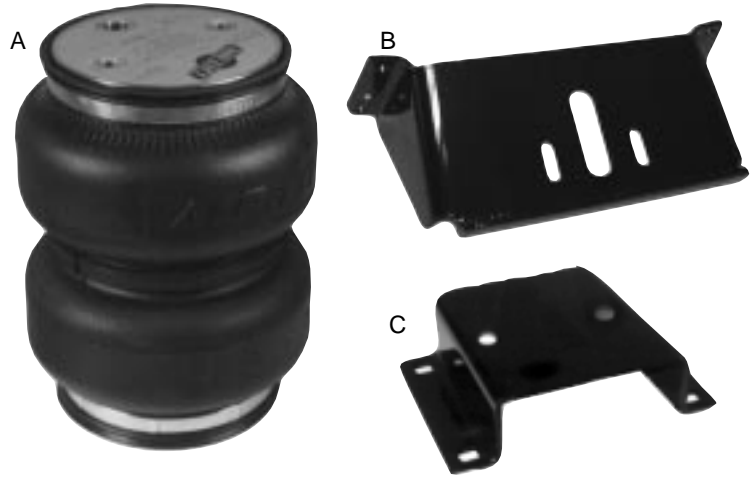


Kit No. 57208

Please read these instructions completely before proceeding with installation

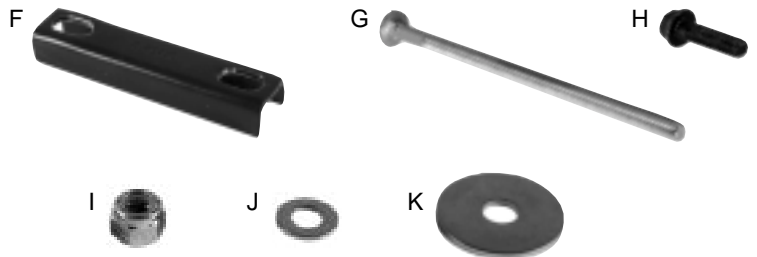
AIR SPRING KIT PARTS LIST

Item	Description	Quantity
A	Air Springs	2
B	Upper Brackets	2
C	Lower Brackets	2
D	Roll Plates	4
E	90° Air Fitting	2



BRACKET ATTACHING HARDWARE

Item	Description	Quantity
F	Clamp Bars	4
G	7" Carriage Bolts	8
H	1.5" Washer Head Frame Bolts	8
I	3/8" Lock Nuts	16
J	3/8" Flat Washers	8
K	Oversized Flat Washers	8



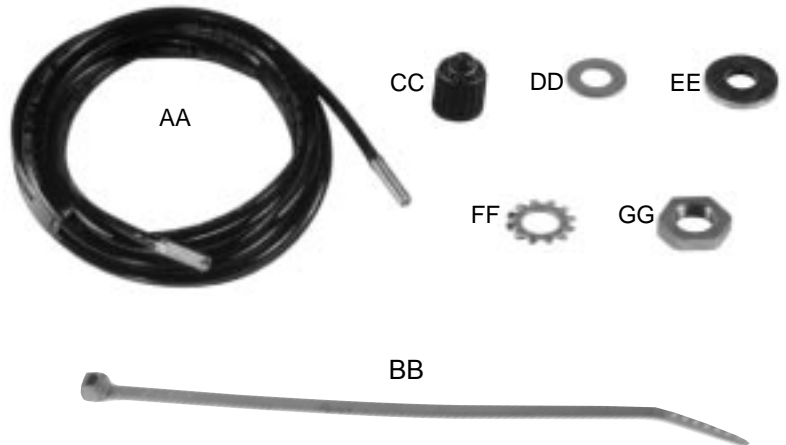
AIR SPRING ATTACHING HARDWARE

Item	Description	Quantity
L	3/8" Hex Head 7/8" Bolts	8
M	3/8" Flat Washers	8
N	Lock Washers	8



