

Please read these instructions completely before proceeding with installation

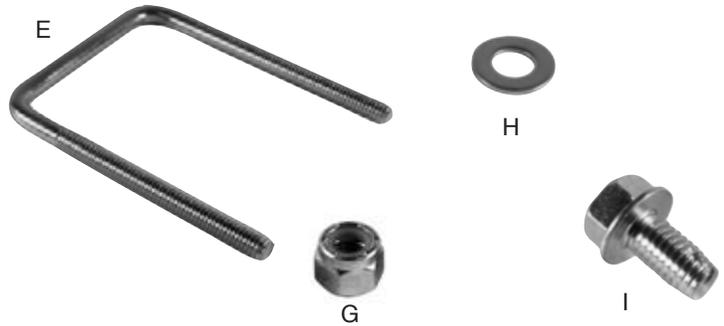
Air Spring Kit Parts List

Item	Description	Quantity
A	Air Sleeves	2
B	Upper Brackets	2
C ₁	Lower Bracket (Driver-Side)	1
C ₂	Lower Bracket (Passenger-Side)	1
D	Elbow Fitting	2



Bracket Attaching Hardware

Item	Description	Quantity
E	3/8" -16 U-Bolts	2
G	3/8" Nylock Nuts	4
H	3/8" Flat Washers	4
I	3/8" x 1" Self-Tapping Screw	6



Air Spring Attaching Hardware

Item	Description	Quantity
J	1/2" x 7/8" Hex Head Bolts	2
K	3/4" Nylon Nut	2
L	1/2" Flat Washers	2



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	Small Star Washer	2
GG	5/16" Hex Nut	4
HH	Hose Clip	4
II	3/4" Self Tapping Bolt	4



Tools Needed

Standard and metric open end or box wrenches
Ratchet with $\frac{3}{8}$ ", $\frac{1}{2}$ ", & $\frac{9}{16}$ " deep well sockets
 $\frac{5}{16}$ " drill bit (very sharp)
 $\frac{7}{16}$ " & $\frac{9}{16}$ " Nut Drivers
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.

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

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.

I. Assembling the Air Spring Unit

NOTE: This kit will mount behind the axle.

1. Install 90 degree air swivel fitting (D) to the top of the air spring. Use an open end wrench being careful to tighten on the metal hex nut only. Tighten 1 and 1/2 turns (Figure 1). Do not over tighten.

NOTE: This fitting is precoated with sealant.

2. Set upper bracket (B) over the fitting and thread post (Figure 4). Position the elbow towards the front or rear of the vehicle depending on which direction will allow easier access for the air line.
3. Thread nylon nut (K) onto the thread post, making sure that the flat side is up (Figure 2).
4. Tighten the nylon nut. Hand tight is sufficient.

IMPORTANT: Ensure that the bracket is tight and flat to the roll plate on both sides.

5. Loosely attach the lower bracket (C₁, C₂) to the bottom of the air spring with 1/2" flat washer (L) and 1/2" Hex Head Cap Screw (J). See Figure 3.

