

Kit No. 57410

www.airliftcompany.com

Please read these instructions completely before proceeding with installation

NOTE: Based on your load and stock spring condition, it may be necessary to use pressures well above the minimum for this application to function properly.

Kit Parts List

Item	Description	Quantity
A	Air Springs	2
B	Upper Bracket	2
C	Lower Bracket	2
D	Roll Plate	4
E	Elbow Fitting	2
F	3/8"-16 x 7/8" HHCS Bolt	8
G	3/8" Lock Washer	8
H	3/8" Flat Washer, SAE	12
I	1/2"-13 x 1.5" HHCS Bolt	8
J	3/8"-16 x 6" Carriage Bolt	4
K	1/2" Flat Washer, SAE	16
L	1/2" Nylock Nut	8
M	3/8" Nylock Nut	4
N	Clamp Bar	2
AA	Air Line Assembly*	1
BB	Tie Strap*	6
CC	Valve Caps*	2
DD	5/16" Flat Washer*	2
EE	Rubber Washer*	2
FF	5/16" Star Washer*	2

* (not shown in Figure 1)

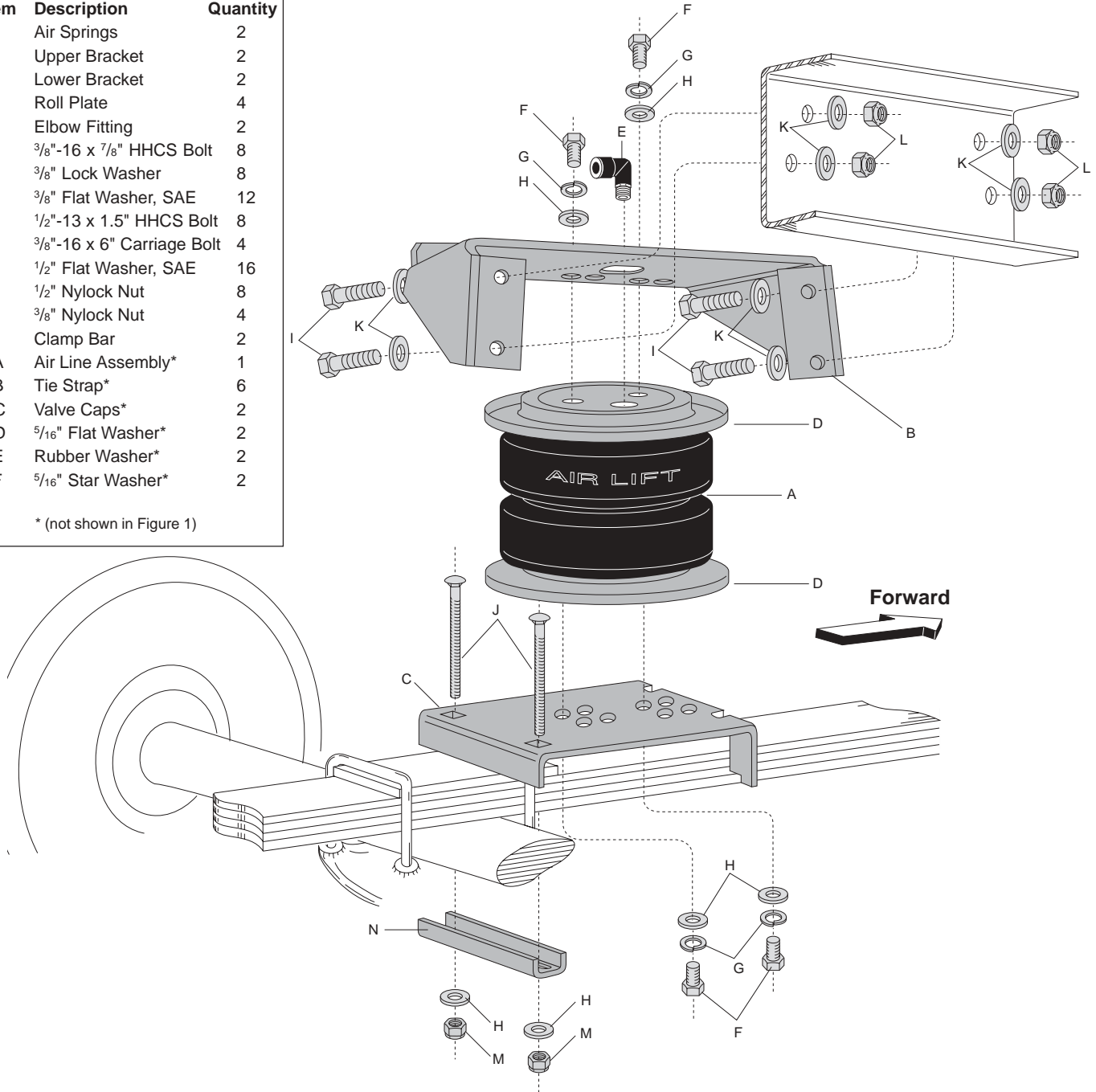


Figure 1

Tools Needed

$\frac{7}{16}$ " , $\frac{9}{16}$ " , $\frac{3}{4}$ " open-end or box wrenches
 Ratchet with $\frac{9}{16}$ " , $\frac{1}{2}$ " , and $\frac{3}{4}$ " deep well sockets
 $\frac{5}{16}$ " and $\frac{1}{2}$ " drill bits (very sharp)
 Heavy Duty Drill
 Torque Wrench
 Hose Cutter, Razor Blade, or Sharp Knife

Hoist or Floor Jacks
 Safety Stands
 Safety Glasses
 Air Compressor, or Compressed Air Source
 Spray Bottle with Dish Soap/Water Solution

DANGER: 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.

