

RideCONTROL™
by AIR LIFT®

Kit 59533
Chevrolet Colorado
and GMC Canyon
2 and 4-Wheel Drive



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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Introduction

The purpose of this publication is to assist with the installation and maintenance RideControl air spring kit. The air springs used in RideControl kits are designed and manufactured like a tire. The air springs have layers of rubber and cords that control the bag's growth and funnel it into one direction. The bags do not require a coil spring for control. RideControl kits utilize a sleeve style air bag that provides up to 2,000 pounds of load-leveling support. Each sleeve is rated at a maximum of 100 PSI

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 and safety information.

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 visit us 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.



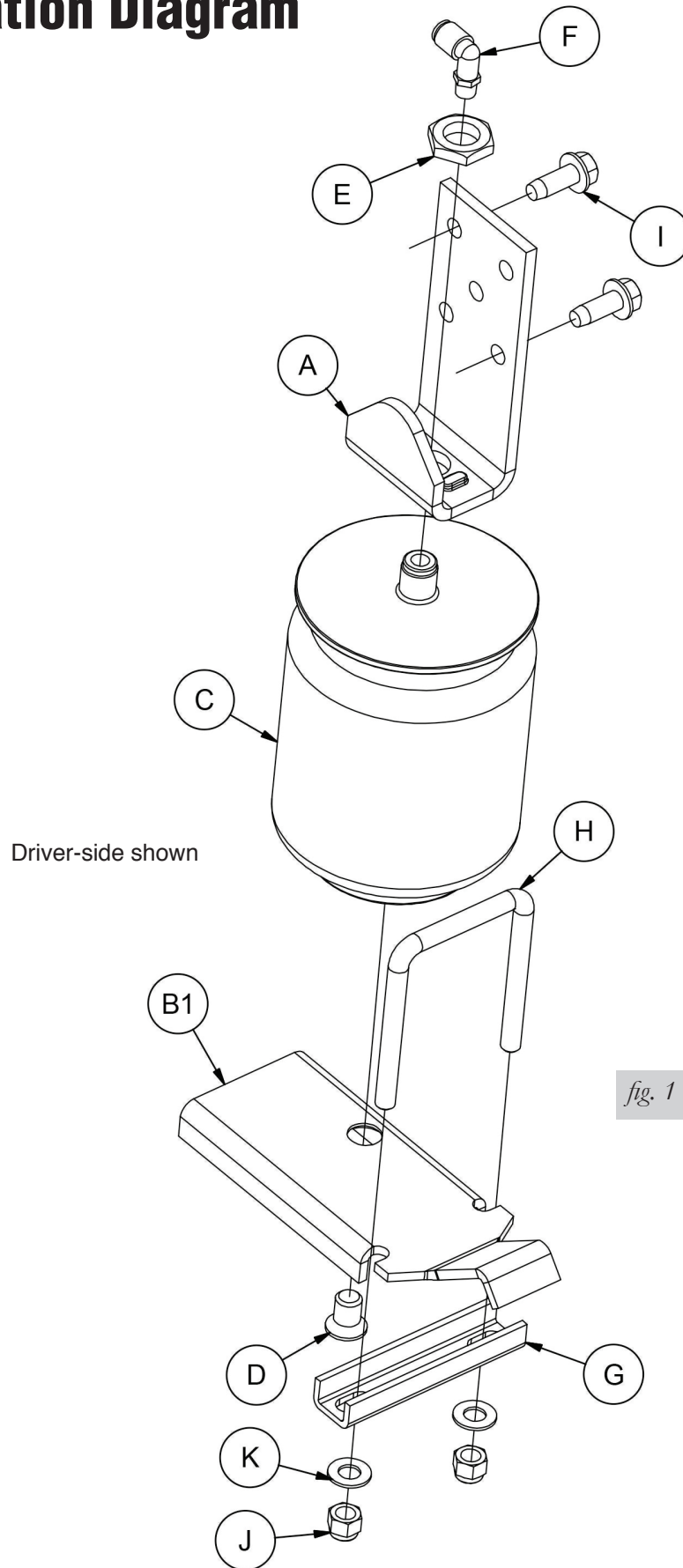
CAUTION

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.

Installation Diagram



HARDWARE LIST

Item	Part #	Description.....Qty	Item	Part #	Description.....Qty
A	07800	Upper bracket2	J	18435	3/8" Nyloc nut.....4
B1	03909	Left-hand lower bracket1	K	18444	3/8" flat washer4
B2	03858	Right-hand lower bracket.....1	AA	20086	Air line assembly.....1
C	58482	Air spring.....2	BB	10466	Tie strap.....6
D	17178	1/2" flat head screw.....2	CC	21230	Valve cap2
E	18454	3/4" nylon jam nut2	DD	18501	5/16" flat washer2
F	21837	90° swivel fitting2	EE	21234	Rubber washer.....2
G	01426	Clamp bar2	FF	18401	Star washer.....2
H	10469	U-bolt2	GG	21233	5/16" hex nut.....4
I	17129	3/8" self-tapping screw.....4	HH	34924	Heat shield kit1



Missing or damaged parts? Call Air Lift customer service at (800) 248-0892 for a replacement part.

