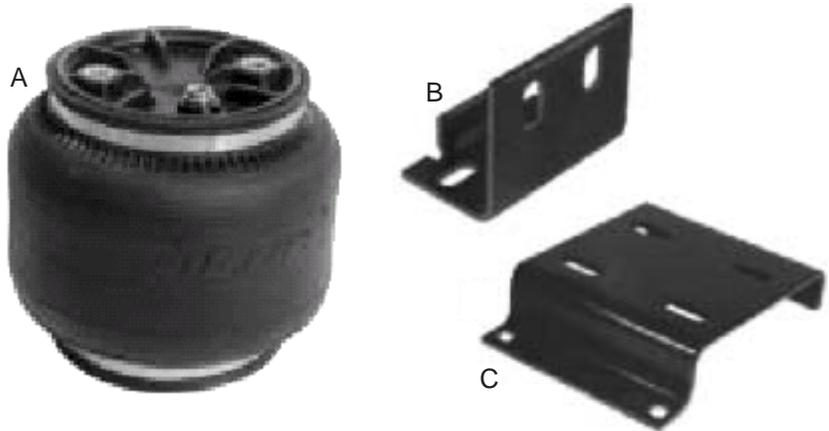


P/N 57140

Please read these instructions completely before proceeding with the installation.

Air Spring Kit Parts List

Item	Description	Quantity
A	Air Springs	2
B	Upper Brackets	2
C	Lower Brackets	2



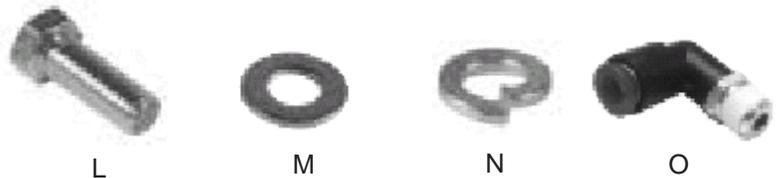
Bracket Attaching Hardware

Item	Description	Quantity
D	3/8" Carriage Bolts 3.5"	4
E	Clamp Bars	2
F	1/2" Hex Head Cap Bolts 1.5"	2
G	1/2" Lock Washer	2
H	1/2" Flat Washer	2
I	1/2" Hex Nut	2
J	3/8" Lock Nuts	8
K	3/8" Flat Washers	4



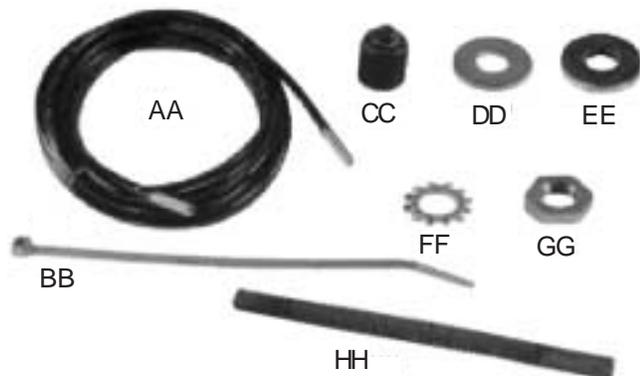
Air Spring Attaching Hardware

Item	Description	Quantity
L	3/8" Hex Head 7/8" Bolts	8
M	3/8" Flat Washers	8
N	Lock Washers	8
O	1/8"x1/4" Tube Elbow	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	Star Washer	2
GG	5/16" Hex Nut	4
HH	Thermal Sleeve	2



