

LoadLifter 5000™

ULTIMATE



Installation Guide



ZR2 / AT4X



Watch the video

Info on Table of Contents page

Kits 88408

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.

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*.

System Overview

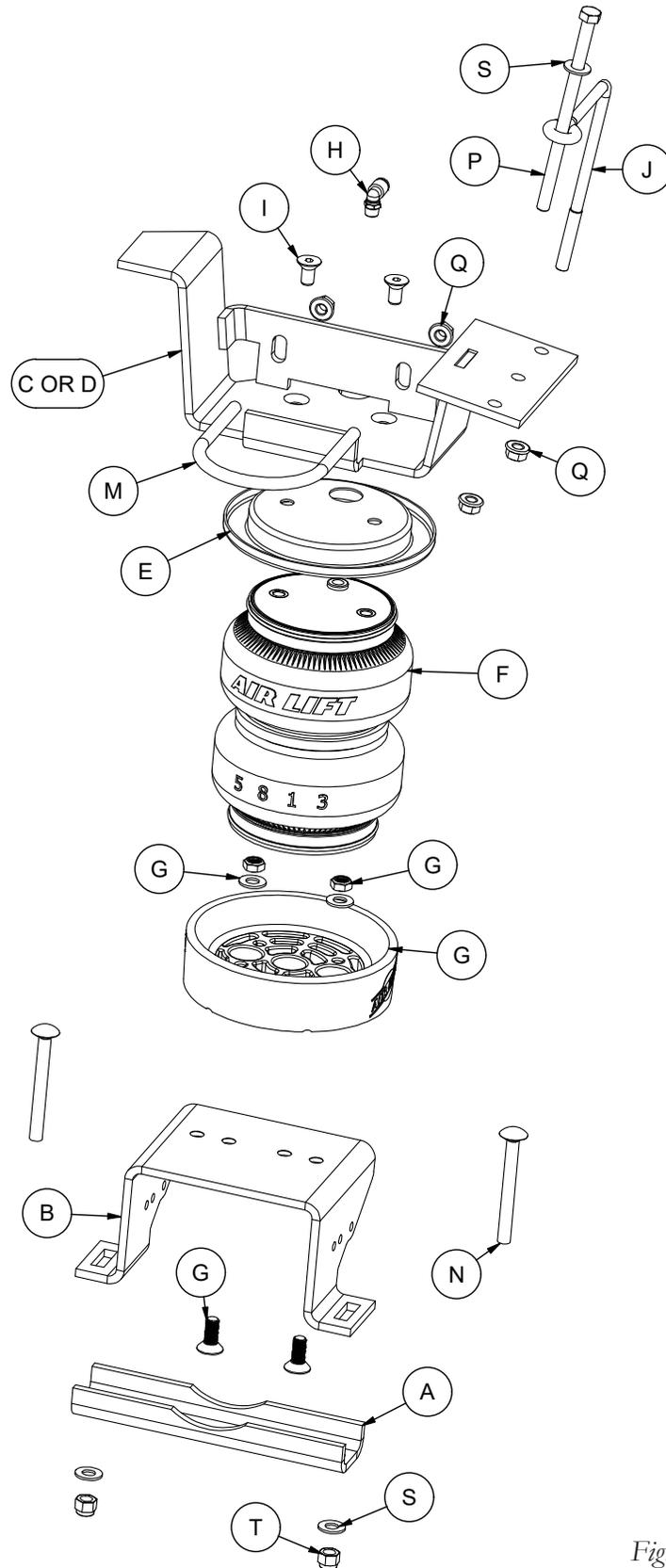


Fig. 1

Hardware and Tools

HARDWARE LIST

| Item | Part# | Description | Qty |
|------|-------|--|-----|
| A | 01851 | Clamp bar | 2 |
| B | 03702 | Lower bracket | 2 |
| C | 07808 | Upper bracket, right hand side | 1 |
| D | 07902 | Upper bracket, left hand side | 1 |
| E | 11967 | Roll plate | 2 |
| F | 58496 | Air spring | 2 |
| G | 52500 | Air Spring cradle kit | 1 |
| H | 21848 | 90-degree Swivel air fitting | 2 |
| I | 17215 | 3/8-24 X 3/4" Flat head socket cap screw | 4 |
| J | 11323 | L-bolt | 2 |
| K* | 11315 | Left hand brake line bracket | 1 |
| L* | 11320 | Right hand brake line bracket | 1 |
| M | 11771 | 3/8-16 U-bolt | 2 |
| N | 17142 | 3/8-16 X 3 1/2" Carriage bolt | 4 |
| O* | 17449 | M8-1.25 X 10 Hex cap screw | 2 |
| P | 17586 | 3/8-16 X 6 1/2" Hex cap screw | 2 |
| Q | 18422 | 3/8-16 Serrated flange lock nut | 10 |
| R* | 18501 | M8 Flat washer | 2 |
| S | 18444 | 3/8" Flat washer | 6 |
| T | 18435 | 3/8-16 Nylon lock nut | 4 |
| U* | 34365 | Heat shield kit | 1 |
| AA* | 20086 | Airline assembly | 1 |
| BB* | 10466 | Zip ties | 6 |
| CC* | 18411 | 5/16" Lock washer | 2 |
| DD* | 21234 | Rubber washer | 2 |
| EE* | 18501 | M8 Flat washer | 2 |
| FF* | 21233 | 5/16" Hex nut | 4 |
