

SlamAir™

Kit 59103

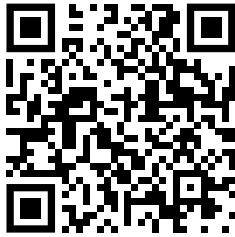


INSTALLATION GUIDE

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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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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Hardware and Tools

HARDWARE LIST

Item	Part #	Description.....Qty
A	58482	Air spring 2
B	10549	Installation tool with nylon nut 1
C	07940	Upper bracket 2
D	03616	Lower bracket 2
E	01426	Clamp bar 2
F	18454	Nylon nut 2
G	10583	U-bolt 2
H	17139	3/8" X 1" Self-tapping screws 4
I	18444	3/8" Flat washer 6
J	18447	3/8" Oversized flat washer 8
K	18435	3/8" Lock nut 8
L	17124	1/2" X 7/8" Hex head cap screw 2
M	18414	1/2" Flat washer 2
N	13377	Square spacer 2
O	17129	Washer head frame bolt 8
P	13225	Round spacer 4
Q	21837	90 degree Swivel air fitting 2
AA	20086	Air line 16'
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

TOOLS NEEDED

Description.....	Qty
1/2", 3/4", 7/16" and 1 1/16" open-end or box wrenches	1 ea.
Ratchet w/ 3/8", 9/16" & 1/2" deep well sockets	1 ea.
Torque wrench	1
3/8" Nut driver	1
3/8" Drill bit (very sharp)	1
Heavy duty drill	1
Hose cutter, razor blade, or sharp knife	1
Hoist or floor jack	1
Safety glasses	1
Safety stands	2
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, maintenance and troubleshooting of the SlamAir 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, tool list, step-by-step installation information, maintenance tips, safety information and a troubleshooting guide.

Air Lift Company reserves the right to make changes and improvements to its products and publications at any time. Contact Air Lift Company at (800) 248-0892 or online at www.airliftcompany.com for the latest version of this manual.

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.

NOTE

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

Installing the SlamAir System

IMPORTANT INSTALLATION INFORMATION

IMPORTANT: Your vehicle may be equipped with a rear brake proportioning valve. Any type of load assist product could affect brake performance. Air Lift recommends checking 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 the load assist product will have NO AFFECT on brake system performance.

CAUTION

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.

This is a universal kit for custom applications. In no way should the air spring or any of the kit's components be the suspension limiter in compression or extension. This air spring can compress to 3.0" and extend to 9.1". Regardless of load, the air pressure should be adjusted so that ride height is maintained at all times. The shock absorber is usually the limiter on extension. If this is not the case, you should consider the use of limiting straps.

GETTING STARTED

- Determine the custom ride height of the lowered vehicle. The custom ride height is the distance between the bottom edge of the wheel-well and the center of the hub when the vehicle is in the custom, lowered condition (fig. 1). In some cases, the ride height is not perfectly level.
 - Remove unusual loads and examine the vehicle from the side to ensure it is on a level surface.
 - 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 custom, lowered ride height.
- Measure the distance between the frame and the tire. This kit requires a minimum of 5" of clearance for a fully inflated air spring (fig. 2).

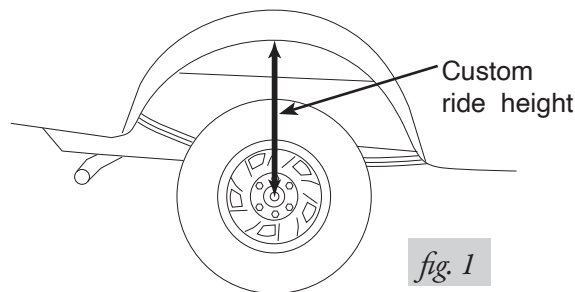


fig. 1

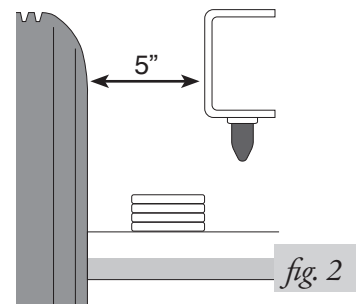


fig. 2

RAISING THE VEHICLE

- Raise the vehicle and remove the wheels.
- Ensure that the vehicle is at the custom, lowered ride height. If not, raise the frame or lower the axle as necessary.
 - If the vehicle is raised with an axle contact hoist, place axle stands under the frame and lower the axle as needed.
 - If the vehicle is raised with a frame contact hoist, place axle stands under the axle and lower the frame as needed.
 - If the vehicle is raised with a jack and supported with axle stands on the frame, use a floor jack to raise the axle.