AIR LINE ASSEMBLY PARTS LIST

Item	Description	Quantity
AA	Air Line Assembly	1
BB	Tie Strap	6
CC	Valve Caps	2
DD	5/16" Flat Washer	2
EE	Rubber Washer	2
FF	Star Washer	2
GG	5/16" Hex Nut	4



TOOLS NEEDED

7/16", 9/16" open-end or box wrenches
Crescent Wrench
Ratchet with 3/8", 9/16" and 1/2" deep well sockets
3/8" and 5/16" drill bits (very sharp)
3/8" Nut Driver
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



***IMPORTANT:** Your vehicle may be equipped with a rear brake proportioning valve. Any type of load assist product could affect brake performance. We recommend that you check 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 a load assist product will have no effect on brake system performance.*

***DANGER:** Compressed air can cause injury and damage to the vehicle and components 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:** Your air springs will last much longer if they are not the suspension limiter in either compression or extension. The air spring compresses to 2.8" and extends to 9.1". Regardless of load, the air pressure should always be adjusted so that the Normal 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; especially if the vehicle is used off-road.*

***IMPORTANT:** If for any reason it becomes necessary to return a part, please use the provided Product Return Form included with your literature pack (Form #AD-240).*

I. GETTING STARTED

1. Determine the Normal Ride Height. The Normal Ride Height is the distance between the bottom edge of the wheel-well and the center of the hub with the vehicle in the “as delivered” condition. In some cases, Normal Ride Height is not perfectly level.
 - a. Remove unusual loads and examine the vehicle from the side to ensure it is on a level surface.
 - b. 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 original “as delivered” ride height.
2. Measure the distance between the center of the hub and the bottom edge of the wheel well (see Figure 1). This is the Normal Ride Height. Enter the measurement below:

NORMAL
RIDE HEIGHT: _____ inches



Figure 1

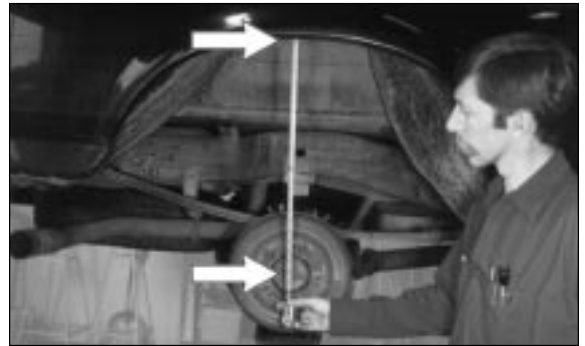


Figure 2

II. RAISING THE VEHICLE

1. Raise the vehicle and remove the wheels.
2. Check the distance between the center of the hub and the bottom edge of the wheel well to ensure it is at the normal ride height recorded above (Figure 2). If not, raise the frame or lower the axle as necessary.
3. The following are tips on lowering the axle or raising the frame. Please review them and determine how to proceed.
 - a. If the vehicle is raised with an axle contact hoist, place axle stands under the frame and lower the axle as needed.
 - b. If the vehicle is raised with a frame contact hoist, place axle stands under the axle and raise the frame as needed.
 - c. If the vehicle was raised with a jack and supported with axle stands on the frame, use a floor jack to lower the axle.