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

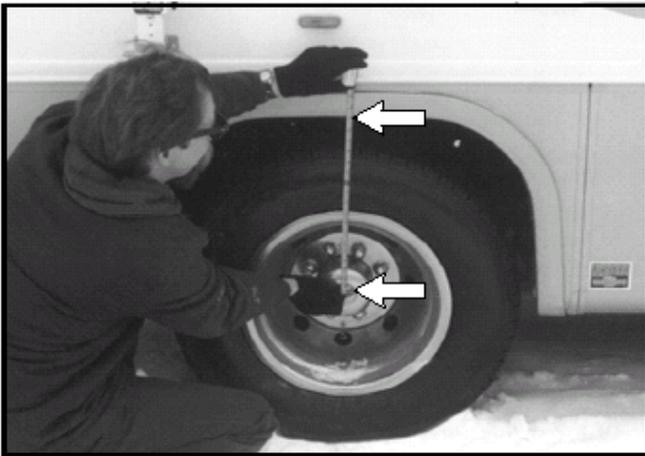
Hose Cutter, Razor Blade, or Sharp Knife
Hoist or Floor Jacks
Safety Stands
Safety Glasses
Air Compressor, or Compressed Air Source
Spray Bottle with Dish Soap/Water Solution

Before You Start

You need to determine Normal Ride Height. 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.



Remove unusual loads and examine your vehicle from the side to ensure it is on a level surface. 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.



Measure the distance between the center of the hub and the bottom edge of the wheel well. This is the Normal Ride Height. Enter the measurement below:

NORMAL
RIDE HEIGHT: _____ inches



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.



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.

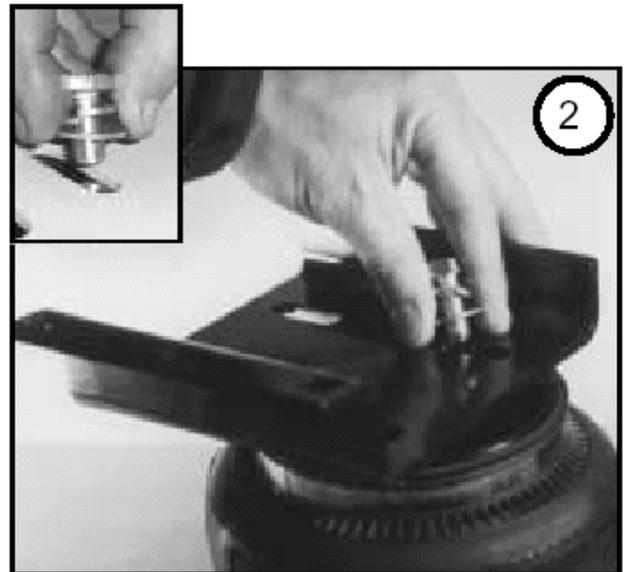
Assembling the Air Spring Unit

LOOSELY attach the 1/8"x1/4" tube elbow fitting (O) to the bellows. Tighten fitting finger tight plus 1 and 1/2 turns, being careful to tighten the metal hex nut only. DO NOT OVERTIGHTEN.

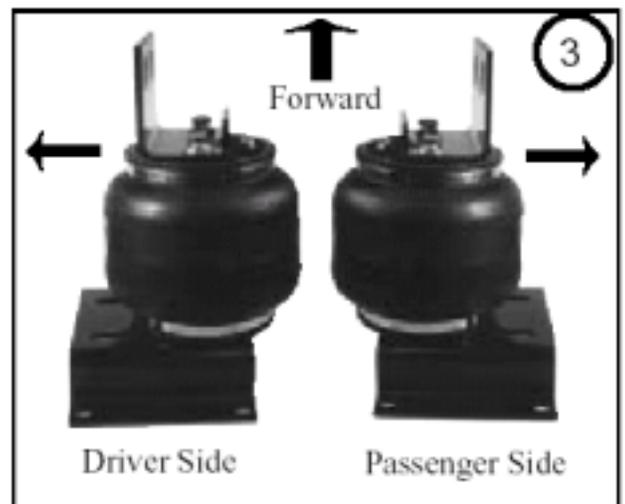
LOOSELY attach the upper bracket (B) to the air springs with two 3/8-16x7/8" hex head bolts (L), lockwashers(N) and flat washers (M).