DECIDING WHERE TO MOUNT

Due to the wide variety of lowering kits on the market, Air Lift cannot guarantee that this kit will fit every vehicle. You may need to modify the upper bracket, or even weld it, depending on the type of kit the vehicle was lowered with or optional equipment present.

Where you install the air spring kit will depend on the type of vehicle you have and the placement necessary to avoid brake lines, gas lines, hydraulic lines or other items that may interfere with drilling the upper bracket holes. Some situations, such as vehicles with staggered shock absorbers, may require installing the air springs in front and behind the axle on opposite sides of the vehicle. The installation tool included in this kit will help check for obstacles and decide which of the installations is best for your vehicle.

On some models it may be necessary to invert the upper bracket in a “legs up” position to achieve the correct mounting position. Do not “hang” the axle on a frame contact hoist while checking this step for proper placement of the upper bracket (C). Vehicle suspension must be in custom ride height condition (like sitting in a parking lot).

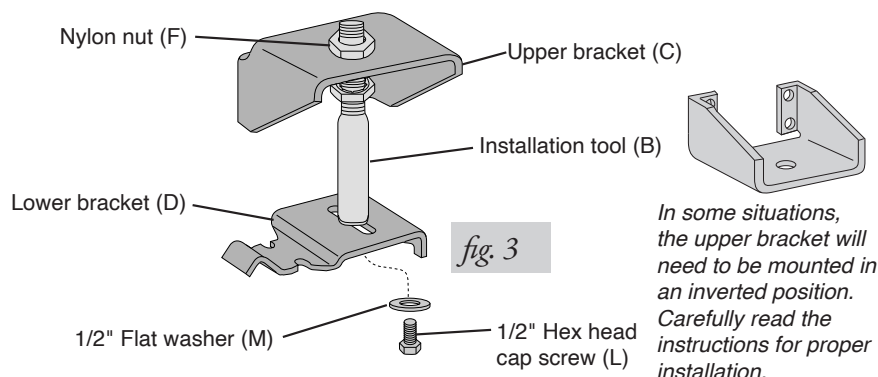
ASSEMBLING THE INSTALLATION TOOL

1. The tool provided with this kit will assist in proper setup and alignment of the air spring and will also position the upper bracket for drilling the bolt holes. The tool attaches to the upper and lower bracket and is rigid so that it will self-align the upper bracket. The threaded section of the upper part of the tool ensures that the air spring can only be mounted at the correct height.
2. Secure the upper bracket to the installation tool using the provided nylon nut (F) (fig. 3).

NOTE

As stated above, it may be necessary to invert the upper bracket based on the type of drop installed.

3. Loosely attach the tool (B) to the lower bracket (D) using a 1/2" flat washer (M) and a 1/2" hex head cap screw (L) (fig. 3). Leave loose for later adjustment.



ATTACHING THE LOWER BRACKET

NOTE

See the 1999 Silverado/Sierra Special Instructions section before proceeding with installation.

1. Set the installation tool assembly on the leaf spring.
2. Place the hook end of the lower bracket over the stock U-bolt or the edge of the upper spring retaining plate (figs. 4 & 5 on next page).

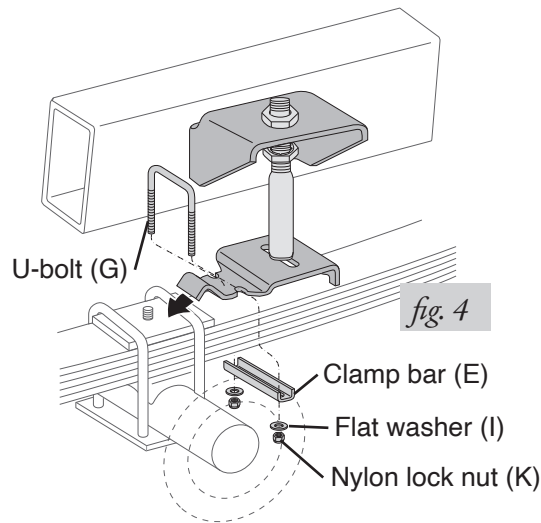
NOTE

This is important so that the lower bracket does not “walk” up the leaf spring.