TOOLS LIST

Description	Qty	Description.....	Qty
1/2", 9/16" and 3/4" open-end or box wrenches...	1	Heavy duty drill.....	1
Crescent wrench	1	Torque wrench	1
Safety glasses.....	1	Jack.....	1
Ratchet w/ 3/8", 9/16" and 1/2" deep well sockets 1		Jack stands	2
5/16" drill bit (very sharp)	1		

Installing the RideControl System



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.

IMPORTANT: Failure to maintain correct minimum pressure (or pressure proportional to the load), bottoming out, overextension, or rubbing against another component will void the warranty.

ASSEMBLING THE AIR SPRING ASSEMBLY

1. Install the fittings (F) to the top of the air springs (C). Tighten fitting one-and-a-half turns past finger-tight (fig. 2).

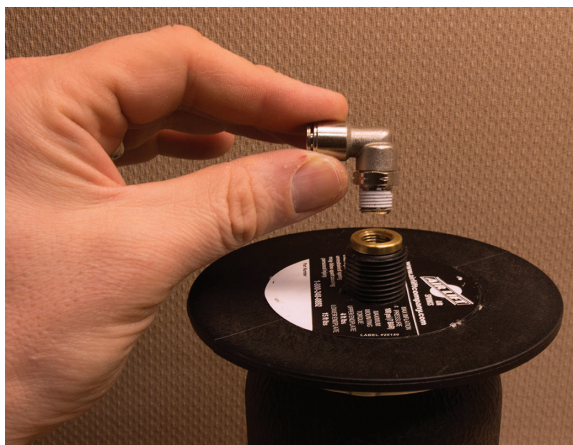
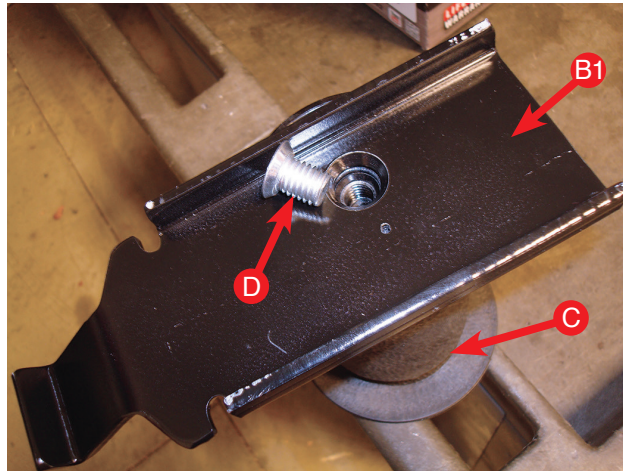


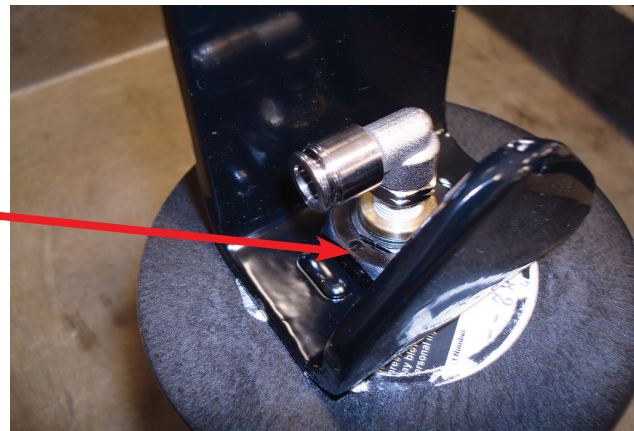
fig. 2

- For the left-hand assembly, install the lower bracket (B1) onto the air spring (C) with the 1/2" flat head screw (D) and leave loose at this time (fig. 3).

*fig. 3*

- With the long portion of the upper bracket to the left side of the fitting and with the fitting facing you (fig. 4), set the upper bracket (A) onto the top of the air spring (C) by inserting the fitting through the upper bracket hole. With the flat edge toward the bracket, insert the nylon jam nut (E) over the fitting and thread it onto the upper post of the air spring. There are two tabs in the upper bracket that the flats of the nylon jam nut will fit into. Make sure these are lined up, and hand-tighten the upper bracket to the air spring (fig. 4). Use no more than 4 ft-lbs. to seat the bracket to the air spring (do not over-tighten).