Figure 3



Figure 4



Figure 5

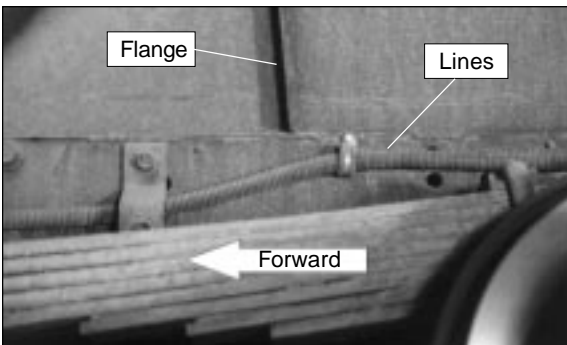


Figure 6

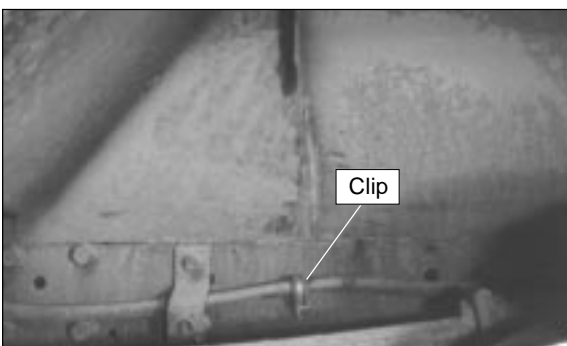


Figure 7

III. ASSEMBLING THE AIR SPRING UNIT

1. Install 90 degree air swivel fitting (E) to the top of the air spring (A). Refer to Figure 3. Tighten finger tight plus 1 and $\frac{1}{2}$ turns.
2. Place the bottom of the air spring (A) into one of the roll plates (D). Repeat for the top as well. See Figure 3.
3. Set the upper bracket (B) on the top of the air spring (A) with the air fitting port inboard.
4. Loosely attach the upper bracket to the air spring using flat washers (M), lock washers (N), and $\frac{3}{8}$ x $\frac{7}{8}$ " hex head bolts (L). Refer to Figure 4. Leave loose for adjustment.
5. Attach the lower bracket (C) to the air spring (A) with flat washers (M), lock washers (N), and $\frac{3}{8}$ x $\frac{7}{8}$ " hex head bolts (L). Refer to Figure 5. Tighten to 20 ft-lbs.

IV. DETERMINING THE MOUNTING LOCATION

1. The assembly will mount forward of the axle on top of the leaf spring.
2. Check to be sure that there are no obstructions (i.e. body flanges, lines, etc.) in or near the installation location (Figure 6).

NOTE: It may be necessary to move any obstructions to mount the air spring. Removing the clip holding the lines to the frame rail should allow the line to be rerouted to provide sufficient clearance (Figure 7).

V. ATTACHING THE LOWER BRACKET

1. Set the air spring assembly on the leaf spring, forward of the axle (Figure 8). The lines can be routed above the upper bracket.
2. Butt the lower bracket up tight to the U-bolt upper spring retainer (Figure 9).
3. Attach the lower bracket to the leaf springs using the clamp bar (F), flat washers (J), and lock nuts (I). Tighten to 20 ft-lbs (Figure 10).
4. Trim off excess bolt, if desired.

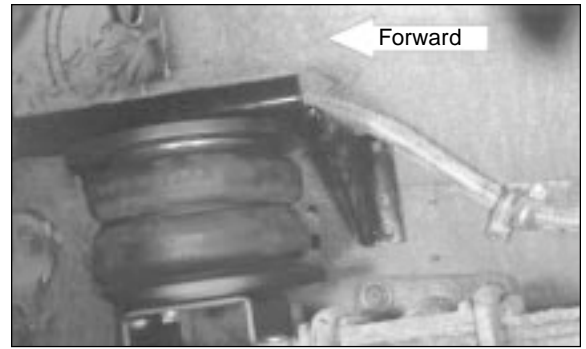


Figure 8



Figure 9

VI. ATTACHING UPPER BRACKET

1. Position the upper bracket so that it is parallel with the lower bracket (Figure 11). Note that the kit mounts on the same angle as the leaf springs.
2. Align the assembly vertically and horizontally. There must be sufficient clearance between the air spring, the frame rail, the tire and brake drum at the maximum inflated diameter (7.0").



Figure 10

IMPORTANT: The upper to lower bracket measurement must be between 5 and 7 inches and be equal on both sides (Figure 11).

3. The upper bracket must be positioned so that at least four bolt holes (two on each side) will be on the flat section of the frame rail. Use the widest bolt spacing possible. Do not drill on the radiused edges of the frame rail.



Figure 11

CAUTION: Do not drill holes into frame before checking for hydraulic lines, gas lines and/or electrical wires that may have to be moved aside on either side of the frame.