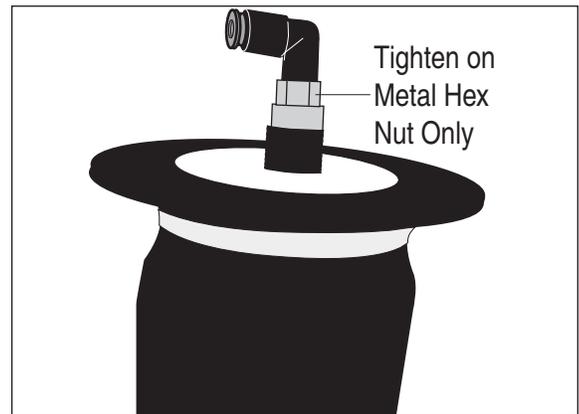


Figure 1

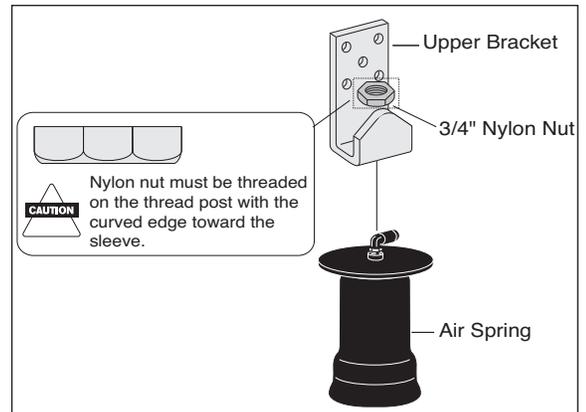


Figure 2

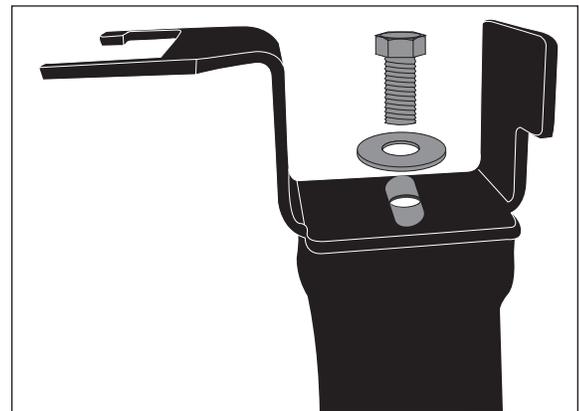


Figure 3

II. Mounting the Lower Bracket

1. With the vehicle at normal ride height, set the air spring assembly on the leaf spring behind the axle. The hook end of the lower bracket (C₁, C₂) must lock around the U-bolt to avoid moving along the leaf spring (Figure 4).

NOTE: The brake line will route freely through the indented section of the lower bracket. If the brake line is rubbing on the bracket, the bracket is on the wrong side of the vehicle (Figure 17).

2. Secure the lower bracket to the leaf spring using U-bolt (E), flat washers (H), and nylock nuts (G). Tighten to 16 ft-lbs.