| GG* | 21230 | Valve cap | 2 |

* Not shown in assembly view (Fig. 1).

TOOLS LIST

| Description | Qty |
|--|------|
| Standard and metric open-end or box wrenches | Set |
| Ratchet | 1 |
| Standard and metric, regular and deep-well sockets | Set |
| 7/32" Hex-key wrench | 1 |
| 5/16" Drill bits (very sharp) | 1 |
| Heavy duty drill | 1 |
| Torque wrench | 1 |
| Large screwdriver or small pry bar | 1 |
| Hose cutter, razor blade or sharp knife | 1 |
| Hoist or floor jack | 1 |
| Safety stands | 2 |
| Safety glasses | Pair |
| 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.

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 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 MACHINE OR MINOR PERSONAL INJURY.



NOTE

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

Install the System

PREPARE THE VEHICLE

1. Raise the frame and support the frame with safety stands. Lower the axle as far as it can go (Fig. 2).

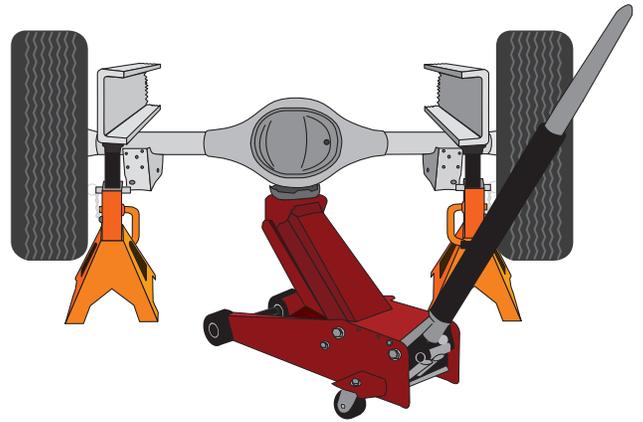


Fig. 2

2. Remove the jounce bumpers from the jounce bumper brackets on both sides by prying them out with a pry bar or large screwdriver (Fig. 3 & Fig. 4).



Jounce bumper in
mounting cup

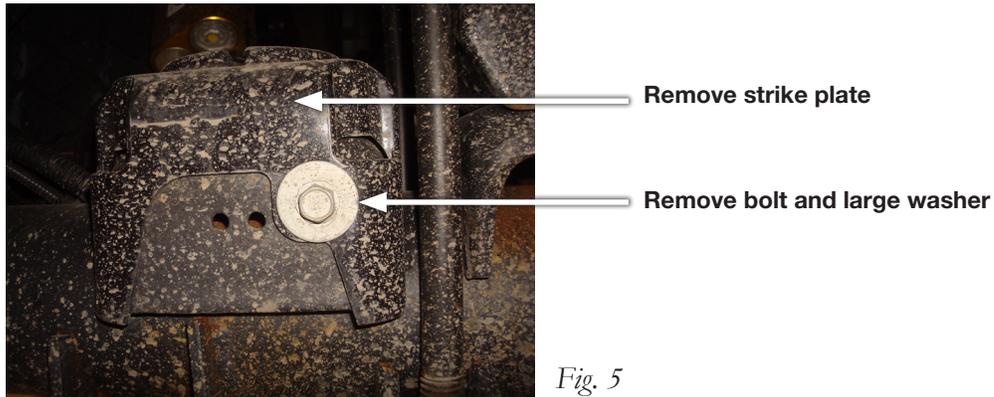
Fig. 3



Jounce bumper
removed

Fig. 4

- Remove the plastic jounce bumper strike plates from the top of the axle by removing the bolt with the large washer from the side. Then, pry loose (using a screwdriver or pry bar to start removal), and pull off once they have been loosened (Fig. 5). These will not be re-used.