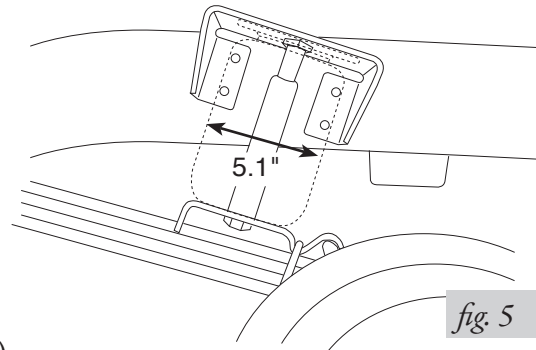
3. Attach the lower bracket to the leaf spring with the supplied U-bolt (G), lower clamp bar (E), 3/8" flat washers (I) and nylon lock nuts (K). Torque to 16 lb.-ft.

NOTE

The bracket will pull down flat to the leaf spring when the nuts are tightened.



Check for sufficient clearance around the installation tool.



MOUNTING THE UPPER BRACKET

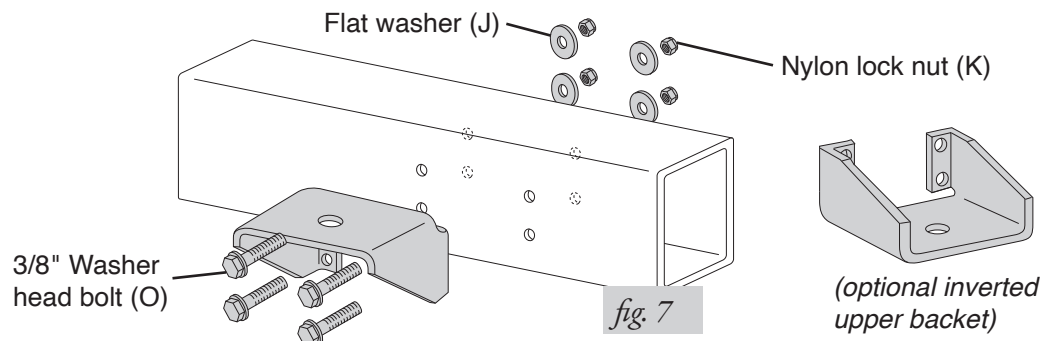
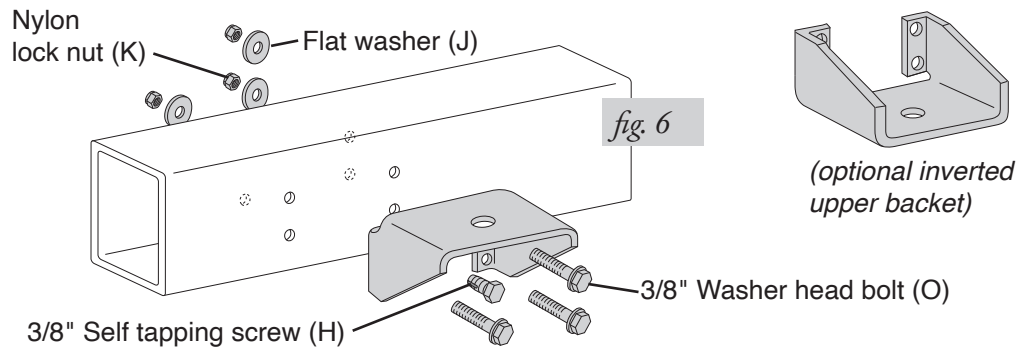
NOTE

See the 1999 Silverado/Sierra Special Instructions section before proceeding with installation.

