

Load**LIFTER** 5000™ **ULTIMATE**

ADJUSTABLE AIR HELPER SPRINGS

TOW AND HAUL WITH SAFETY AND COMFORT™



Kit Number
88230

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.

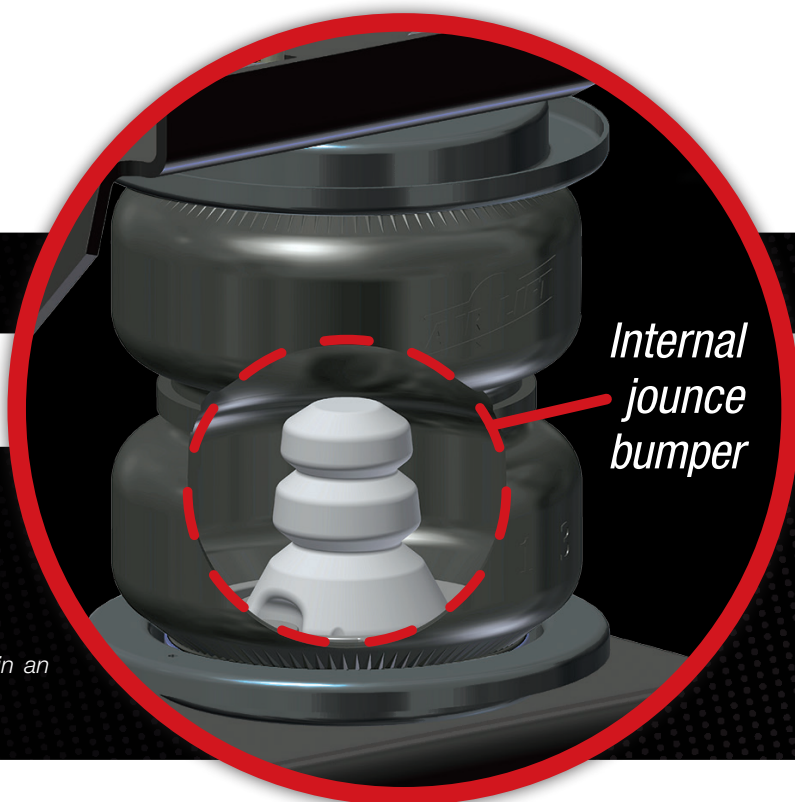


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Installation Diagram

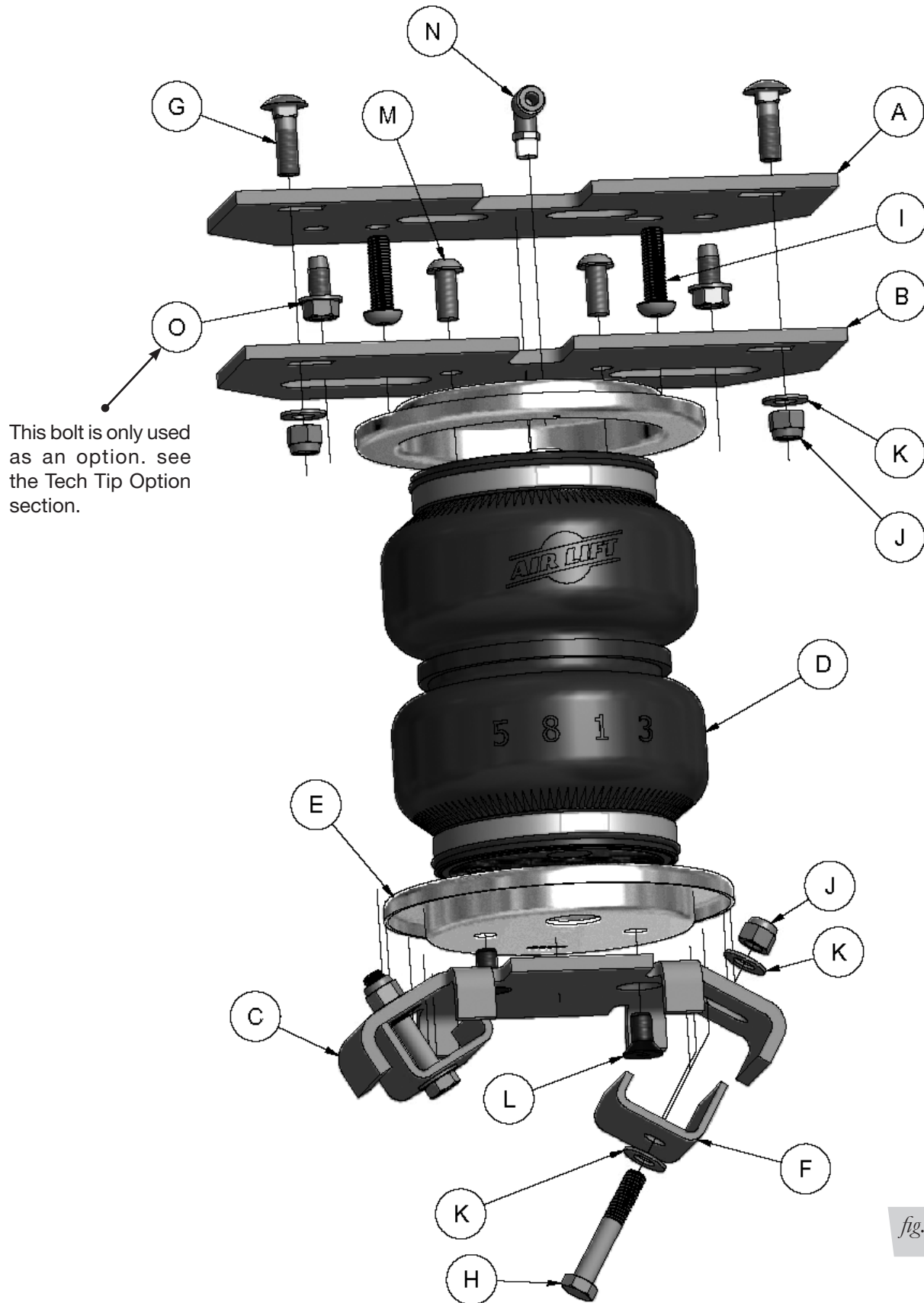


fig. 1

HARDWARE LIST

Item	Part #	Description.....	QTY
A	07057	Upper Frame Bracket.....	2
B	07058	Upper Bellows Bracket.....	2
C	03062	Lower Bracket	2
D	58496	Air Spring.....	2
E	11967	Roll Plate	4
F	01663	Lower Bracket Retainer (J-Clamp).....	4
G	17361	3/8"-16 x 1 1/4" Carriage Bolt.....	4
H	17420	3/8"-16 x 2 1/4" Hex-Head Bolt	4
I	17366	M10-1.5 x 35 Button-Head Screw	4
J	18435	3/8" Nylon Lock Nut.....	8
K	18444	3/8" Flat Washer.....	12
L	17215	3/8"-24 x 7/8" Flat-Head Screw.....	4
M	17365	3/8"-24 x 7/8" Button-Head Screw	4
N	21837	90-Degree Swivel Fitting	2
O	17151	3/8" x 3/4" Self-Tapping Bolt.....	4
AA	20086	Air Line Assembly.....	1
BB	10466	Zip Ties.....	6
CC	21230	Valve Cap	2
DD	18501	5/16" Flat Washer.....	2
EE	21234	Rubber Washer.....	2
FF	18411	Star Washer	2
GG	21233	5/16" Hex Nut.....	4

TOOLS LIST

Description.....	QTY
Hoist or Floor Jacks	1
Safety Stands	2
Safety Glasses.....	1
Torque Wrench	1
Standard Open-end Combo Wrenches.....	1
Ratchet.....	1
Metric and Standard Sockets.....	1
#6 Metric Hex Key Wrench (socket if available)	1
7/32 Hex Key Wrench (socket if available)	1
5/16" Drill Bit (very sharp).....	1
Heavy Duty Drill.....	1
Hose Cutter, Razor Blade or Sharp Knife.....	1
Air Compressor or Compressed Air Source.....	1
Spray Bottle with Dish Soap/Water Solution.....	1

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.



INDICATES IMMEDIATE HAZARDS WHICH WILL RESULT IN SEVERE PERSONAL INJURY OR DEATH.