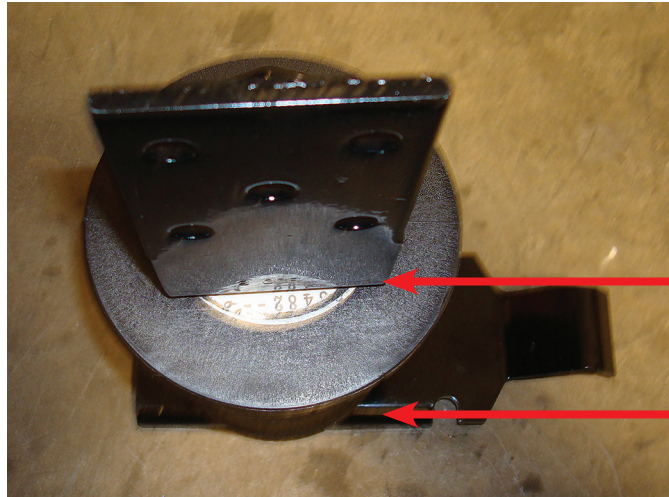
Nylon jam nut must have the flat on the nut facing down, indexed between the tabs in the upper bracket.

*fig. 4*

- For the right-side assembly, repeat steps 2 and 3, but make sure the fitting points are in the opposite direction as the first one assembled (fig. 5).

*fig. 5*

5. Make sure the lower bracket and the upper bracket are parallel to each other and the fittings are pointing in the opposite direction of the tab or "finger" on the lower bracket, and tighten the lower bracket screw (D) to no more than 15 ft-lbs. (figs. 6 and 7). Figure 7 shows the left- and right-hand assemblies ready to install.

*fig. 6*

Make sure the upper and lower brackets are parallel to each other.



Left-hand assembly shown.

Right-hand assembly shown.

fig. 7

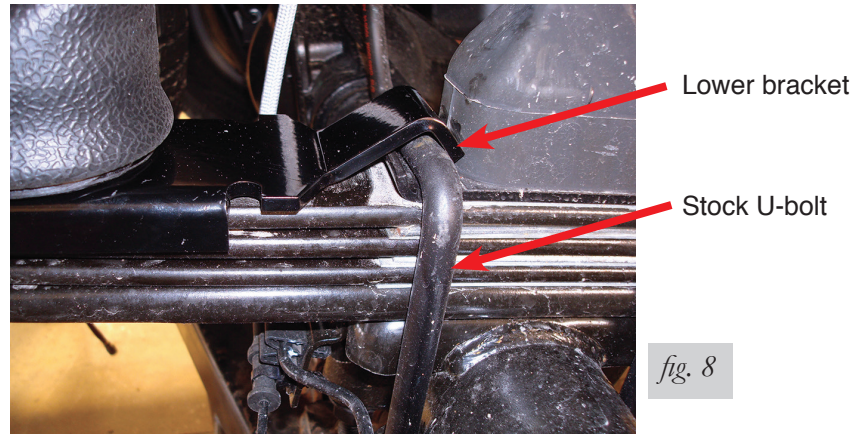
INSTALLING THE ASSEMBLIES

1. Jack up the vehicle and support the axle with jack stands. Remove rear wheels.

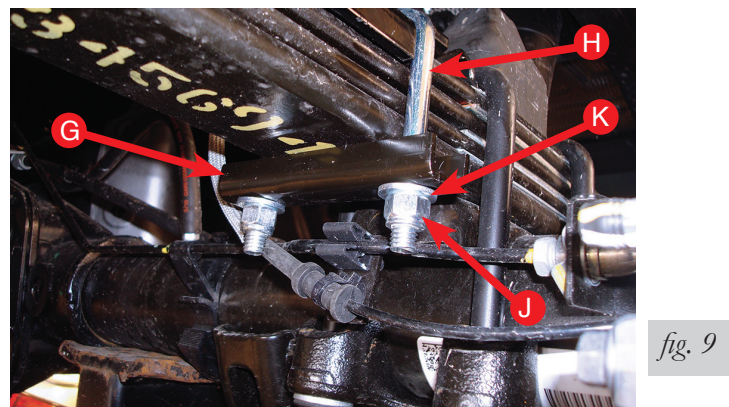
NOTE

If you are using a frame contact hoist, it will be necessary to lower the vehicle down so that the axle is in the normal, ride height position (like the wheels were on and the truck was sitting in a parking lot).

2. Set the left- and right-hand assemblies on the leaf spring **behind** the axle so that the “finger” of the lower bracket is over the stock U-bolt (fig. 8).