1. Using the slot in the lower bracket, push the upper bracket against the frame rail.
2. Using the supplied nylon nuts (F), adjust the upper bracket so that the upper bracket legs are flat against the frame rail and all four holes are in the middle section of the frame (figs. 6 & 7). The mounting holes must stay 3/4" from the rounded edges of the frame rail and **AT LEAST 1 1/2" must be left above the top of the upper bracket for air fitting clearance**. The brackets can be mounted anywhere within the threaded range of the installation tool.

NOTE

On some models it may be necessary to invert the upper bracket in a "legs up" position to achieve the correct mounting position (figs. 6 & 7).



IMPORTANT: Please read this entire section before drilling any holes.

 **CAUTION**

BEFORE DRILLING, CHECK THE BACK SIDE OF THE FRAME FOR CLEARANCE ISSUES SUCH AS BRAKE LINES, GAS LINES, ELECTRICAL LINES, ETC. ALL OBSTACLES NEED TO BE TEMPORARILY RELOCATED TO CLEAR THE AREA.

1999 SILVERADO/SIERRA SPECIAL INSTRUCTIONS

1. Adjust the upper bracket along the threaded tool until the upper rearward hole lines up squarely on the ridge as shown in Figure 8.
2. Not all '99 Silverado/Sierra models have this reinforcing frame ridge. If yours does not, place bracket in same position and follow same installation instructions.



fig. 8

3. Center punch the lower rear hole and drill a 3/8" hole (fig. 9).

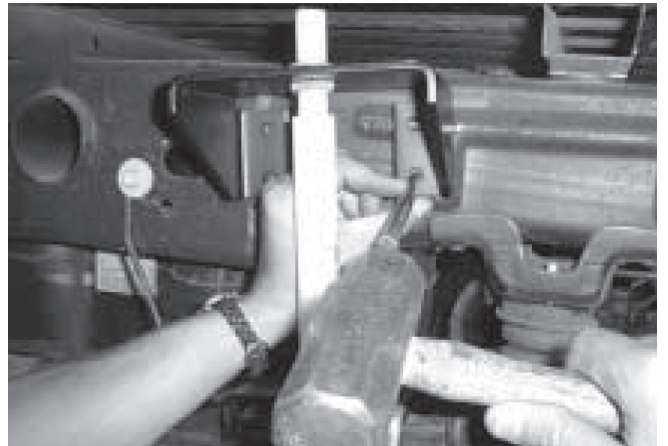


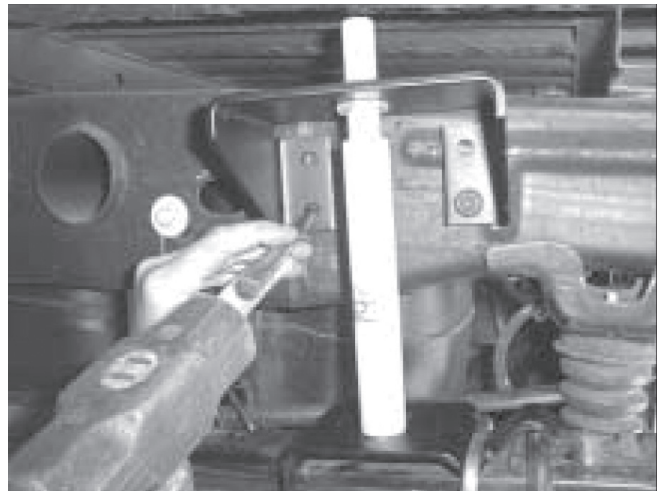
fig. 9

4. Insert the square spacer (N) between the upper bracket and the frame as shown in Figure 10. Loosely attach frame bolt (O), large washer (J) and nylon lock nut (K).