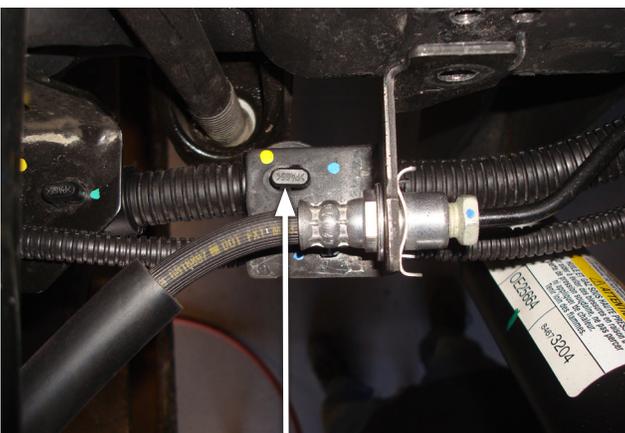


- Remove the two bolts that hold the brake/ABS line bracket onto the back side of the jounce bumper strike plate (Fig. 6 & Fig. 7). Pull the bracket away from the jounce bumper strike plate to make room for the lower bracket to be installed later.


Remove bolt holding bracket

Pull bracket away from jounce bumper strike plate

- Squeeze the two locking tabs on the large ABS wiring harness loom holder that is attached to the stock brake/ABS line bracket and pull out, disconnecting it from the bracket (Fig. 8 & Fig. 9). Detach the opposite side and leave loose for now.


Carefully remove from bracket

Loom holder shown removed

ASSEMBLE THE LOWER BRACKET/CRADLE ASSEMBLIES

1. To determine which holes in the lower brackets (B) to use for installing the cradle to, set them next to each other with the angled sections pointing toward each other (Fig. 10).

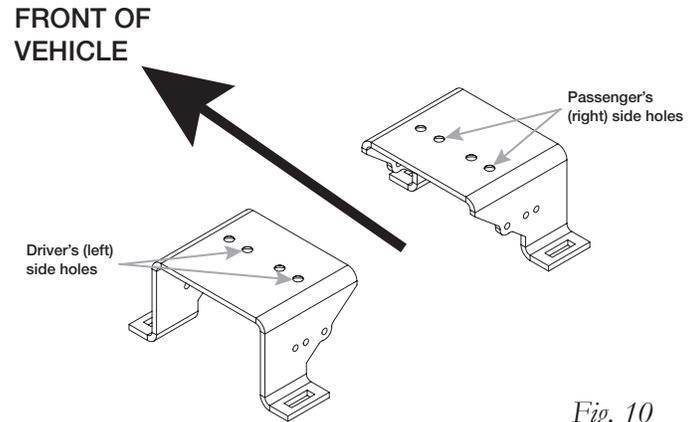


Fig. 10

2. Use the first and third holes on each bracket to attach the cradle (Fig. 11). Attach the cradle onto the air spring with two 3/8" flat head screws, two flat washers and thin nylon lock nuts (hardware supplied in cradle kit (G)).