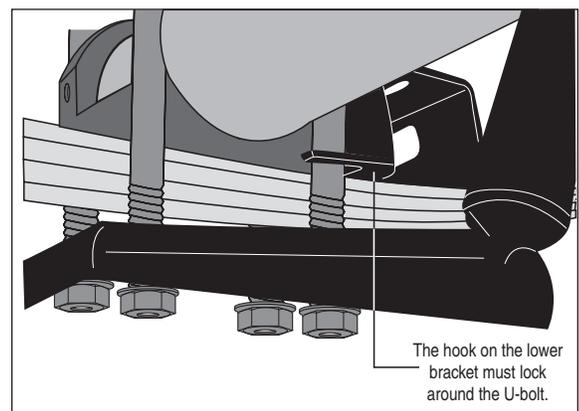


Figure 4

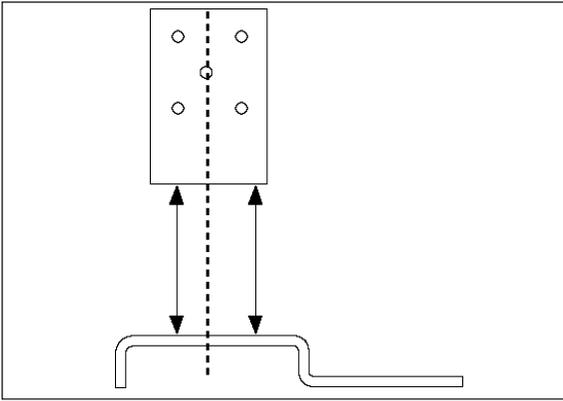


Figure 5

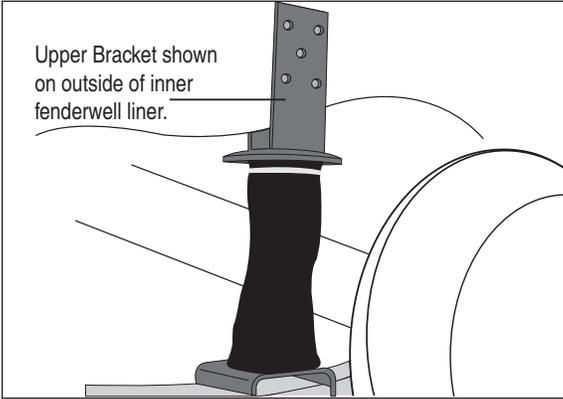


Figure 6

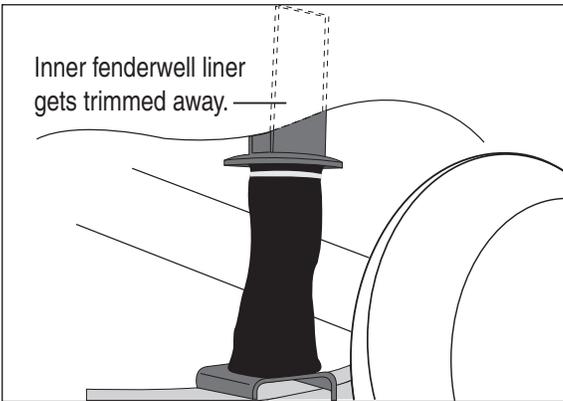


Figure 7

III. Locating the Upper Bracket

IMPORTANT NOTE: After each step in Locating the Upper Bracket, check to ensure that the upper bracket is both parallel and perpendicular to the lower bracket.

1. The upper bracket (B) must be parallel and perpendicular to the lower bracket (C1, C2). See Figures 5 and 8.
2. **IMPORTANT NOTE:** The Dodge Durango is equipped with an inner fenderwell liner. The first option is that the upper bracket can be positioned on the outside of the liner behind the axle (Figure 6). The second option is that the liner can be trimmed away as shown in Figure 7.

3. Align the upper bracket so that the short leg of the upper bracket touches the bottom of the frame rail (Figure 8).

IMPORTANT: *If the short leg of this bracket does not contact the frame rail, the warranty will be void.*

4. Using the upper bracket as a template, center punch one hole (Figure 9). A welding clamp or C-clamp may assist in holding the upper bracket to the frame.

NOTE: *It is necessary to use at least three of the five pre-drilled holes in the upper bracket for mounting. Any combination of the three is permissible.*

CAUTION: *Before drilling, be sure to check the back side of the frame rail for brake lines, gas lines, or electrical lines that may be in the way. It is necessary to move any interfering lines prior to drilling.*

5. Drill one $\frac{5}{16}$ " hole and install one self-tapping screw (I). Tighten to 15 ft-lbs.
6. Centerpunch and drill remaining two holes and install the self-tapping screw (I). Again, torque to 15 ft-lbs. Do not over tighten.

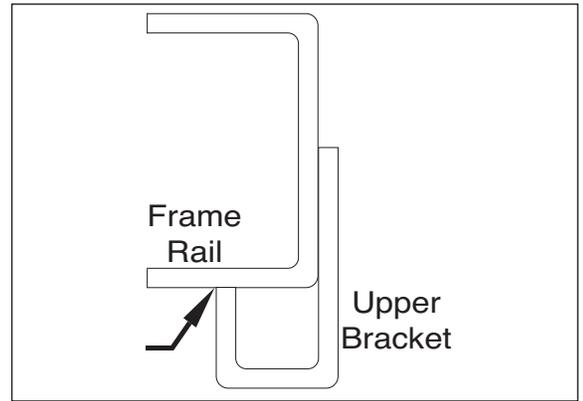


Figure 8

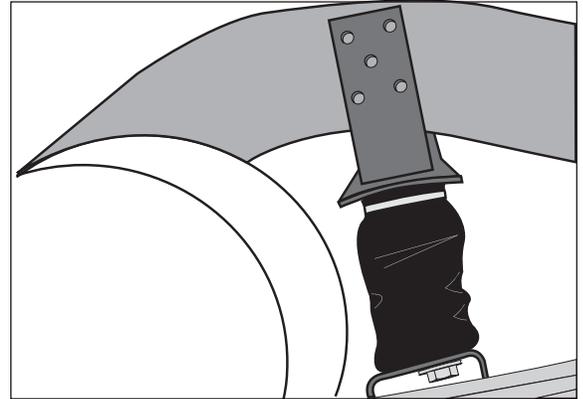


Figure 9

IV. Installing the Other Side

1. Install the minimum/maximum air pressure decal in a highly visible location.
2. Repeat entire installation procedure for remaining side.
3. Continue with section V, Installing the Air Lines.