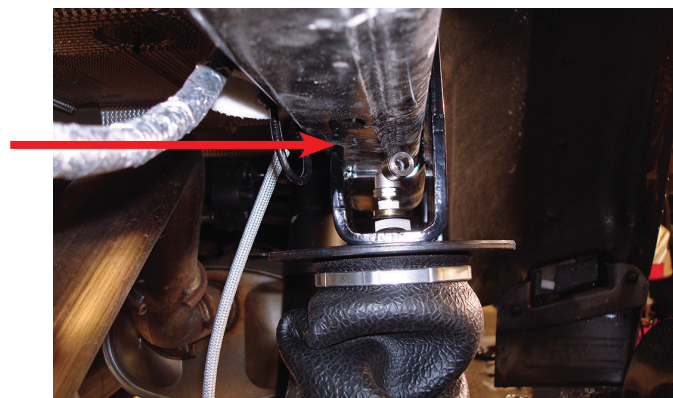
3. Set a U-bolt (H) down through the slots of the lower brackets and around the stock leaf spring. Install a clamp bar (G) over the U-bolt (fig. 9) and cap U-bolt with two 3/8” flat washers (K) and two Nyloc nuts (J). Repeat for the opposite side and torque hardware to 15 ft-lbs.



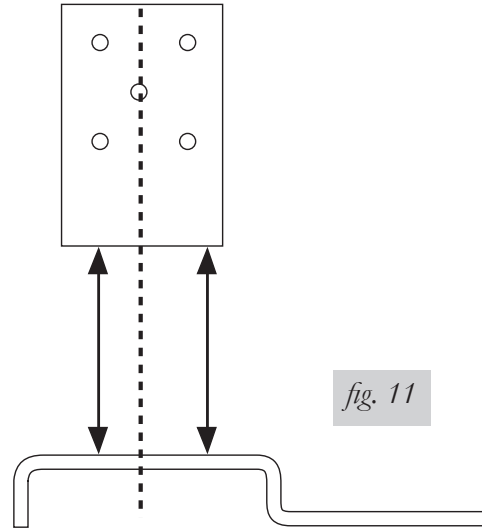
4. Push the upper bracket (A) against the frame and make sure the short leg of the upper bracket is in contact with the bottom of the frame rail (fig. 10).

The short leg of the upper bracket must be in contact with the bottom of the frame rail.

Note: passenger side shown.



- The upper bracket (A) must be parallel and perpendicular to the lower bracket (B) (fig. 11).


fig. 11

- With the upper bracket in position, center-punch the frame using two of the lower three holes in the upper bracket as a template (fig. 12). Drill two 5/16" holes through the frame and install two 3/8" self-tapping screws (I). Torque bolts to 15 ft-lbs. Repeat for the other side.



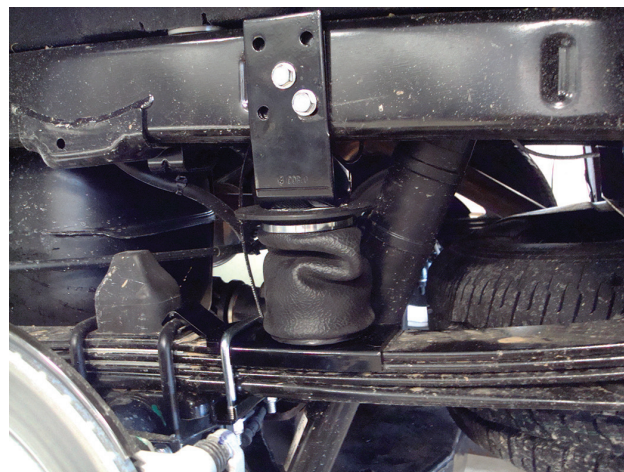
Note: passenger side shown.

fig. 12

- Figure 13 shows the left side (driver) finished installation.

NOTE

Spring has not been inflated yet in photo.


fig. 13

INSTALLING THE AIR LINES

1. Choose a convenient location for mounting the inflation valves. Popular locations for the inflation valve are:
 - a. The wheel well flanges.
 - b. License plate recess in bumper.
 - c. Under the gas cap access door.
 - d. Through license plate itself.

NOTE

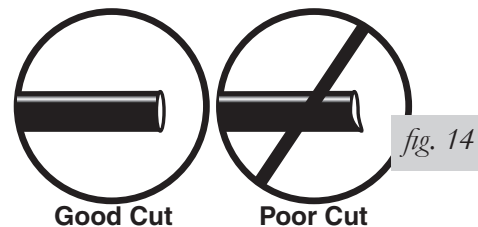
What ever the chosen location is, make sure there is enough clearance around the inflation valves for an air chuck.