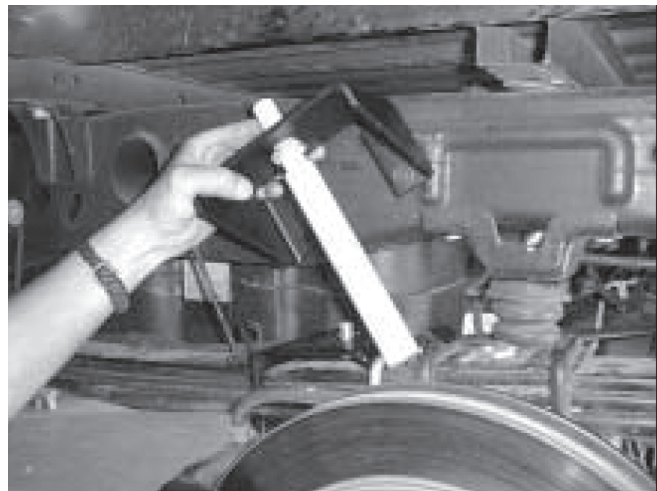


fig. 10

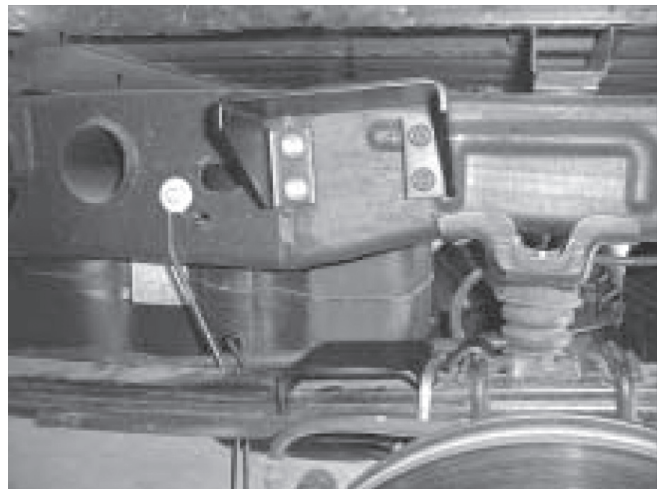
- Center punch the forward lower hole, and drill a 5/16" hole (fig. 11).

*fig. 11*

- Remove tool by removing lower attaching bolt and upper nylon nut (F). Swing upper bracket down to remove tool (fig. 12).

*fig. 12*

- Attach upper bracket at forward lower hole with a self-tapping bolt (H) (fig. 13). Tighten rear lower hole frame bolt securely.
- Centerpunch and drill remaining two upper holes. Be sure to drill a 5/16" hole in the forward upper hole and attach with a self-tapping bolt (H). Drill a 3/8" hole in the rear upper hole, attaching with frame bolt (O), large washer (J) and nylon lock nut (K).

*fig. 13*

INSTRUCTIONS FOR ALL OTHER INSTALLATIONS

1. Using the upper bracket as a template, centerpunch one of the lower mounting holes and drill a 3/8" hole through the frame (fig. 14). Install one of the mounting bolts (O) and LOOSELY attach the oversized flat washer (J) and lock nut (K). Now centerpunch and drill a 3/8" hole at the OTHER LOWER mounting hole location. DO NOT insert the mounting bolt at this time.

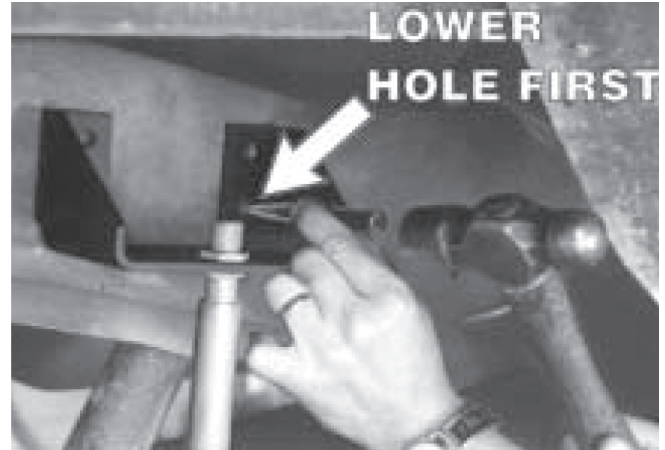


fig. 14

2. You can now remove the installation tool by removing the upper nylon nut, loosening and removing the tool from the bottom bolt (leave in place), and slightly rotating the upper bracket to give you enough room to completely remove the tool (fig. 15).
3. Save the upper nylon nut to attach the air spring as shown on page 10.



