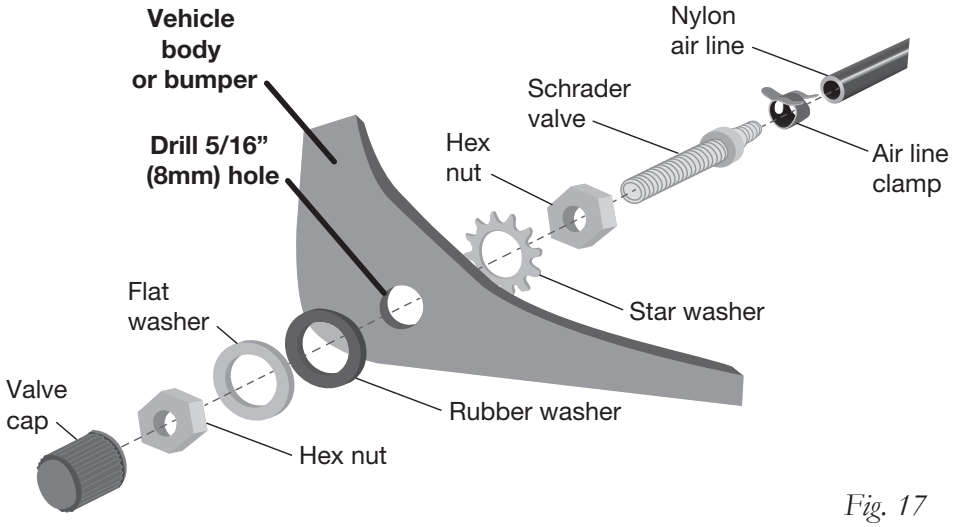

Fig. 17

INSTALL THE HEAT SHIELD

1. Attach the metal heat shield to the exhaust where it is closest to the driver's (left) side air spring (Fig. 18).

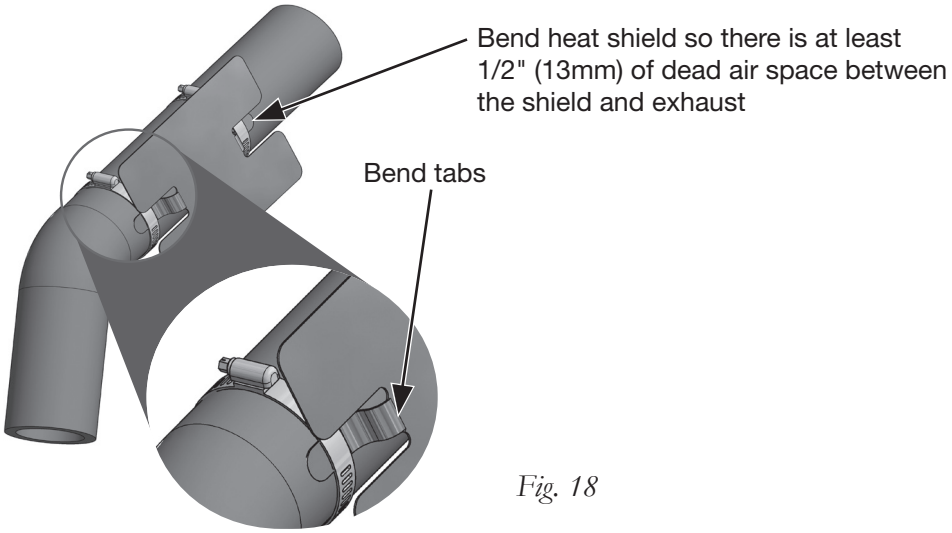

Fig. 18

COMPLETE THE INSTALLATION

2. Once the air lines have been installed, raise the suspension or lower the body completely and remove the safety stands. Inflate the air springs to 5 PSI (.34BAR).

Before Operating

INSTALLATION CHECKLIST

- ☐ **Clearance test** — Inflate the air springs to 30 PSI (2BAR) and make sure there is at least 1/2" (13mm) clearance from anything that might rub against each air spring. Be sure to check the tire, brakes, frame, shock absorbers and brake cables.
- ☐ **Leak test before road test** — Inflate the air springs to 30 PSI (2BAR) 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 initial 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 35 PSI (2.4BAR) or 50 PSI (3.45), as noted below.
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.

Minimum Recommended Air Pressure

Maximum Air Pressure — Greater than 1" Spring Pitch

Maximum Air Pressure — Less than 1" Spring Pitch

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 35 PSI (2.4BAR), 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, from the date of original purchase, 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.

*Full Limited Warranty and Return Policy are available at www.airliftcompany.com/warranty and are subject to change.

WARRANTY REGISTRATION & CLAIMS

- To register your warranty, please visit https://www.airliftcompany.com/support/warranty/register/
- To submit a warranty claim, please visit https://www.airliftcompany.com/support/warranty/submit-claim/

Thank you for purchasing Air Lift Products!

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