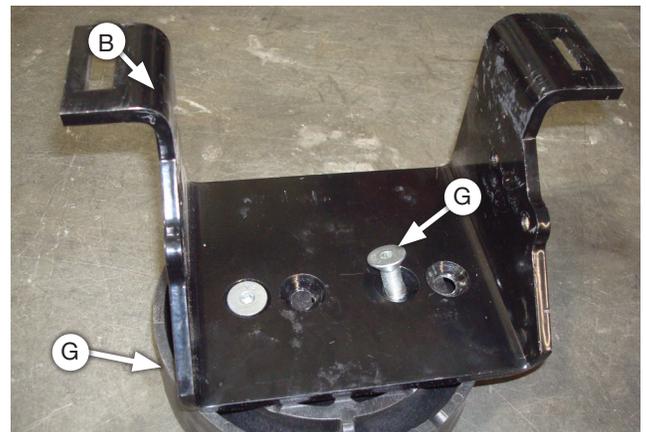


Fig. 11

3. Figure 12 shows driver's (left) and passenger's (right) side assemblies.

NOTE THE ANGLED SIDE OF THE LOWER BRACKET WILL BE ON THE FITTING SIDE OF THE AIR SPRING

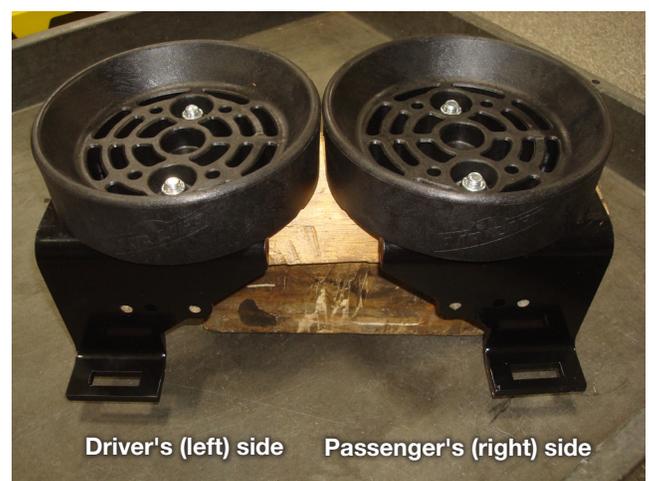


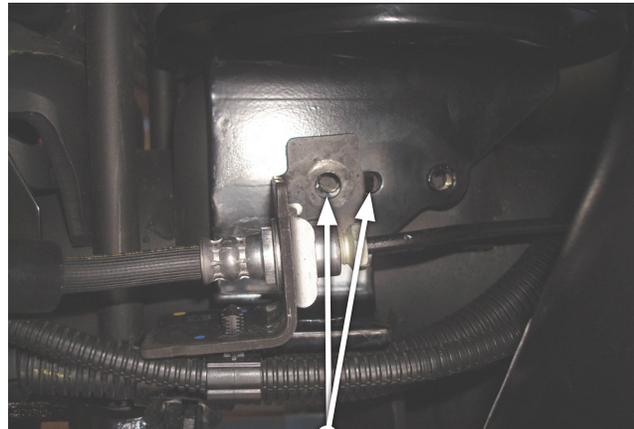
Fig. 12

INSTALL THE LOWER BRACKET/CRADLE ASSEMBLIES

1. With the suspension at full extension, set the driver's (left-hand) and passenger's (right-hand) side assemblies over the axle jounce bumper strike plates. Push the lower bracket down flush to the strike plate. By moving the assembly in and out, align the lower bracket until the tab and the hole on the brake line/ABS bracket align with the holes in the lower bracket (Fig 13).

NOTE

IT MAY BE NECESSARY TO TAP THE LOWER BRACKET ASSEMBLY INTO POSITION.

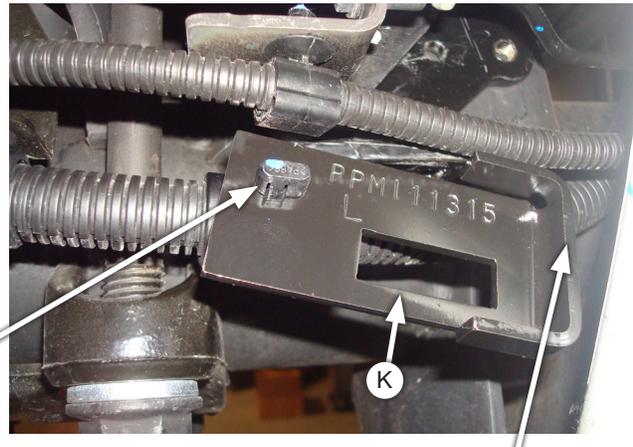


Align brake/ABS bracket hole and tab with holes in the lower bracket

Fig. 13

2. Attach the ABS loom holder (previously removed) to the underside of each ABS loom bracket (K & L) supplied (Fig. 14). The left-hand side is for the driver's (left) side, the right-hand side is for the passenger's (right) side. Once installed, the brackets will nest around the bottom of the lower bracket (Fig. 15).