fig. 15

NOTE

MANY DODGE AND FORD PICKUP CHASSIS HAVE AN INDENT IN THE FRAME RAIL. IT IS NECESSARY TO USE THE PROVIDED SPACERS (FIGS. 16 & 17) BEHIND THE MOUNTING HOLES IN THE UPPER BRACKET THAT FALL INTO THE INDENTED AREA. USE TWO ROUND SPACERS (P) FOR THE DODGE AND ONE SQUARE SPACERS (N) FOR THE FORD PER SIDE.



fig. 16



fig. 17

- Rotate the upper bracket back to the original location and install the washer head frame bolt (O), 3/8" Oversized flat washer (J), and lock nut (K) through the second hole you drilled (fig. 18). Now tighten both of the installed fasteners to 20 lb.-ft.. Center punch and drill the other two holes and install the fasteners. Torque all fasteners to 20 lb.-ft..

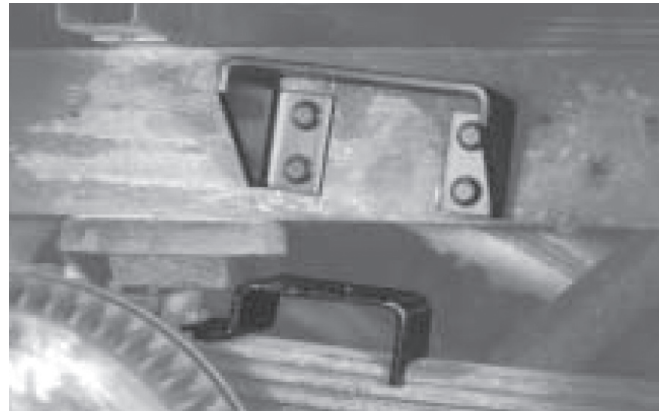


fig. 18

MOUNTING THE AIR SPRING

- Install the air fitting (Q) into the top of the air spring (A) (fig. 19). Tighten with fingers and then seal the fitting by tightening 1 1/2 turns with an 7/16" open-end wrench, being careful to tighten on the metal hex nut only. **IMPORTANT:** Do not overtighten.

NOTE

The swivel air fitting is precoated with a sealant.

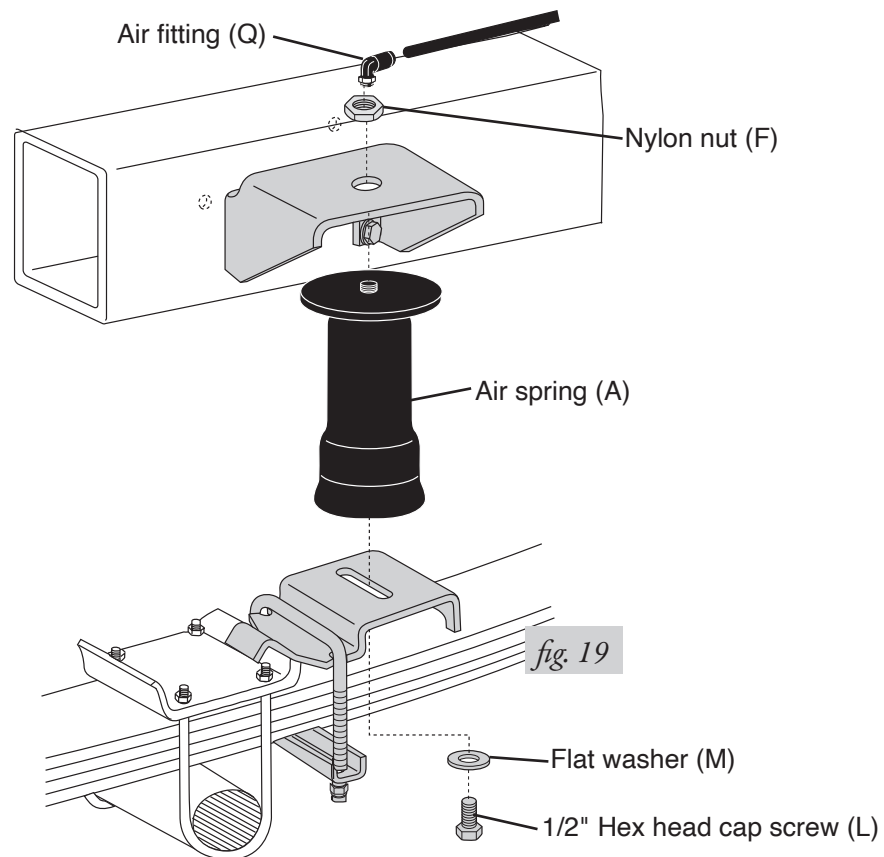
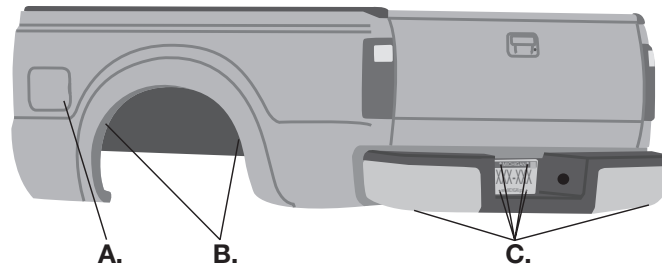