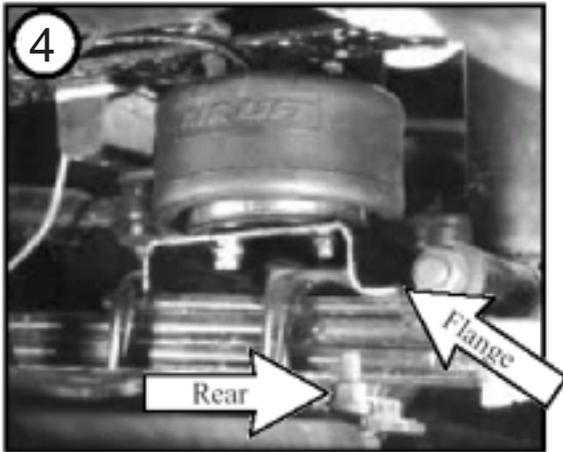
Attach the air spring to the lower bracket. Secure the lower bracket (C) to the air spring with two 3/8-16x7/8" hex head bolts (L), lockwashers(N) and flat washers (M). Torque to 20 ft. lbs.



There is a Driver and Passenger side unit. Attach the air spring to the inboard slotted holes of the lower bracket with the vertical flange of the upper bracket outboard.

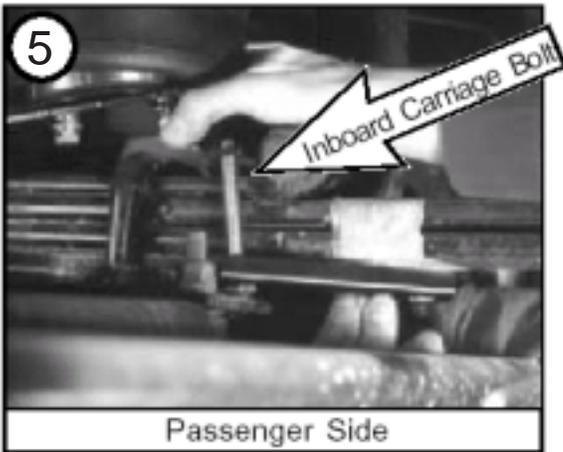
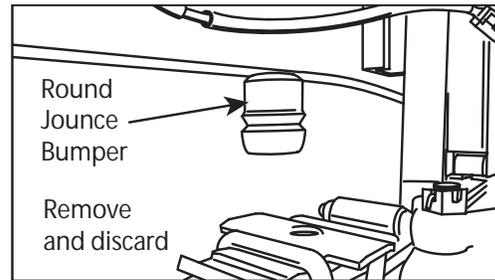


Attaching the Lower Bracket



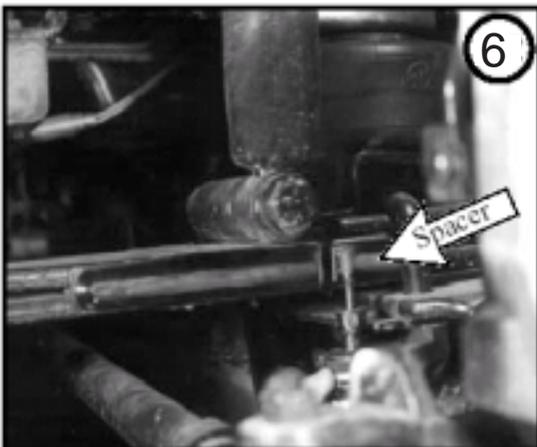
Set the assembly on the leaf spring with the lower bracket flange over the rearward u-bolt and the vertical flange of the upper bracket on the outboard side of the frame rail.

NOTE: On some late models, the chassis has a round jounce bumper under the frame that will interfere with the installation of the assembly. If your model is equipped with this style jounce bumper, remove and discard it.



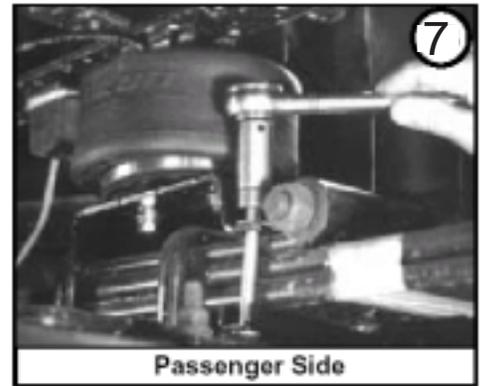
PASSENGER SIDE-It will be necessary to install the inboard carriage bolt (D) and clamp bar (E) first before placing the unit on the leaf spring. Install the inboard carriage bolt through the clamp bar and up through the lower bracket (the nut will be on the top of the bracket). The outboard carriage bolt will go down.