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



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

Installing the LoadLifter 5000 Ultimate System

GETTING STARTED

1. Raise the vehicle and support the axle with safety stands, setting the jack stands as wide as possible on the axle (Fig. 2).

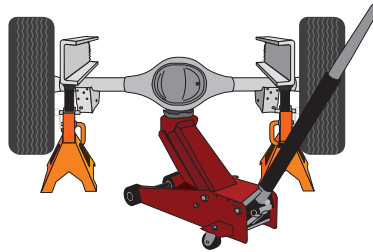


fig. 2

2. Drop the axle or raise the frame up to make room for the assemblies to be put into position between the frame and axle.
3. Remove the jounce bumper from under the frame rail (Fig. 3).

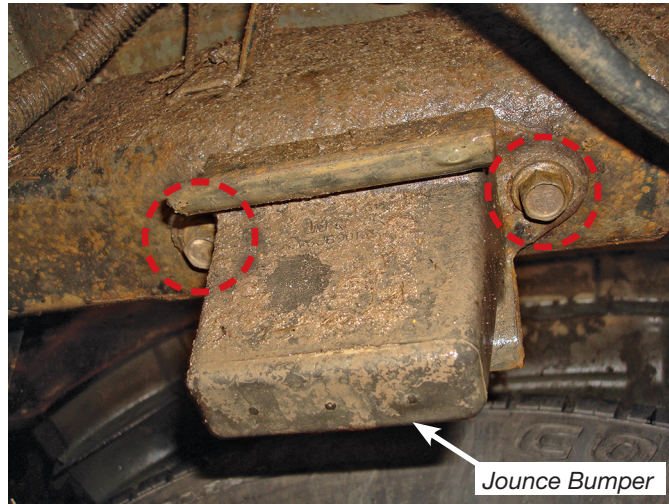


fig. 3

4. Attach the upper frame bracket (A) to the frame using the two M10-1.5 x 35 button-head screws (I). Torque to 30 lb.-ft. (41Nm).

NOTE

The slot in the frame goes inboard toward the inside of the vehicle (Fig. 4). Repeat for the opposite side.

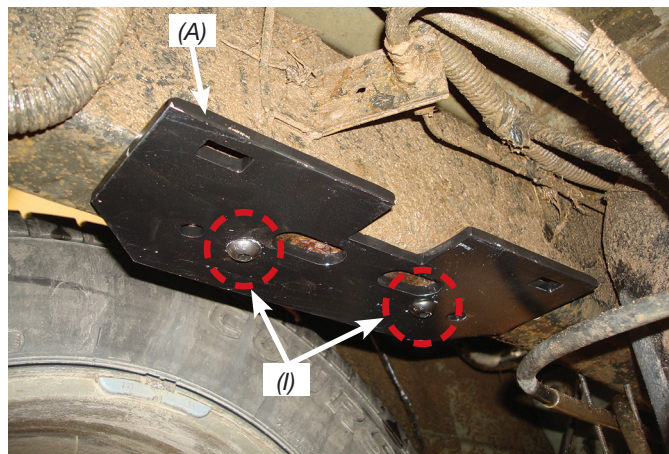


fig. 4

TECH TIP OPTION

If one of the jounce bumper bolts break upon removal, bolt the bracket to the frame as noted above using the jounce bumper mounting hole that the other bolt was removed from, to align the bracket.

1. Line up the hole in the upper bracket over the broken bolt (as if being bolted as stated above).
2. Center punch and drill a 5/16" hole in the center of the outside hole next to the broken bolt hole (Fig. 5).