Insert tab on ABS wire loom here



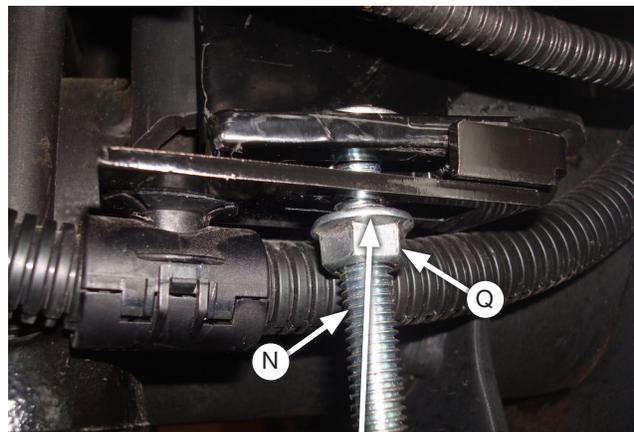
Tab on ABS bracket must be facing up and will nest around the lower bracket when installed

Fig. 14

3. Insert a 3/8" carriage bolt (N) through the lower bracket and ABS loom holder previously installed (Fig. 15). Install a 3/8" serrated flange lock nut (Q) onto the carriage bolt with the flat portion of the nut facing up. Tighten the nut up enough to nest the ABS bracket around the lower bracket, but do not tighten yet. Repeat for both sides.

NOTE

IF WIRE LOOM DOES NOT ALIGN CORRECTLY, UNCLIP LINE HOLDER, ADJUST, THEN RE-CLIP LINE HOLDER BACK ONTO LOOM.



Install nut with flange facing up

Fig. 15

4. Install the remaining 3/8" carriage bolts on the front side of the lower brackets and install the clamp bars (A) over the carriage bolts. Secure the clamp bar with the 3/8" serrated lock nuts (Q) (Fig. 16). Align the clamp bar so that it is somewhat centered between the shock bracket and leaf spring retainer. Torque clamp bar hardware evenly to 16 lb.-ft. (22Nm). Repeat for both sides.

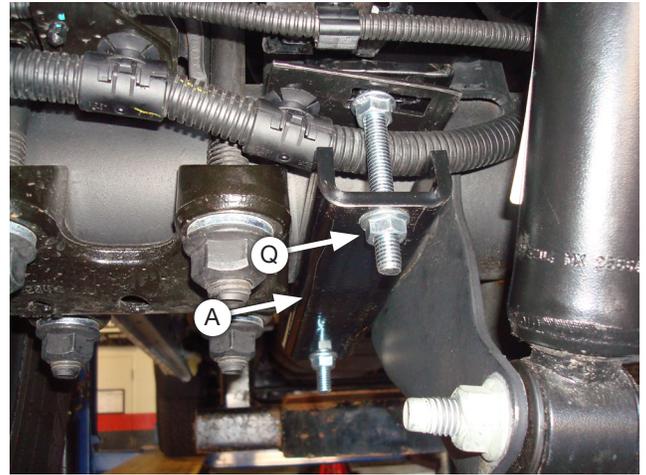


Fig. 16

5. Securely tighten the ABS bracket nut on both sides (Fig. 17).



Fig. 17

6. Reattach the stock brake line/ABS brackets removed in the *Preparing the Vehicle* section using the M8 hex cap screws (O) and M8 flat washers (R) (Fig. 18). Tighten both sides securely.

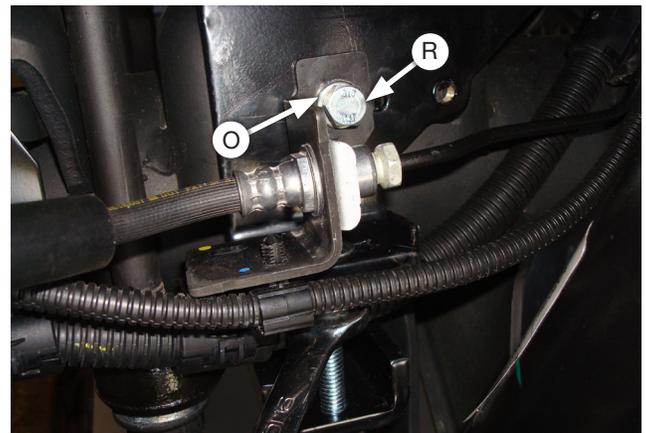


Fig. 18

ASSEMBLE THE AIR SPRINGS

1. Place the roll plates (E) on the air springs (F). Install the 90-degree swivel elbow fitting (H) onto the air springs (Fig. 19). Tighten the air fittings finger-tight plus 1 1/2 turns.