2. Drill a 5/16" hole to install the inflation valves.
3. Cut the air line assembly in two equal lengths.

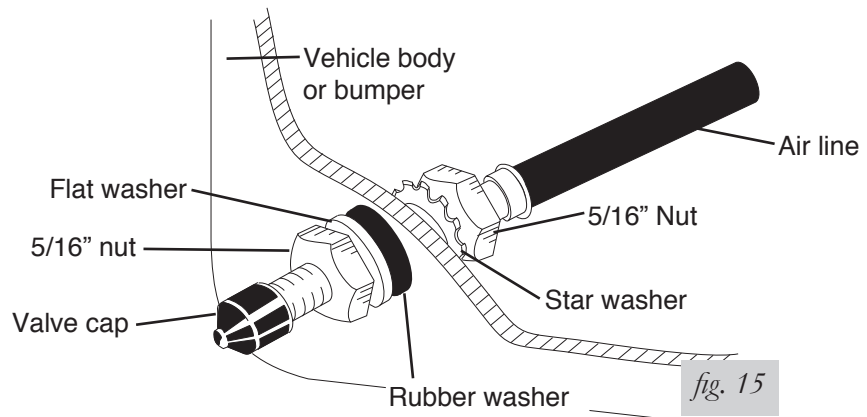


CAUTION

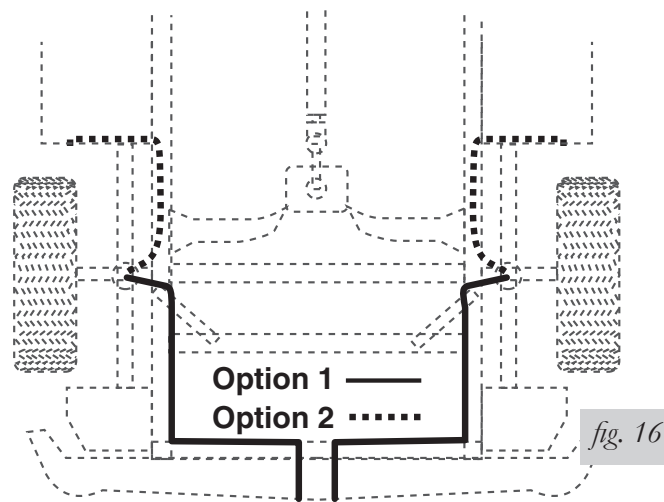
WHEN CUTTING OR TRIMMING THE AIR LINE, USE A HOSE CUTTER, A RAZOR BLADE OR A SHARP KNIFE. A CLEAN, SQUARE CUT WILL PREVENT LEAKS. DO NOT USE WIRE CUTTERS OR SCISSORS TO CUT THE AIR LINE. THESE TOOLS MAY FLATTEN OR CRIMP THE AIR LINE, CAUSING IT TO LEAK AROUND THE O-RING SEAL INSIDE THE ELBOW FITTING (FIG. 14).



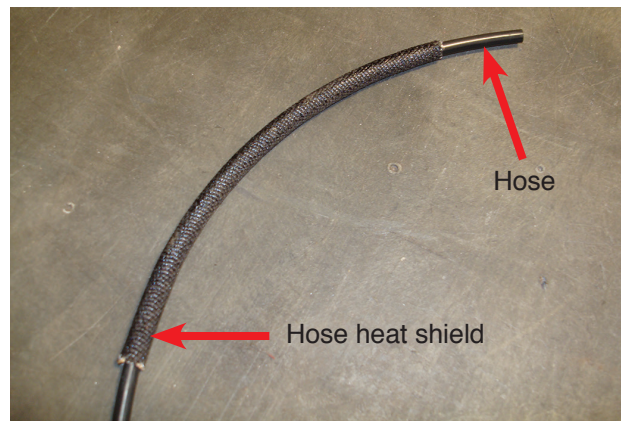
4. Place a 5/16" nut and a star washer on the air valve. Leave enough of the inflation valve in front of the nut to extend through the hole and have room for the rubber washer, flat washer, and 5/16" nut and cap. There should be enough valve exposed after installation - approximately 1/2" - to easily apply a pressure gauge or an air chuck (fig. 15).



5. Push the inflation valve through the hole and use the rubber washer, flat washer, and another 5/16" nut. Tighten the nuts to secure the assembly in place (fig. 15).
6. Route the air line along the frame to the air fitting on the air spring (fig. 16). Keep AT LEAST 6" of clearance between the air line and heat sources, such as the exhaust pipes, muffler, or catalytic converter. Avoid sharp bends and edges. Use the plastic tie straps (BB) to secure the air line to fixed, non-moving points along the chassis. Be sure that the tie straps are tight, but do not pinch the air line. Leave at least 2" of slack to allow for any movement that might pull on the air line.