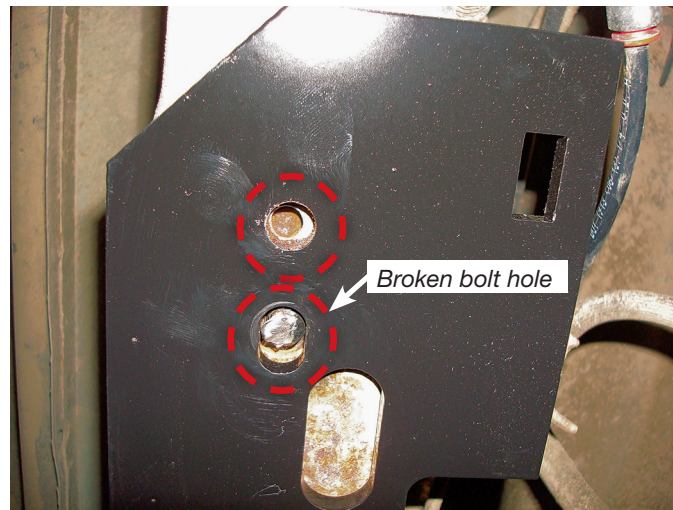


fig. 5

3. Insert and tighten a self-tapping bolt (O) into the hole drilled. Torque the bolt to 15 lb.-ft. (20Nm) (Fig. 6).

NOTE

Figure 6 shows the upper bracket installed to the frame using the supplied M10 bolt (I) and a self-tapping bolt (O). Use the self-tapping bolts only if the existing jounce bumper bolts break.

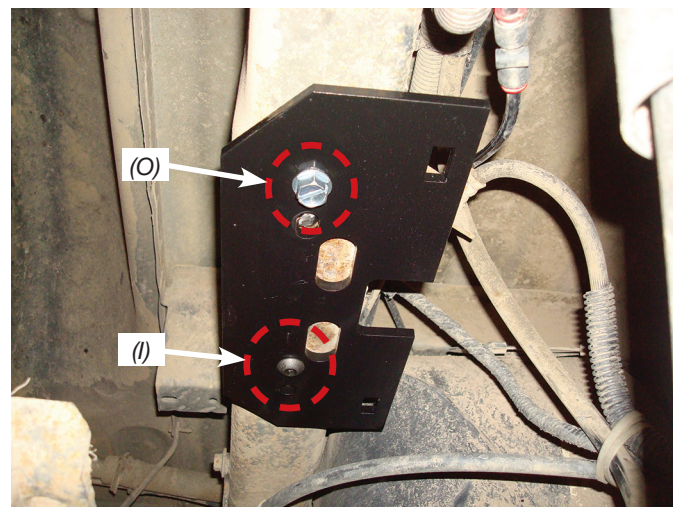


fig. 6

ASSEMBLING THE AIR SPRING ASSEMBLIES

1. Set a roll plate (E) over the top of each air spring (D).

NOTE

The radiused (rounded) edge of the roll plate (E) will be towards the bellows so that the bellows is seated inside both roll plates.

2. Install the swivel fitting (N) into the top of the air spring finger tight plus one and a half turns (fig. 7).

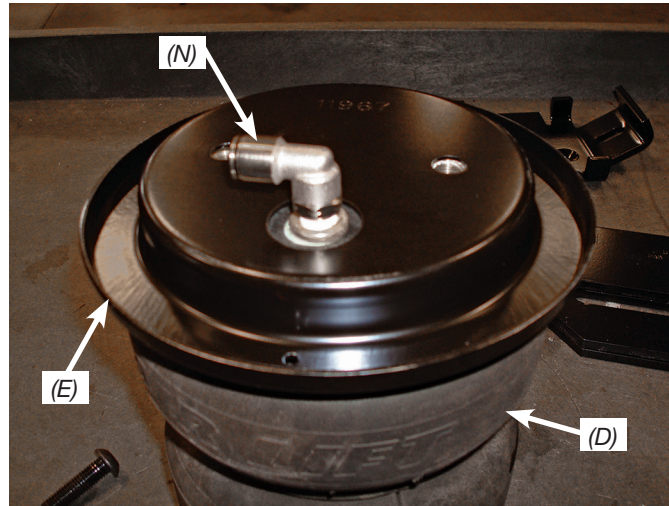


fig. 7

3. Install the air spring bracket (B) onto the air spring and attach using the 3/8"-24 x 7/8" button-head screws (M) (Fig. 8). Torque to no more than 20 lb.-ft. (27Nm).