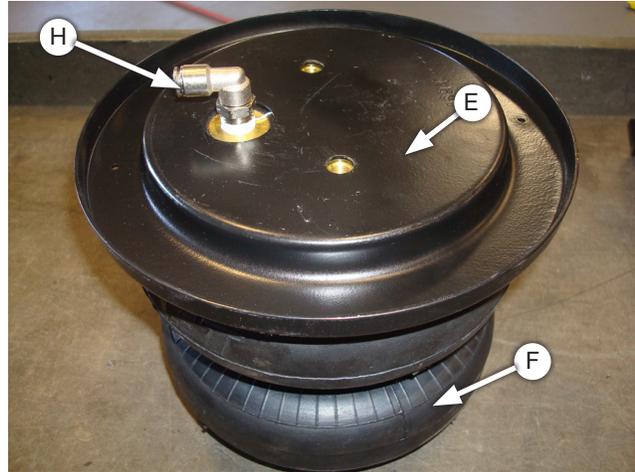


Fig. 19

2. Install both upper brackets (C & D) onto the air spring assemblies using the 3/8" flat head screws (I) (Fig. 20). Torque hardware to no more than 20 lb.-ft. (27Nm).

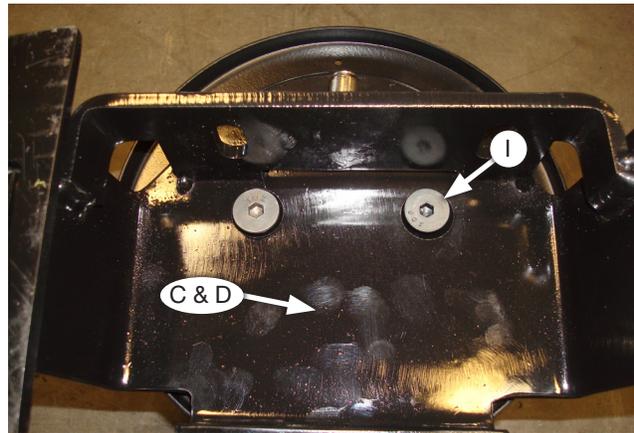


Fig. 20

3. Figure 21 shows driver's (left) and passenger's (right) side assemblies.



Fig. 21

ATTACH THE AIR SPRING ASSEMBLIES

1. For the driver side only, pull the tree holder that secures the wiring harness onto the frame, out of the frame (Fig. 22).



Fig. 22

2. Hold the L-bolt (J) parallel to the frame, insert the eye through the top of the frame from the inside out between the 5th wheel bracket and bed cross member (Fig. 23).



Fig. 23

3. When the eye is completely through the frame, rotate the L-bolt forward and under the wiring harness inside the frame (Fig. 24).



Fig. 24

4. Insert the 3/8" Hex cap screw (P) through a 3/8" flat washer (S), then all the way through the eye of the L-bolt (J) (Fig. 25).

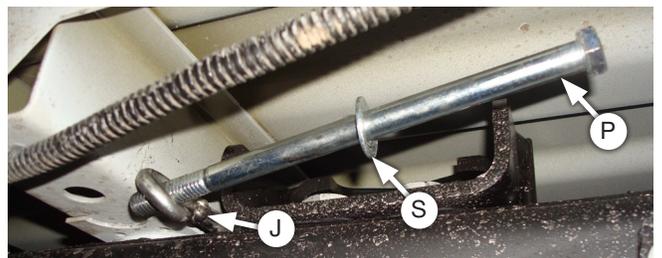


Fig. 25

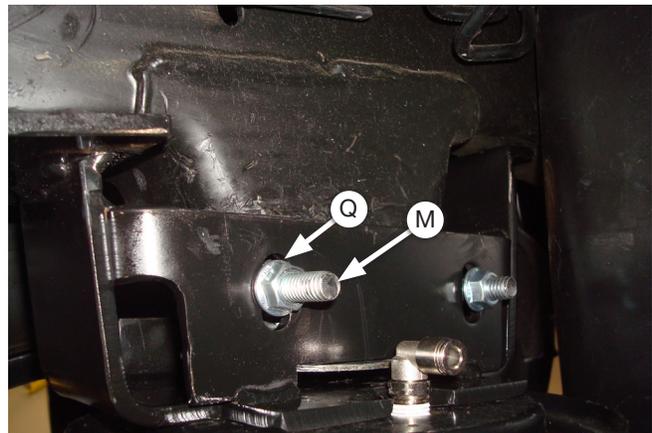
5. Rotate the new “U-bolt” down and through the upper bracket holes behind the axle. Install the 3/8" serrated flange lock nuts (Q) onto the U-bolt (Fig. 26). Install the passenger’s side U-bolt assembly and leave both sides loose at this time.