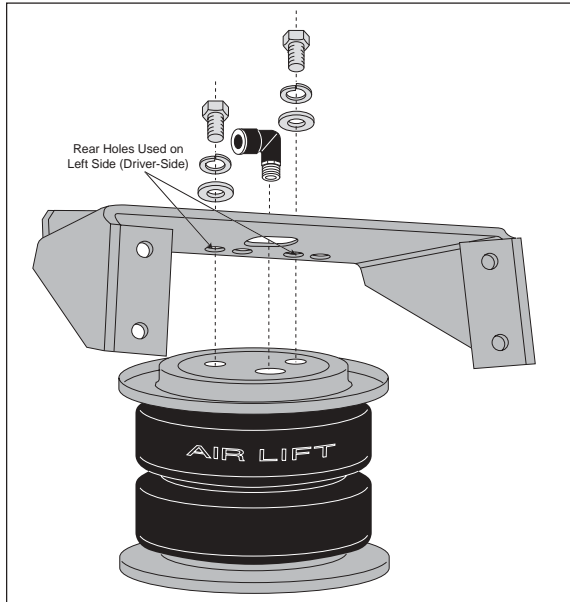


Figure 2

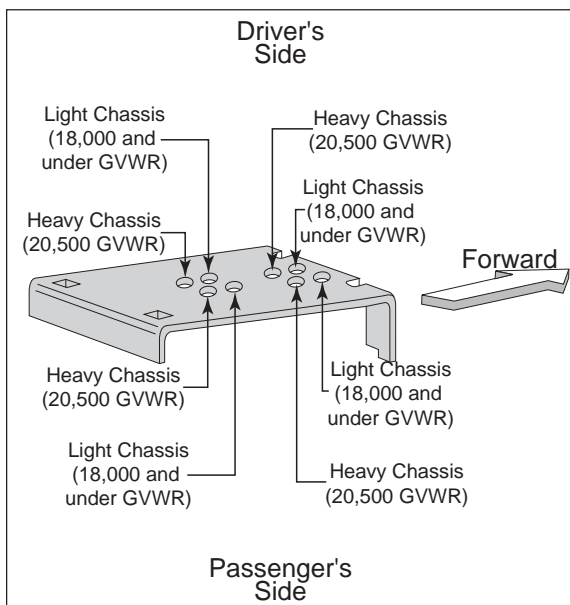


Figure 3

I. Assembling the Air Spring Assembly

1. Set a roll plate (D) on both ends of the air spring (A). The radiused (rounded) edge of the roll plate will be towards the air spring, so that the air spring is seated in both roll plates (Figure 2).
2. Install 90° elbow fitting (E) to the top of the air spring. Tighten finger tight plus 1 and $\frac{1}{2}$ turns. Be careful to only tighten on the metal hex nut. Do not over tighten.
3. When installing the upper bracket (B) to the air spring and roll plate, use the rear-ward holes for the left (driver-side) installation and, when installing the bracket on the right side (passenger-side) of the vehicle, continue to use the rear-ward most holes (Figure 2). The upper bracket is marked "L" and "R" on the top. Attach the assembly using two $\frac{3}{8}$ " bolts (I), lock washers (L), and flat washers (K). Tighten hardware to 20 ft-lbs.
4. To find the proper air spring mounting holes on the lower bracket (Figure 3), place the template, provided on page 6, on to the top of the lower bracket (C). Be sure to line up the outside edges of the bracket to the outline on the template. Using the key on the template, determine and mark the correct mounting holes. The driver's side will use one of the sets of holes on the left side of the template/bracket, whereas, the passenger's side will use one of the sets of holes on the right side of the template/bracket.
5. Upon determining the correct mounting holes on the lower bracket, insert two carriage bolts (J) into the lower bracket (Figure 1). Attach the air spring assembly to the lower bracket using two $\frac{3}{8}$ " bolts (F), lock washers (G), and flat washers (H). Refer to Figure 1. Tighten bolts to 20 ft-lbs.

II. Attaching the Air Spring Assembly

NOTE: *It may be necessary to support the frame and drop the axle to obtain sufficient clearance in order to install the assembly.*

1. Set the assembly on the leaf spring forward of the axle.

NOTE: *The rear of the lower bracket should hook around the forward U-bolt (Figure 1).*

2. Using the existing holes in the frame (Figure 4), loosely attach the upper bracket (B) with a $\frac{1}{2}$ " HHCS bolt (I), two $\frac{1}{2}$ " flat washers (K), and a $\frac{1}{2}$ " nylock nut (L) through both of the lower mounting holes in the upper bracket (Figure 1).

NOTE: *The rearward existing hole in the frame is located directly over the jounce bumper bracket. Also, the upper bracket goes around the sway bar mount (Figure 4).*

3. Center punch the upper mounting holes.
4. Drill a $\frac{1}{2}$ " hole for both upper mounting holes.
5. Use a $\frac{1}{2}$ " HHCS bolt (I), two $\frac{1}{2}$ " flat washers (K), and a $\frac{1}{2}$ " nylock nut (L) in each upper hole to secure the bracket to the frame (Figure 1). Tighten to 80 ft-lbs
6. Attach the lower bracket to the leaf spring using the clamp bar (N), flat washers (H), and nylock nuts (M). Tighten the carriage bolt hardware to 16 ft-lbs (Figure 1).