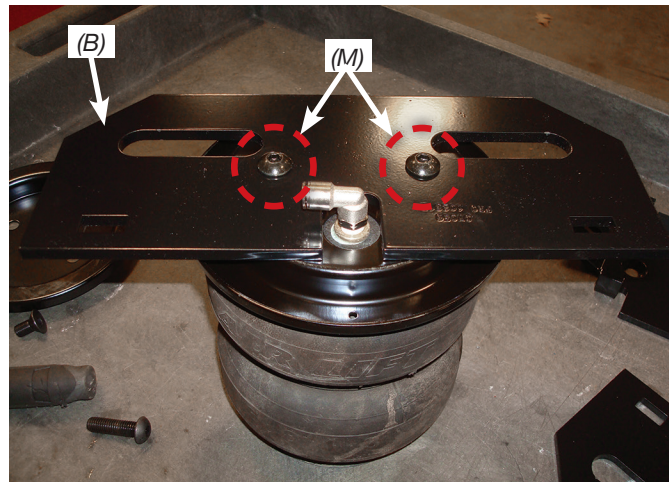
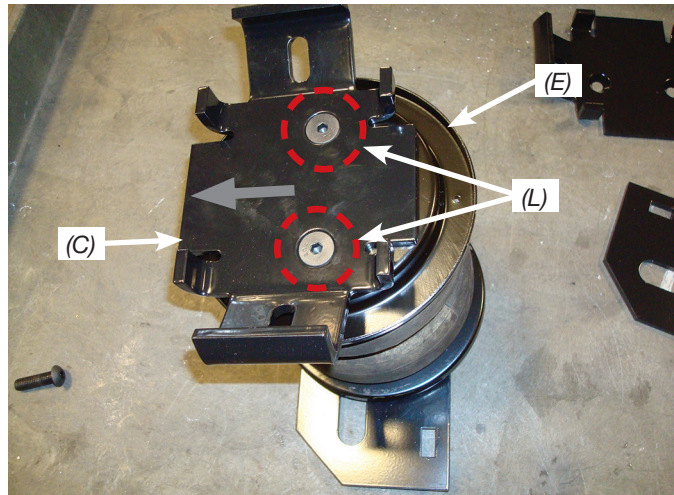


fig. 8

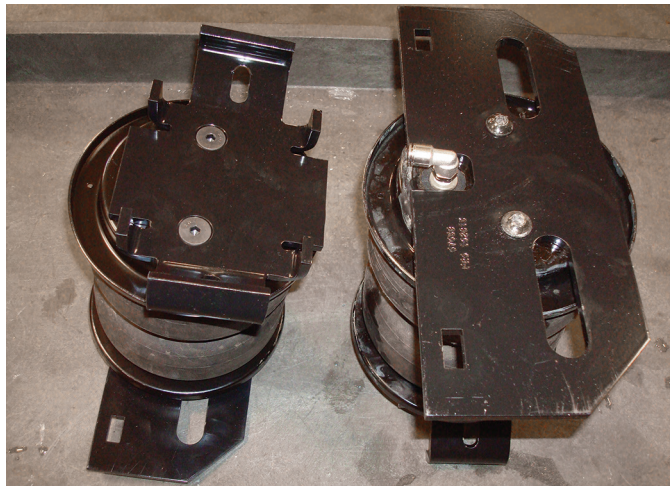
4. Repeat for the other assembly.
5. Flip the assemblies over; set a roll plate (E) onto the bottom of the air spring assembly (Fig. 9).
6. Set the lower bracket (C) onto the assembly with the arrow pointing in the opposite direction of the 90-degree swivel fitting, which is on the top of the assembly (Fig. 9). Attach the lower bracket with 3/8"-24 x 3/4" flat head screws (L). Torque to no more than 20 lb.-ft. (27Nm).

NOTE

The arrow (shown as gray color in Fig. 9) on the lower bracket points opposite of the fitting (points towards the tire once installed).