Fig. 26

6. Install the U-bolt (M) from the outside of the frame, over the jounce bumper mounting cup, and through the upper bracket on the inside of the frame. Attach the U-bolt with the 3/8" serrated flange nuts (Q) and leave loose at this time (Fig. 26 & Fig. 27).

NOTE

IT MAY BE NECESSARY TO TAP THE U-BOLT INTO POSITION BECAUSE OF THE WELDS AROUND THE JOUNCE BUMPER CUP.

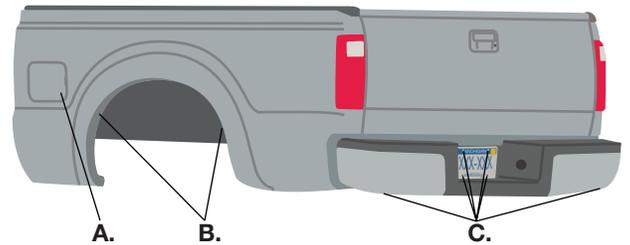

Fig. 27

Install 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. 28).



KEEP AT LEAST 6" (150MM) 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. 28

1. It is recommended that the air line be routed along the top of the frame, forward of the axle, then down to the fitting (Fig. 29). After cutting the air line to length, install the air line thermal sleeve over the air line on the passenger's (right) side before inserting into the fitting. Secure the air lines to the upper air spring mount with zip ties (BB) supplied.



Thermal sleeve

Fig. 29

2. Make clean, square cuts with a razor blade or hose cutter when cutting the air line (AA) (Fig. 30). Do not use scissors or wire cutters.

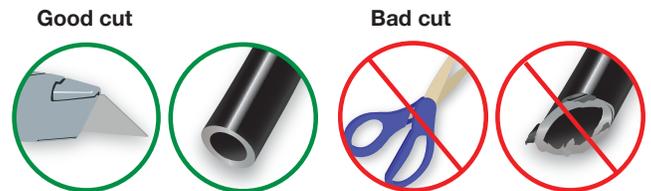


Fig. 30

3. Use zip ties 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" (50mm) 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. 31).

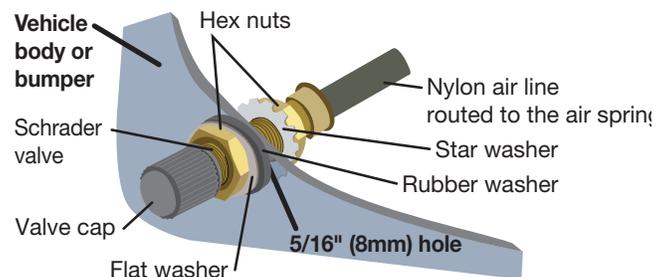


Fig. 31

INSTALL THE HEAT SHIELD

1. Bend tabs to provide a dead air space between exhaust pipe and heat shield. (Fig. 32) Attach the heat shield to the exhaust pipe using the clamps. Bend the heat shield for maximum clearance to the air spring.