4. With the upper bracket in position, mark one of the holes to be drilled (Figure 12).



Figure 12



Figure 13



Figure 14



Figure 15



Figure 16



Figure 17

5. Move the upper bracket aside and drill one $\frac{3}{8}$ " hole in the marked position (Figure 13).
6. Move the upper bracket back into the original position and install a washer head frame bolt (H), oversized flat washer (K) and lock nut (I). See Figure 14.
7. Check the alignment of the upper to lower bracket once again and using the upper bracket as a template, drill the remaining three $\frac{3}{8}$ " holes (Figure 15).
8. Install the remaining three washer head frame bolts (H), oversized flat washers (K) and lock nuts (I). Tighten all fasteners to 20 ft-lbs (Figure 16).

VII. CHECKING THE AIR SPRING ALIGNMENT

1. With the air spring still loose in the upper bracket, align the air spring inboard and outboard, using the slotted holes in the upper bracket. Be sure that it is uniformly positioned between the brackets.
2. Maintain at least a "thumb's width" of clearance between the air spring and the frame (deflated).

VIII. SECURING THE AIR SPRING TO THE BRACKETS

1. Tighten the upper bracket securely to air spring. Torque to 20 ft-lbs.



Figure 18

IX. INSTALLING OTHER SPRING

1. Now that the installation of one side is complete, return to section III and complete up to section VIII for the other side.
2. Continue with Installing the Air Lines.



Figure 19

X. INSTALLING THE AIR LINES

1. Choose a convenient location for mounting the inflation valves.

Recommended locations are, in the wheel well, or lower body ahead of rear wheel (Figure 19). One on each side provides ease of filling, checking, and measuring body height to compensate for side to side lean and sag.



Figure 20

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 (Figure 20).

CAUTION: *When cutting or trimming the air line, use a hose cutter (Air Lift P/N 10530), a razor blade or a sharp knife. A clean, square cut will ensure against leaks. (Figure 21a). 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 (Figure 21b).*

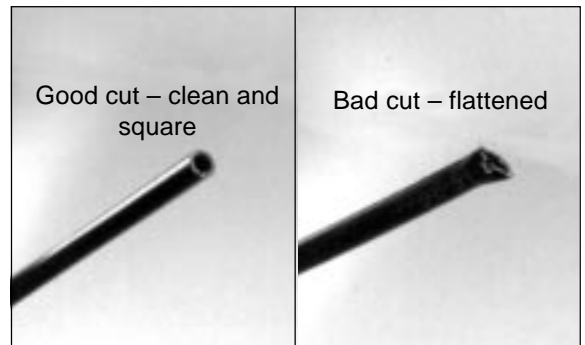


Figure 20a

Figure 20b



Figure 22

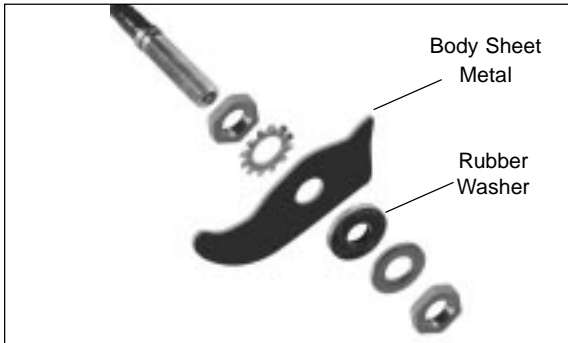


Figure 23

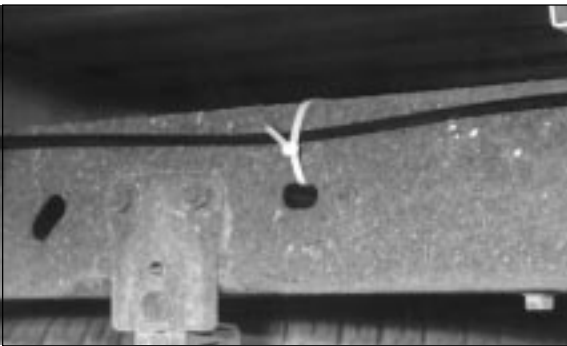


Figure 24

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 22).
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 23).
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 (Figure 24).
7. Insert the air line into the 90° swivel fitting. This is a push to connect fitting. Simply push the air line into the fitting until a definite click can be heard and/or felt. The air line should go in approximately $\frac{9}{16}$ ".