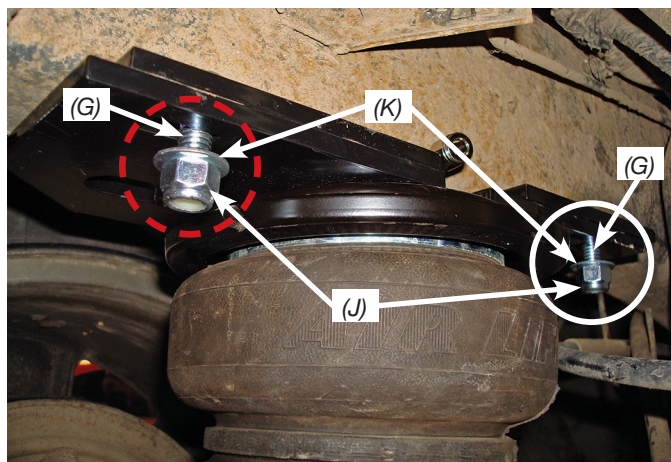

fig. 9

1. Figure 10 shows the finished assemblies.


fig. 10

ATTACHING THE UPPER BRACKETS

1. Set the assemblies onto the axle with the fittings to the inside of the frame (Fig. 11). Align the upper air spring and frame bracket (A) (that was previously installed) slots and attach using two $3/8''-16 \times 1 \ 1/4''$ carriage bolts (G), two flat washers (K) and two nylon lock nuts (J). Repeat for the opposite side and leave hardware loose at this time.


fig. 11

ATTACHING THE LOWER BRACKETS

1. Raise the axle or lower the frame and make sure the lower bracket has nested over the jounce bumper strike plate (Figs. 12 & 13).

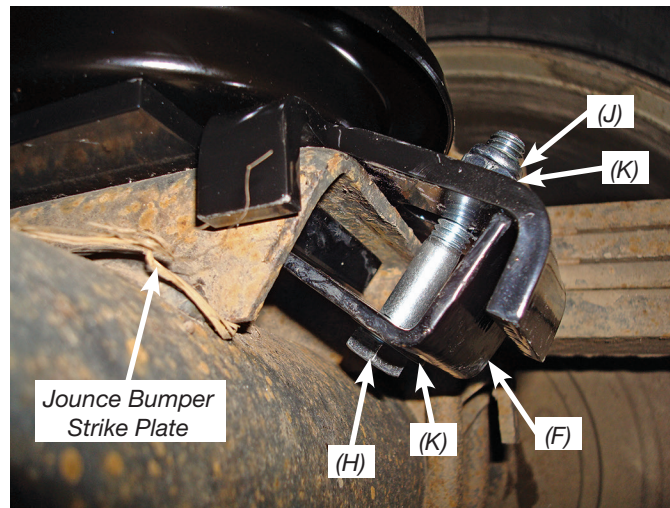


fig. 12

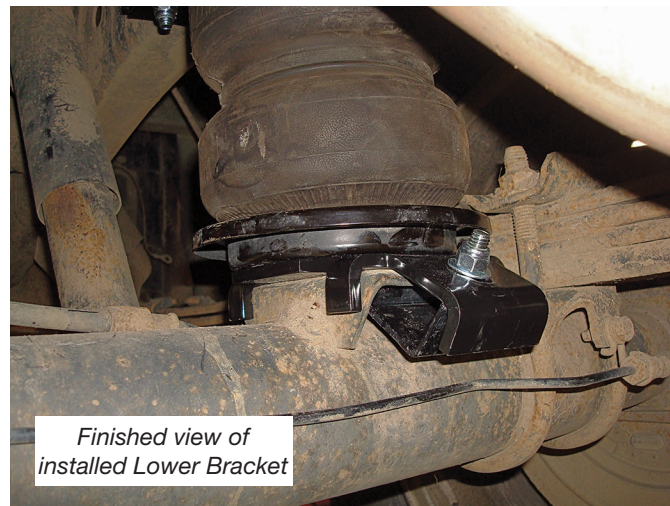


fig. 13

2. Attach the lower bracket by inserting a hex head bolt (H) through a flat washer (K) and J-clamp (F). Install the J-clamp with the short end under the jounce bumper strike plate with the bolt through the lower bracket. Cap with a flat washer (K) and nylon lock nut (J). Do this for the front and rear of the lower bracket and as the hardware is being tightened, make sure the lower bracket stays in the center of the jounce bumper strike plate. Torque the lower bracket hardware evenly to 10 lb.-ft. (14Nm).
3. Once the lower bracket is tight, push the top of the air spring assembly forward or backward to align the upper and lower bracket so they are parallel. Torque the upper mounting hardware to 16 lb.-ft. (22Nm).

Installing the Air Lines

Choose the locations for the Schrader valves and drill a 5/16" (8mm) hole, if necessary (Fig. 14).

1. Cut the air line in half. Make clean, square cuts with a razor blade or hose cutter (Fig. 15). Do not use scissors or wire cutters.