DRIVER SIDE-Both carriage bolts are installed down with the nut on the bottom of the clamp bar (opposite of passenger side).



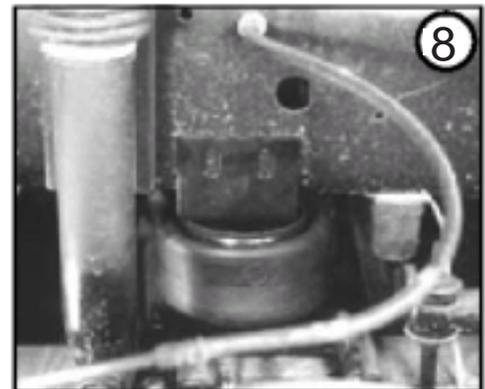
PASSENGER SIDE-Some models have a plastic spacer between the leaf springs that will need to be filed or ground away to allow the carriage bolt to be installed into the clamp bar.

Secure the carriage bolt (D) with a flat washer (K) and 3/8" lock nut (J). Tighten all fasteners to 20 ft. lbs.

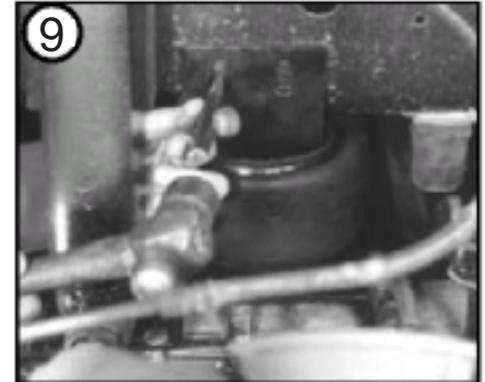


Attaching the Upper Bracket

Position the upper bracket (B) on the frame rail so that it is aligned front to rear and inboard/outboard. Upper and lower brackets are slotted for adjustment.

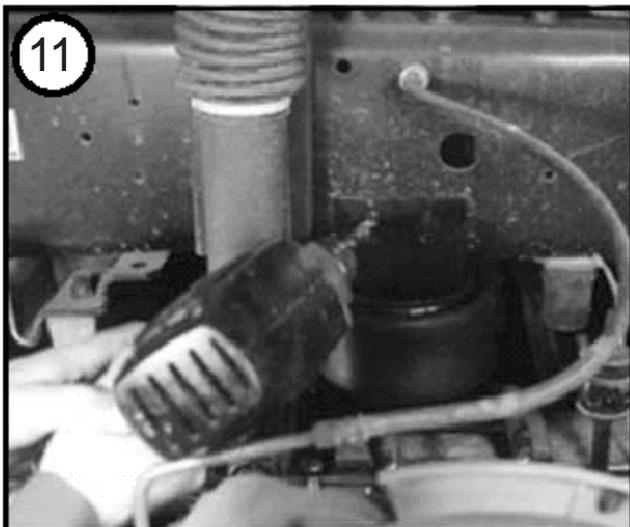


Put the upper bracket back into position on the frame rail and center punch ONE hole in the side of the frame rail.



Tighten the rearward bolt in the upper bracket to the air spring first. Now move the upper bracket away from the frame and tighten the front bolt.