XI. AFFIXING THE INFLATION DECAL

Install the minimum/maximum air pressure decal in a highly visible location. We suggest placing it near the inflation valve.

XII. CHECKING FOR LEAKS

1. Inflate the air spring to 60 p.s.i.

2. 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 (Figure 25). Leaks should be spotted easily by looking for bubbles in the soapy water.
3. After the test, deflate the springs to the minimum pressure required to restore the Normal Ride Height, but not less than 5 p.s.i.
4. **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.



Figure 25

XIII. 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 the it with a valve core tool (Figure 26).
 - b. Check the air line connection (Figure 26) 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 Service at 1-800-248-0892 for assistance.

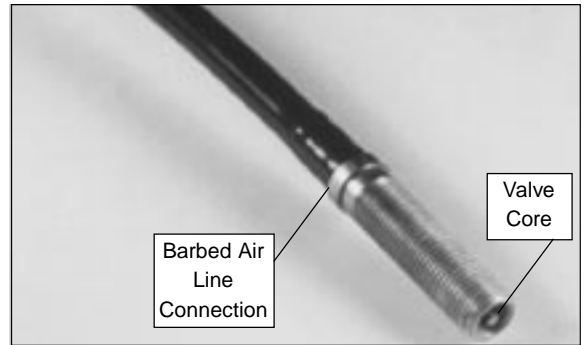


Figure 26



Figure 27



Figure 28

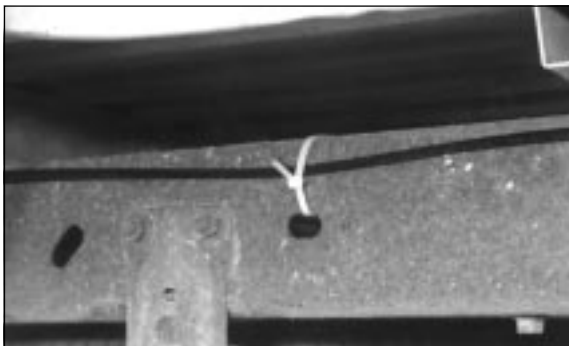


Figure 29

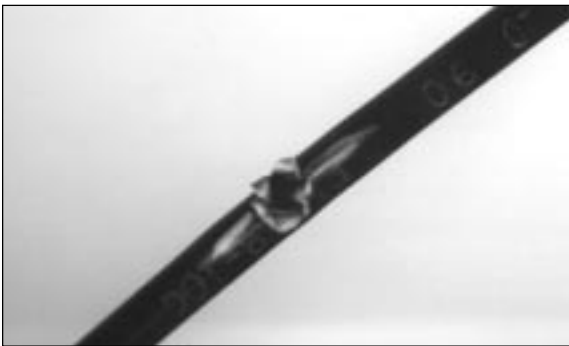


Figure 29



Figure 30

IXV. 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 (Figure 27). See Section XII to repair.
2. Leak test the inflation valve for leaks at the air line connection or dirt or debris in the valve core (Figure 28). See Section XIII for repair.
3. Inspect air lines to be sure it is not pinched. Tie straps may be too tight. Loosen or replace strap. Replace leaking components (Figure 29).
4. Inspect air line for holes and cracks (Figure 30). Replace as needed.
5. A kink or fold in the air line (Figure 31). 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.

XI. 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 8 and 9 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.

Torque Guide:

3/8" Frame Bolts	20 ft–lbs
Carriage Bolts	20 ft–lbs

- 5. Road Test – The vehicle should be road tested after the preceding tests. Inflate the springs to 50 p.s.i. or until vehicle is level. 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 12 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 9 and 10) 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.

XII. MAINTENANCE AND OPERATIONS

Minimum Air Pressure	Maximum Air Pressure
20 p.s.i.	100 p.s.i.
Minimum Air Pressure for Motorhomes	
50 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. (See page 8.)
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., this pressure may represent too great a load on some vehicles. 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 (20 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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