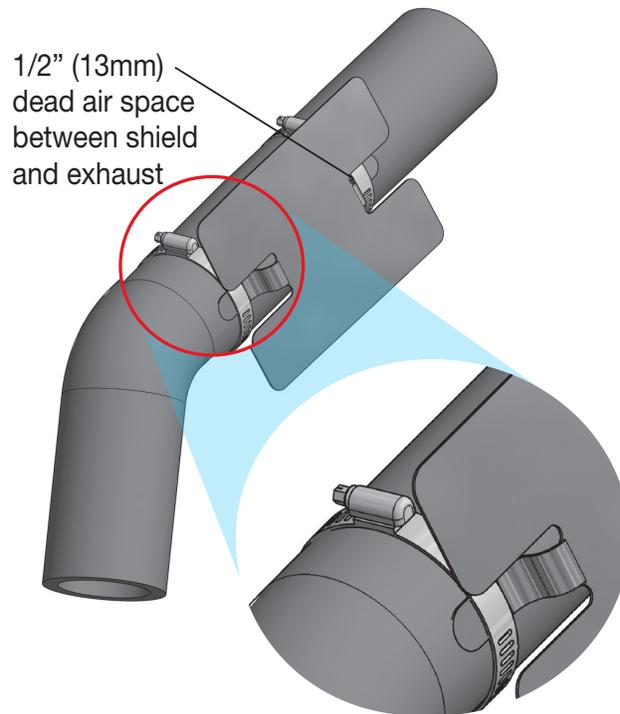


Fig. 32

2. Figure 33 shows the heat shield installed.

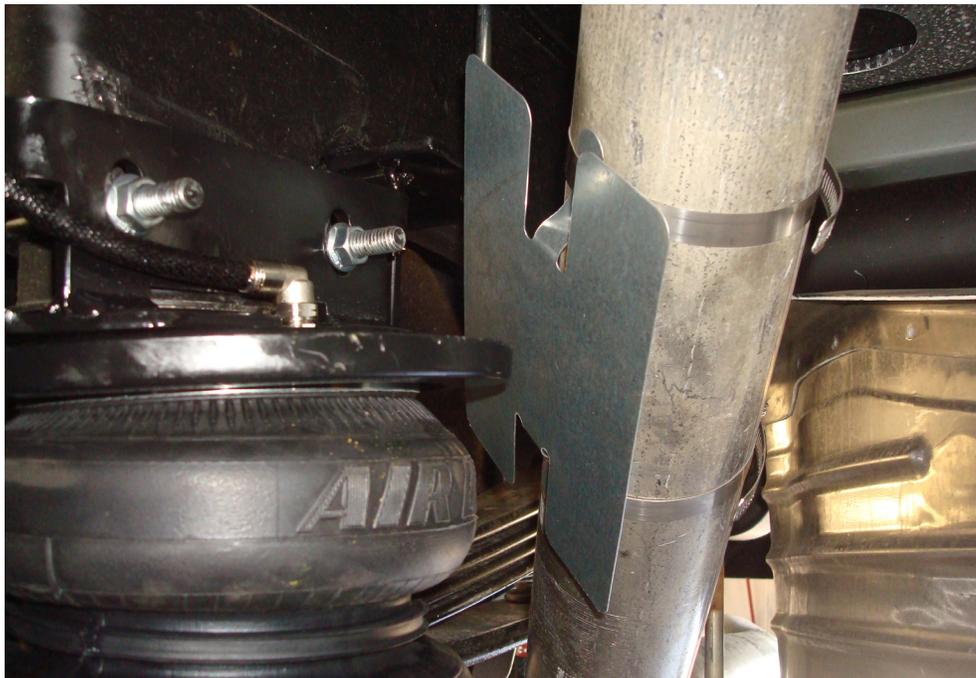


Fig. 33

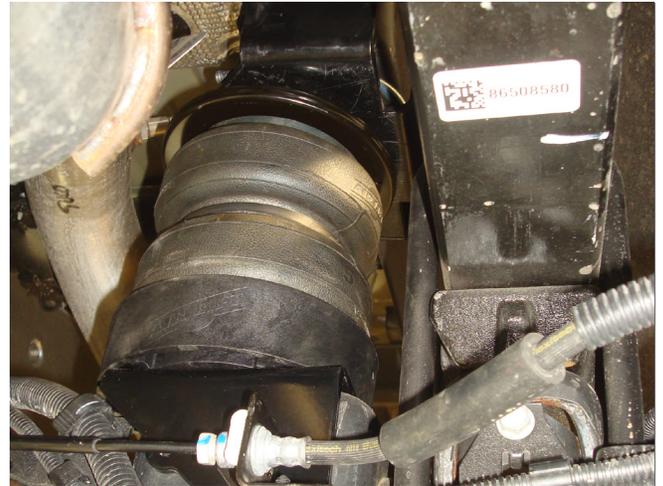
Finish the Installation

1. Once the hose is installed, inflate the system to 10 PSI and torque both upper bracket U-bolts to 10 lb.-ft. (14Nm), starting with the square U-bolt first.

The images show the finished installation of both sides.



Inside, front of axle view of passenger's (right) side installation.



Back, rear of axle view of passenger's (right) side installation.



Inside, front of axle view of driver's (left) side installation.



Back, rear of axle view of driver's (left) side installation.

Congratulations!

You are now the proud owner of an Air Lift air suspension system. Enjoy!

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** — 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 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



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, 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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