fig. 19

- Collapse the air spring and guide the fitting through the center mounting hole in the upper bracket.
- Install the nylon nut (F), flange up, onto the upper threadpost of the air spring. **Leave loose for final adjustment.**
- Attach the air spring to the lower bracket (fig. 19). Carefully hold the lower mounting bolt (L) with a 1 1/16" open end wrench and hand turn the air spring onto the lower mounting bolt. Important: **Leave loose for later adjustment.**

Installing the Air Lines

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



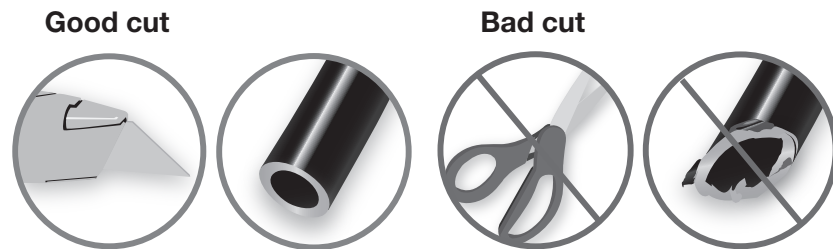
A. Inside fuel tank filler door
B. Inside rear wheel wells

C. License plate or rear bumper area

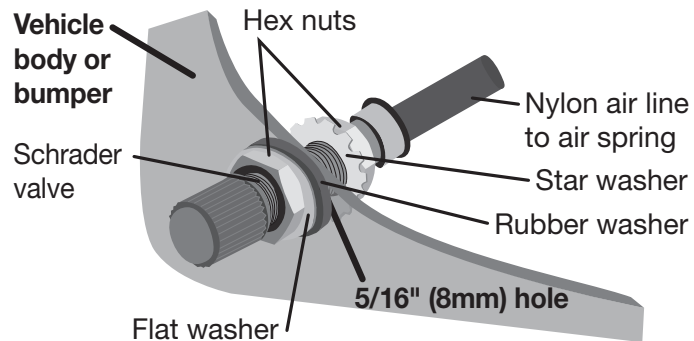
CAUTION

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

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



3. 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).
4. Install the Schrader valve in the chosen location.



Finished Installation

ALIGNING THE AIR SPRING

IMPORTANT: With the top and bottom of the air spring still loose, inflate the air spring to approximately 10 PSI.

1. Use the slotted adjustment in the lower bracket to correctly align the air spring between the upper and lower brackets. This can be accomplished by tapping it inboard (towards the vehicle) or outboard (towards the wheel) for proper alignment. There should be a symmetrical cushion of air around the base of the air spring when correctly positioned.



2. With the top nut still loose, tighten the lower mounting bolt with a 3/4" open end wrench to 10 lb.-ft.
3. Tighten the upper nylon nut with a 1 1/16" open end wrench to 4 lb.-ft.
IMPORTANT: Do not overtighten.
4. Repeat on the other side of the vehicle.

Before Operating

INSTALLATION CHECKLIST

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



**Minimum Recommended
Air Pressure**



Maximum Air Pressure

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

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.

Need Help?

Contact our customer service department by calling (800) 248-0892, Monday through Friday, 8 a.m. to 5 p.m. Eastern Time. For calls from outside the USA or Canada, our local number is (517) 322-2144.



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

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