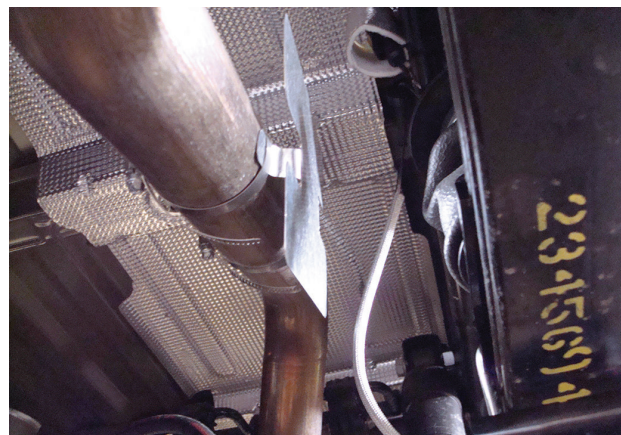
- Slide the hose heat shield over the right-side (passenger) hose before attaching the hose to the air spring assembly fitting (fig. 17)



- Cut off air line leaving approximately 12" of extra air line. A clean square cut will prevent leaks (see fig. 14). Insert the air line into the air fitting. This is a push to connect fitting. Simply push the air line into the 90° swivel fitting until it bottoms out (9/16" of air line should be in the fitting).

INSTALLING THE HEAT SHIELD

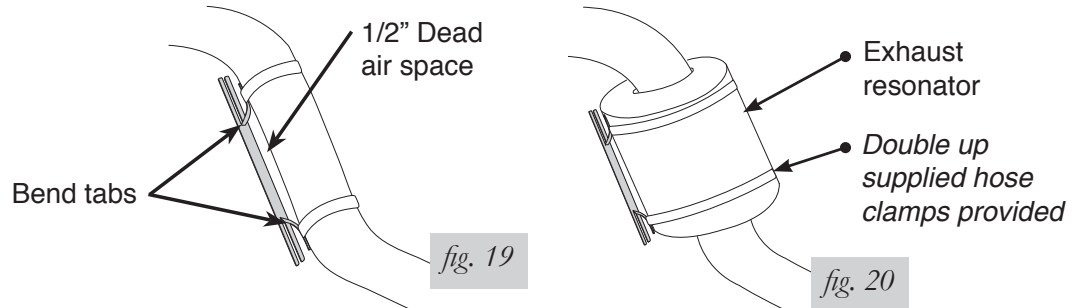
- Single pipe installation shown in Figure 18. For models with large resonator, double up hose clamps that come in the heat shield kit and install to the large resonator in the same fashion.



2. Bend tabs to provide a 1/2" dead air space between exhaust pipe and heat shield (fig. 19).
3. Attach the heat shield to the exhaust pipe using the clamps. Bend the heat shield for maximum clearance to the air spring (fig. 19).

NOTE

Some vehicles have large resonators in this area, it will be necessary to double up on the clamps to fit these models (fig. 20).

**CHECKING FOR LEAKS**

1. Inflate the air spring to 30 PSI and spray all connections and the inflation valves with a solution of 1/5 liquid dish soap and 4/5 water to check for leaks. Spot leaks easily by looking for bubbles in the soapy water.
2. After the test, deflate the springs to the minimum pressure required to restore the normal ride height, no less than 5 PSI
3. Check the air pressure again after 24 hours. A 2-4 PSI loss after initial installation is normal. Retest for leaks if the loss is more than 5 lbs.

FIXING LEAKS

1. If there is a problem with the swivel fitting:
 - a. Check the air line connection by deflating the spring and removing the line by pulling the collar against the fitting and pulling firmly on the air line. Trim 1" off the end of the air line. Be sure the cut is clean and square (see fig. 14). Reinsert the air line into the push-to-connect fitting.
 - b. Check the threaded connection by tightening the swivel fitting another 1/2 turn. If it still leaks, deflate the air spring, remove the fitting, and re-coat the threads with thread sealant. Reinstall by hand tightening as much as possible, then use a wrench for an additional two turns.
2. If there is a problem with the inflation valve, then:
 - a. Check the valve core by tightening it with a valve core tool.
 - b. Check the air line connection by removing the air line from the barbed type fitting.

**CAUTION**

DO NOT CUT THE AIR LINE COMPLETELY OFF AS THIS WILL NICK THE BARB AND RENDER THE FITTING USELESS.

FINISHING THE INSTALLATION

1. Finish the installation by installing the wheels. Torque the wheels to the manufacturing torque specs recommended.

Before Operating

INSTALLATION CHECKLIST (To be completed by installer)

- Clearance test — Inflate the air springs to 60 PSI and ensure there is at least 1/2" clearance around each bellow, away from anything that might rub against them. Be sure to check the tire, brake drum, frame, shock absorbers and brake cables.
- Leak test before road test — Inflate the air springs to 60 PSI, check all connections for leaks with a soapy water solution. See the *Checking for Leaks* section for tips on how to spot leaks. All leaks must be eliminated before the vehicle is road tested.
- Heat test — Be sure there is sufficient clearance from any heat sources — at least 6" for air springs and air lines.
- Fastener test — Recheck all bolts for proper torque. Re-torque after 100 miles.
- Road test — The vehicle should be road tested after the preceding tests. Inflate the air springs to 25 PSI (50 PSI if the vehicle is loaded). Drive the vehicle 10 miles and recheck for clearance, loose fasteners and air leaks.
- Operating instructions — If professionally installed, the installer should review the *Product Use, Maintenance and Servicing* section with the owner. Be sure to provide the owner with all of the paperwork which came with the kit.