V. Installing the Air Lines

IMPORTANT NOTE: When installing the air lines, there must be at least six inches of clearance between the air lines and any heat sources.

1. Choose a convenient location for mounting the inflation valves. Popular locations for the inflation valve are:

The wheel well flanges; The license plate recess in bumper; Under the gas cap access door; Through license plate.

NOTE: Whatever 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 (Air Lift P/N 10530), a razor blade or a sharp knife. A clean, square cut will ensure against leaks. (Figure 11). 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. Install the inflation valves as shown in Figure 15.
5. 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. Leave at least 2" of slack when securing the air lines to allow for any movement that might pull on the air line (Figure 16).
6. Cut off air line leaving approximately 12" of extra air line. Insert the air line into the air fitting. Push the air line into the 90° swivel fitting until it bottoms out ($\frac{9}{16}$ " of air line should be in the fitting) (Figure 15).
7. Use the plastic tie straps (BB) to secure the air line to fixed, non-moving points along the chassis (Figure 13). Be sure that the tie straps are tight, but do not pinch the air line. Where there are no holes to secure the straps to, use the air line clip (HH) and self tapper (II) to secure the air line to the frame (Figure 14). Leave at least 2" of slack to allow for any movement that might pull on the air line.

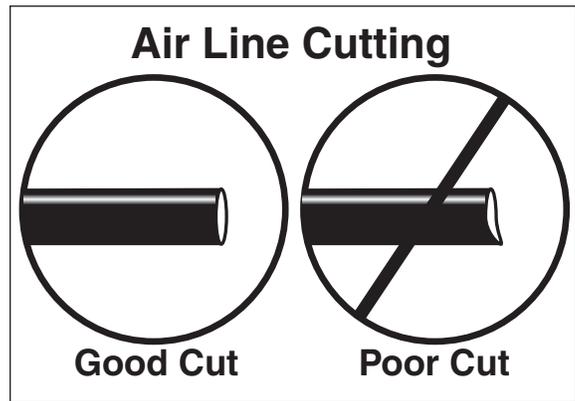


Figure 11

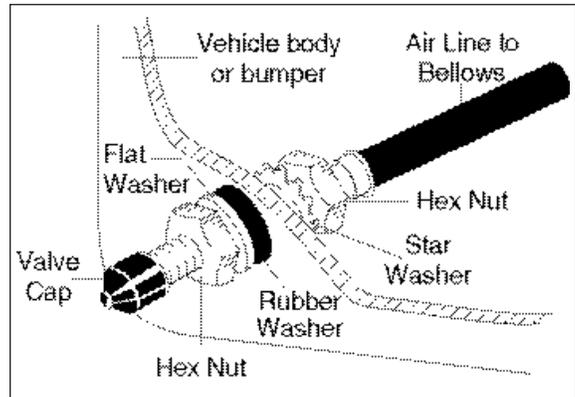


Figure 12

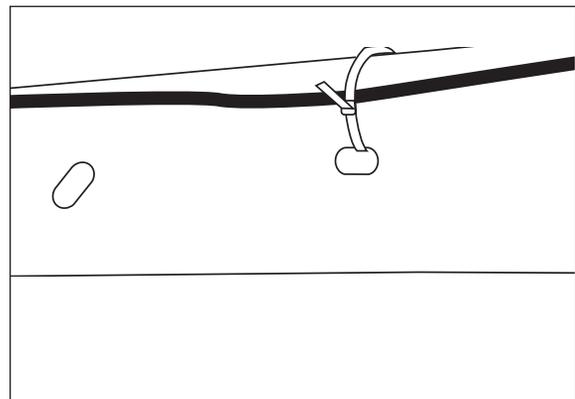


Figure 13

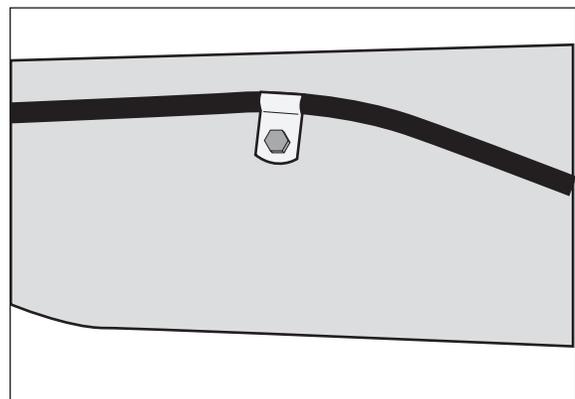


Figure 14

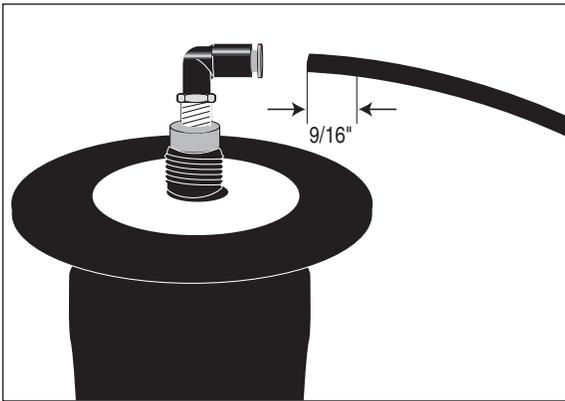


Figure 15

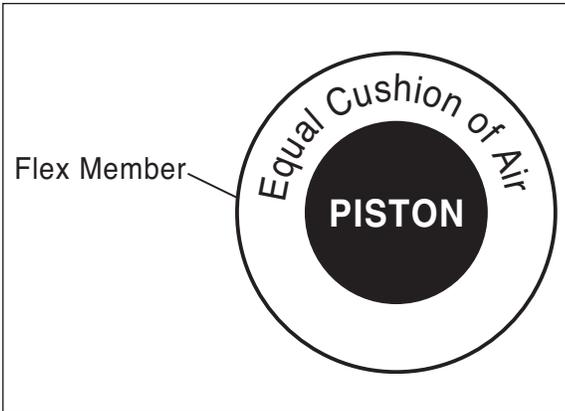


Figure 16

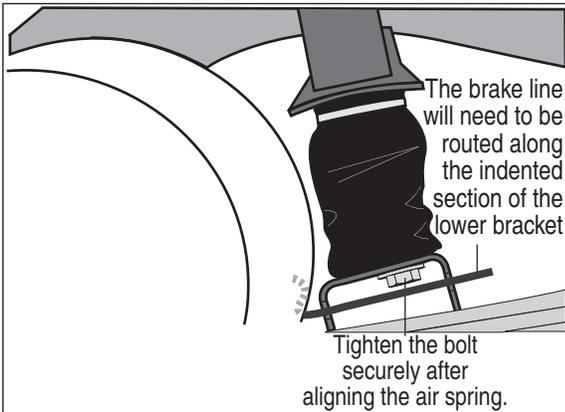


Figure 17

VI. Aligning the Air Springs