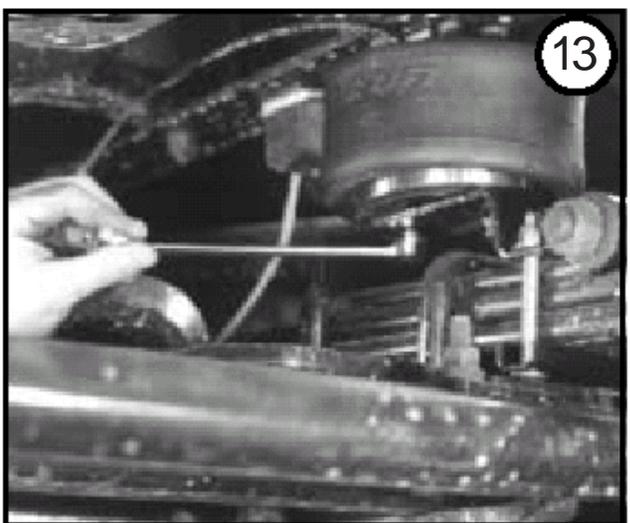
Drill ONE 1/2" hole in the side of the frame rail.



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.



Check the alignment once again. Using the slots in the lower bracket, align the air spring so that it is square, vertically and horizontally to the upper bracket.



Tighten the air spring mounting bolts to 20 ft. lbs. Attach the upper bracket using one 1/2-13x1.5" bolt (G), 1/2" flat washer (I), 1/2" lock washer (H) and 1/2" hex nut (J). Only one bolt is required to secure the bracket to the frame.

Install Other Air Spring

You have now completed the installation for one air spring. Complete steps 1-13 for the other side of the vehicle, and then return to step 15.

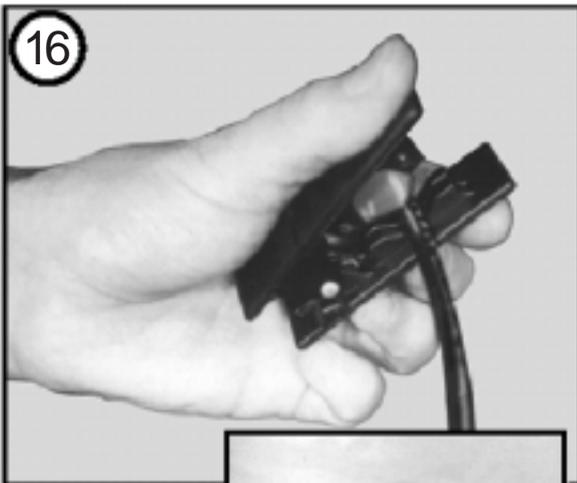
14

Installing the Air Lines

Choose a convenient location for mounting the inflation valves. Make sure there is enough clearance around the inflation valves for an air chuck. Drill a 5/16" hole to install the inflation valves.



The recommended location is in the wheel well or lower body ahead of rear wheel. One on each side provides ease of filling, checking and measuring body height to compensate for side-to-side lean and sag.



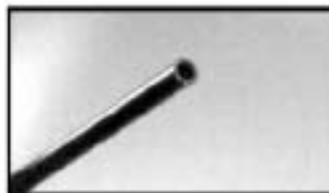
Cut the air line assembly (AA) in two equal lengths.



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.