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).
3. Install the Schrader valve in the chosen location (Fig. 16).

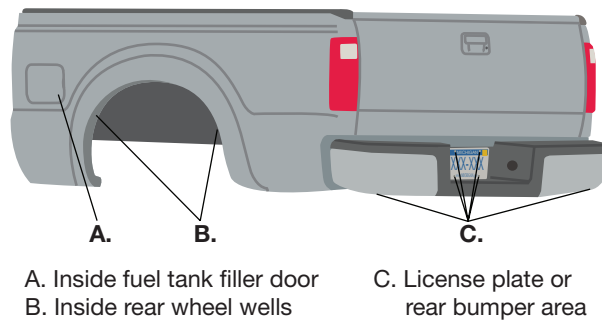


fig. 14

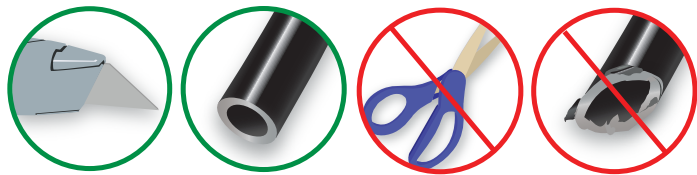


fig. 15

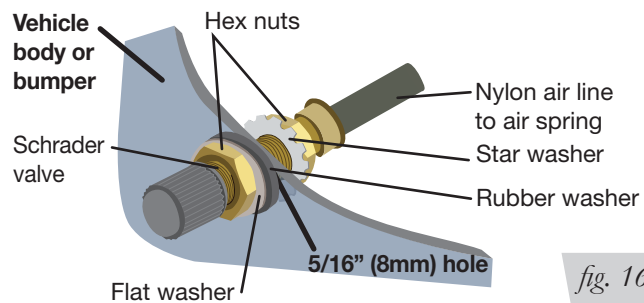
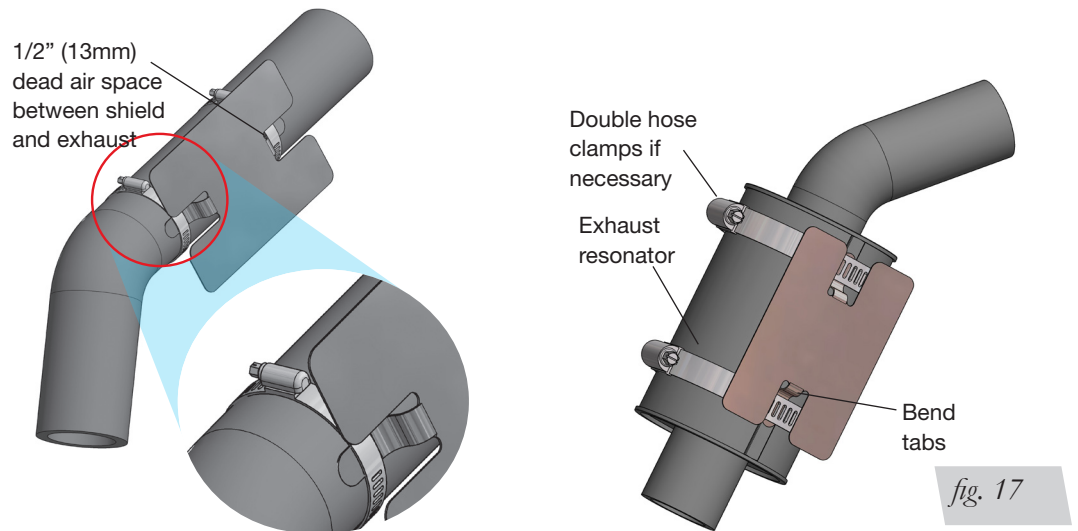


fig. 16

INSTALLING THE HEAT SHIELD

1. Attach the metal heat shield to the exhaust where it is closest to the passenger's (right) side air spring. Slide the air line thermal sleeve over the air line and position it where the air line is closest to the exhaust. (Figs. 17 & 18).



FINISHED ASSEMBLIES

1. Front view of the right (passenger's) side assembly (Fig. 19).



fig. 19

2. Rear view of the left (driver's) side assembly (Fig. 20).



fig. 20

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** — 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

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.

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



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.