1. **IMPORTANT:** With the bottom of the air spring still loose, inflate the air spring to approximately 10 p.s.i. Use the slotted adjustment in the lower bracket to correctly align the air spring between the upper and lower bracket. This can be accomplished by tapping it inboard or outboard for proper alignment. There should be a symmetrical cushion of air around the base of the air spring when correctly positioned (Figure 16).
2. When aligned, tighten the lower end by holding the air spring and turning the bolt with a $\frac{3}{4}$ " open end wrench (Figure 17). Snug (10 ft-lbs) will be sufficient and will also prevent stripping the threads. ***Do not attempt to hold the air spring with any type of tool.***

VII. 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 30). You should be able to spot leaks 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 10 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.

VIII. 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 Service at 1-800-248-0892 for assistance.

IX. 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 VIII 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 VIII 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.
4. Inspect air line for holes and cracks. Replace as needed.
5. A kink or fold in the air line . Reroute as needed.
6. If the preceding steps have not resolved the problem, call Air Lift Technical Service at 1-800-248-0892 for assistance.

X. 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 10 and 11 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:

Self-Tapping Screws	15 ft-lbs
U-bolt Lock Nuts	16 ft-lbs
Lower Bolt for Air Spring	10 ft-lbs

- 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 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 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 2 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.

XI. Maintenance and Operations

Minimum Air Pressure	Maximum Air Pressure
5 p.s.i.	100 p.s.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.

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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