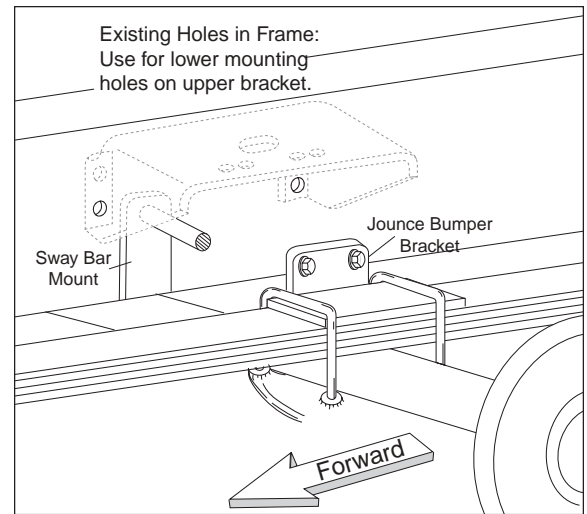


Figure 4

III. Installing the Air Lines

1. Choose a convenient location for mounting the inflation valves. Popular locations for the inflation valve are: wheel well flanges, in a stowage area, or under body flange

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

2. Drill a $\frac{5}{16}$ " hole to install the inflation valves.
3. Cut the air line assembly (AA) 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 ensure against 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.*

4. Place a $\frac{5}{16}$ " nut (GG) and a star washer (FF) 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 (EE), flat washer (DD), and $\frac{5}{16}$ " nut (GG) and cap (CC). There should be enough valve exposed after installation - approximately $\frac{1}{2}$ " - to easily apply a pressure gauge or an air chuck (Figure 5).

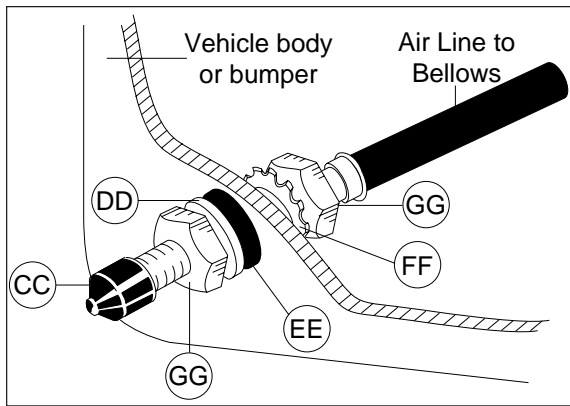


Figure 5

5. Push the inflation valve through the hole and use the rubber washer (EE), flat washer (DD), and another $\frac{5}{16}$ " nut (GG) to secure it in place. Tighten the nuts to secure the assembly in place (Figure 5).
6. Route the air line along the frame to the air fitting on the air spring. 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.

7. Cut off air line leaving approximately 12" of extra air line. A clean square cut will ensure against leaks. 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 ($\frac{9}{16}$ " of air line should be in the fitting).

IV. Checking for Leaks

1. Inflate the air spring to 50 p.s.i. and spray all connections and the inflation valves with a solution of $\frac{1}{5}$ liquid dish soap and $\frac{4}{5}$ water to check for leaks. Leaks will be spotted 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, but not less than 20 p.s.i.
3. **IMPORTANT:** Check the air pressure again after 24 hours. A 2 to 4 p.s.i. loss after initial installation is normal. Retest for leaks if the loss is more than 5 lbs.

V. Fixing Leaks

1. If there is a problem with the swivel fitting, then:
 - 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. Reinsert the air line into the push-to-connect fitting.
 - b. Check the threaded connection by tightening the swivel fitting another $\frac{1}{2}$ 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.