Technician's Signature _____

Date _____

POST-INSTALLATION CHECKLIST

- Overnight leak down test — Recheck air pressure after the vehicle has been used for 24 hours. If the pressure has dropped more than 5 PSI, then there is a leak that must be fixed. Either fix the leak yourself or return to the installer for service.
- Air pressure requirements — Regardless of load, the air pressure should always be adjusted to maintain ride height at all times.
- Thirty day or 500 mile test — Recheck the air spring system after 30 days or 500 miles, whichever comes first. If any part shows signs of rubbing or abrasion, the source should be identified and moved, if possible. If it is not possible to relocate the cause of the abrasion, the air spring may need to be remounted. If professionally installed, the installer should be consulted. Check all fasteners for tightness.

Product Use, Maintenance and Servicing

Minimum Recommended Pressure	Maximum Air Pressure
5 PSI	100 PSI

MAINTENANCE GUIDELINES

NOTE

By following the steps below, vehicle owners will obtain the longest life and best results from their air springs.

1. Check the air pressure weekly.
2. Always maintain normal ride height. Never inflate beyond 100 PSI.
3. If you develop an air leak in the system, use a soapy water solution (1/5 liquid dish soap and 4/5 water) to check all air line connections and the inflation valve core before deflating and removing the air spring.



CAUTION

FOR YOUR SAFETY AND TO PREVENT POSSIBLE DAMAGE TO YOUR VEHICLE, DO NOT EXCEED MAXIMUM GROSS VEHICLE WEIGHT RATING (GVWR), AS INDICATED BY THE VEHICLE MANUFACTURER. ALTHOUGH YOUR AIR SPRINGS ARE RATED AT A MAXIMUM INFLATION PRESSURE OF 100 PSI, THE AIR PRESSURE ACTUALLY NEEDED IS DEPENDANT ON YOUR LOAD AND GVWR.

4. Loaded vehicles require at least 25 PSI or more. A “loaded vehicle” refers to a vehicle with a heavy bed load, a trailer, or both. As discussed above, never exceed GVWR, regardless of air spring, air pressure, or other load assist. The springs in this kit will support approximately 40 lbs. of load (combined on both springs) for each 1 PSI of pressure. The required air pressure will vary depending on the state of the original suspension. Operating the vehicle below the minimum air spring pressure will void the Air Lift warranty.
5. When increasing load, always adjust the air pressure to maintain the normal ride height. Increase or decrease pressure from the system as necessary to attain normal ride height for optimal ride and handling. Remember that loads carried behind the axle (including tongue loads) require more leveling force (pressure) than those carried directly over the axle.
6. Always add air to springs in small quantities, checking the pressure frequently.
7. Should it become necessary to raise the vehicle by the frame, make sure the system is at minimum pressure (5 PSI) to reduce the tension on the suspension/brake components. Use of on board leveling systems do not require deflation or disconnection.
8. Periodically check the air spring system fasteners for tightness. Also, check the air springs for any signs of rubbing. Realign if necessary.
9. On occasion, give the air springs a hard spray with a garden hose in order to remove mud, sand, gravel or other abrasive debris.

TROUBLESHOOTING GUIDE

1. Leak test the air line connections, the threaded connection into the air spring, and all fittings in the control system.
2. Inspect the air lines to be sure none are pinched. Tie straps may be too tight. Loosen or replace the strap and replace leaking components.
3. Inspect the air line for holes and cracks. Replace as needed.
4. Look for a kink or fold in the air line. Reroute as needed.

FREQUENTLY ASKED QUESTIONS

Q. Will installing air springs increase the weight ratings of a vehicle?

No. Adding air springs will not change the weight ratings (GAWR, GCWR and/or GVWR) of a vehicle. Exceeding the GVWR is dangerous and voids the Air Lift warranty.

Q. Is it necessary to keep air in the air springs at all times and how much pressure will they need?

For LoadLifter 5000 Ultimate, the recommended minimum air pressure is 5 PSI, but it can safely be run at zero air pressure.

Q. Is it necessary to add a compressor system to the air springs?

No. Air pressure can be adjusted with any type of compressor as long as it can produce sufficient pressure to service the springs. Even a bicycle tire pump can be used, but it's a lot of work.

Q. How long should air springs last?

If the air springs are properly installed and maintained they can last indefinitely.

Q. Will raising the vehicle on a hoist for service work damage the air springs?

No. The vehicle can be lifted on a hoist for short-term service work such as tire rotation or oil changes. However, if the vehicle will be on the hoist for a prolonged period of time, support the axle with jack stands in order to take the tension off of the air springs.