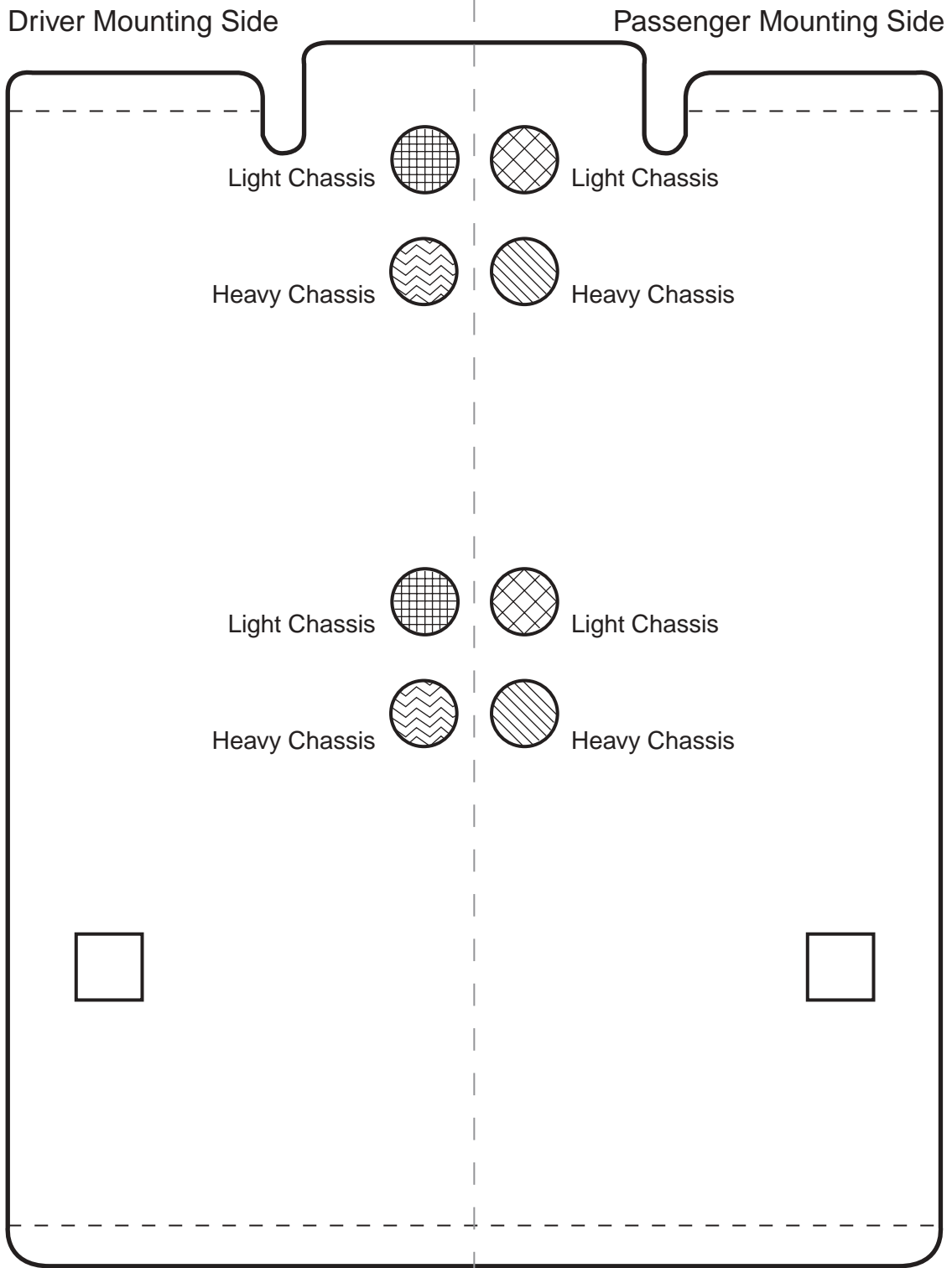
2. If there is a problem with the inflation valve, then:
 - a. Check the valve core by tightening it with a valve core tool.
 - b. Check the air line connection by removing the air line from the barbed type fitting. *CAUTION: Do not cut it off. As this will usually nick the barb and render the fitting useless.* Cut air line off a few inches in front of the fitting and use a pair of pliers or vise-grips to pull/twist the air line off the fitting.
3. If the preceding steps have not resolved the problem, call Air Lift Technical Support at 1-800-248-0892 for assistance.

VI. Troubleshooting Guide





Problems maintaining air pressure, without on-board compressor.

1. Leak test the air line connections and threaded connection of the elbow into the air spring. See Section V to repair.
2. Leak test the inflation valve for leaks at the air line connection or dirt or debris in the valve core. See Section V for repair.
3. Inspect air lines to be sure it is not pinched. Tie straps may be too tight. Loosen or replace strap and replace leaking components.
4. Inspect air line for holes and cracks. Replace as needed.
5. A kink or fold in the air line. Reroute as needed.

You have now tested for all of the most probable leak conditions that can be easily fixed. At this point the problem is most likely a failed air spring - either a factory defect or an operating problem. Please call Air Lift at 1-800-248-0892 for assistance or a replacement air spring.



KEY

- | | |
|--|--|
|  Left/Driver Side: For Light Chassis
(18,000 and under GVWR) |  Right/Passenger Side: For Light Chassis
(18,000 and under GVWR) |
|  Left/Driver Side: For Heavy Chassis
(20,500 GVWR) |  Right/Passenger Side: For Heavy Chassis
(20,500 GVWR) |

VII. Checklist

You can protect your warranty on this product and prevent unnecessary wear by ensuring the following checks have been made:

Section I – Installation (To be completed by the installer):

- 1. Clearance Test - Inflate the air springs to 60 p.s.i. and ensure there is at least 1/2 " clearance around each sleeve from anything that might rub against them. Be sure to check the tire, brake drum, frame, shock absorbers and brake cables.
- 2. Leak Test Before Road Test – Inflate the air springs to 60 p.s.i., check all connections for leaks with a soapy water solution. See pages 4-5 of the manual for tips on how to spot leaks. All leaks must be eliminated before the vehicle is road tested.
- 3. Heat Test – Be sure there is sufficient clearance from heat sources - at least 6" 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 1-800-248-0892.
- 4. Fastener Test – Recheck all bolts for proper torque.
- 5. Road Test – The vehicle should be road tested after the preceding tests. Inflate the springs to 25 p.s.i. (50 p.s.i. if vehicle is loaded). Drive the vehicle 10 miles and recheck for clearance, loose fasteners and/or air leaks.
- 6. Operating Instructions – If professionally installed, the installer should review the operating instructions on page 8 with the owner. Be sure to provide the owner with all of the paperwork that came with the kit.

Section II - Post Installation Checklist (To be completed by the owner):

- 1. Overnight Leakdown Test – Recheck air pressure after vehicle has been used for 24 hours. If pressure has dropped more than 5 p.s.i. then, you have a leak that must be fixed. Either fix the leak yourself (see pages 8-9) or return to the installer for service.
- 2. Air Pressure Requirements – I understand that the air pressure requirements of my air spring system are as follows:

Minimum _____ Maximum _____

I also understand that I must inflate the air springs until the Ride Height measurement that was recorded on page 3 has been restored. Regardless of load, the air pressure should always be adjusted so that the Ride Height is maintained at all times.

- 3. Thirty Day or 500 Mile Test. I understand that I must 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.

VIII. Maintenance and Operations

Minimum Air Pressure	Maximum Air Pressure
20 p.s.i.	100 p.s.i.
<i>Failure to maintain correct minimum pressure (or pressure proportional to load), bottoming out, over-extension, or rubbing against another component will void the warranty.</i>	

By following these steps, 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 p.s.i.
3. If you develop an air leak in the system, use a soapy water solution to check all air line connections and the inflation valve core before deflating and removing the air spring.
4. 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.
5. **IMPORTANT:** 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 p.s.i. The air pressure actually needed is dependant on your load and GVWR, which may be less than 100 p.s.i. Check your vehicle owners manual and do not exceed the maximum load listed for your vehicle.
6. Always add air to springs in small quantities, checking the pressure frequently. Sleeves require less air volume than a tire and inflate quickly.
7. *Should it become necessary to raise the vehicle by the frame, make sure the system is at minimum pressure (5 p.s.i.) to reduce the tension on the suspension/brake components. Use of on-board leveling systems do not require deflation or disconnection.*

Thank you for purchasing Air Lift Products



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