TUNING THE AIR PRESSURE

Pressure determination comes down to three things — level vehicle, ride comfort, and stability.

1. Level vehicle

If the vehicle's headlights are shining into the trees or the vehicle is leaning to one side, then it is not level (fig. 2.1). Raise the air pressure to correct either of these problems and level the vehicle.

2. Ride comfort

If the vehicle has a rough or harsh ride it may be due to either too much pressure or not enough (fig. 2.2). Try different pressures to determine the best ride comfort.

3. Stability

Stability translates into safety and should be the priority, meaning the driver may need to sacrifice a perfectly level and comfortable ride. Stability issues include roll control, bounce, dive during braking and sponginess (fig. 2.3). Tuning out these problems usually requires an increase in pressure.



Bad headlight aim *fig. 2.1*



Rough ride *fig. 2.2*



Sway and body roll *fig. 2.3*

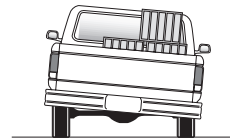
GUIDELINES FOR ADDING AIR

1. Start with the vehicle level or slightly above.
2. When in doubt, always add air.
3. If the front of the vehicle dives while braking, increase the pressure in the front air bags, if equipped.
4. If it is ever suspected that the air bags have bottomed out, increase the pressure (fig. 2.4).
5. Adjust the pressure up and down to find the best ride.
6. If the vehicle rocks and rolls, adjust the air pressure to reduce movement.
7. It may be necessary to maintain different pressures on each side of the vehicle. Loads such as water, fuel, and appliances will cause the vehicle to be heavier on one side (fig. 2.5). As much as a 50 PSI difference is not uncommon.

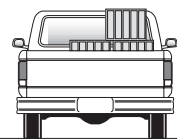


Bottoming out

fig. 2.4



Unlevel



Level

fig. 2.5

Choosing the Right On-Board Air Compressor System

60 DAY NO QUESTIONS ASKED, MONEY-BACK GUARANTEE

TWO YEAR COMPRESSOR SYSTEM WARRANTY

Add an on-board air compressor system to inflate and deflate your air springs with the touch of a button — from inside or outside of the vehicle.

- For convenient, on-the-go control of your air springs, add an Air Lift on-board air compressor system.
- Air Lift on-board air compressor systems eliminate the search for gas stations that have a working compressor, saving you time, energy and money.
- All systems include a compressor, controller and all parts needed for easy installation.

1. Choose single or dual path inflation (see illustrations at right)

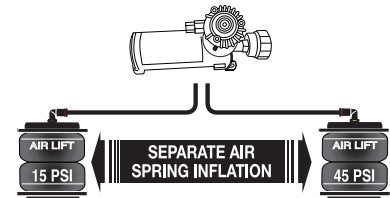
2. Choose wireless or analog control

- **Wireless:** Control your air springs from inside or outside the vehicle. Easiest installation - no wires to the cab.
- **Analog:** In-cab control of your air springs. Economically priced.

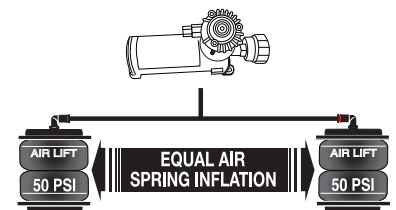
3. Choose heavy or standard duty compressor

- **Standard duty:** A standard duty compressor will work well for most customers who use their system on an intermittent basis.
- **Heavy duty:** For daily use, consider the heavy duty compressor - it inflates faster and more quietly than the standard compressor.

Visit www.airliftcompany.com for more detailed info on compressor systems.



Dual path systems Air springs are controlled separately to allow for different air pressure from side-to-side. Perfect for uneven or top-heavy loads.



Single path systems Two springs will inflate at the same time. Good for loads that are evenly distributed from left-to-right or front-to-back.

WIRELESS

ANALOG

DUAL PATH

WirelessAIR™

PATENTED!

- Easy installation
- Includes heavy duty compressor



P/N 72000

LoadCONTROLLER™

Dual

Compact, economically priced control.

PATENT PENDING!



P/N Standard Duty Compressor 25850; P/N Heavy Duty Compressor 25854

SINGLE PATH

WirelessONE™

PATENTED!

- Easy installation
- Includes standard duty compressor



P/N 25870

LoadCONTROLLER™

Single

Compact, economically priced control.

PATENT PENDING!



P/N Standard Duty Compressor 25852; P/N Heavy Duty Compressor 25856

Replacement Information

- Parts are missing from the kit.
- Need technical assistance on installation or operation.
- Broken or defective parts in the kit.
- Wrong parts in the kit.
- Have a warranty claim or question.

Contact the retailer where the kit was purchased:

- If it is necessary to return or exchange the kit for any reason.
- If there is a problem with shipping if shipped from the retailer.
- If there is a problem with the price.