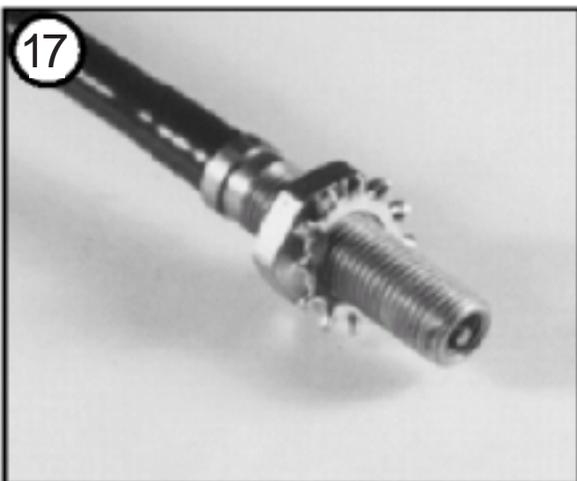


Bad cut - flattened



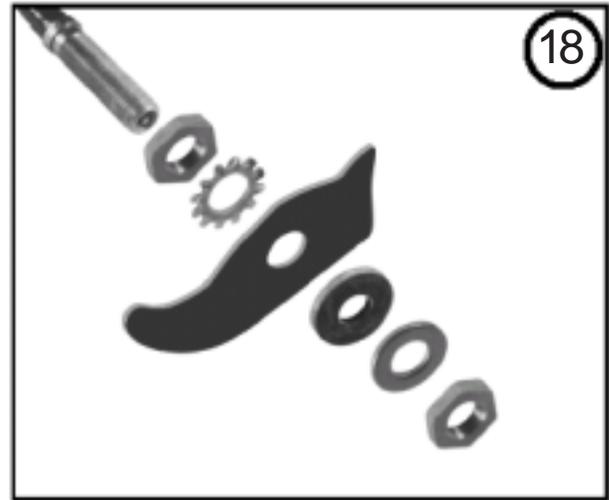
Good cut - clean and square

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.

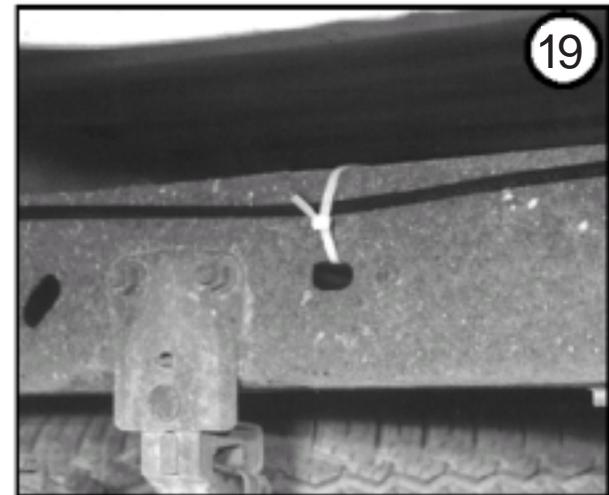


Place a 5/16" nut (GG) and a star washer (FF) on the air valve. Leave enough of the inflation valve in front of the nut to extend through the hole and allow room for the rubber washer (EE), flat washer (DD), and 5/16" nut (GG) and cap (CC). There should be enough valve exposed after installation - approximately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

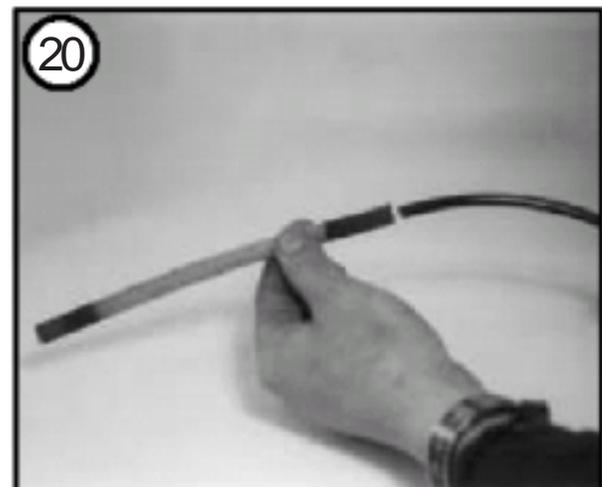
Push the INFLATION valve through the hole and use the rubber washer (EE), flat washer (DD) and another 5/16" (GG) nut to secure it in place. Tighten the nuts to secure the assembly in place.



Route the air line along the frame to the air spring location on the leaf spring, behind the axle. 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.



Trim the excess air line before inserting it into the air fitting. Using a standard tube cutter, a razor blade, or very sharp knife to cut the air line. Cut off air line leaving approximately 12 inches 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 fitting until it bottoms out (**5/8" of air line should be in the fitting**). Maintain a smooth bend from the air spring. **Do not kink the air line.**



PASSENGER SIDE ONLY - Before installing the air line, place a thermal sleeve (HH) on the air line near the exhaust.

Checking for Leaks

Inflate the air spring to 60 p.s.i. Spray all connections and the inflation valves with a solution of 1/3 dish soap and 2/3 water to check for leaks. You should be able to spot leaks easily by looking for bubbles in the soapy water. After the tests, deflate the springs to the minimum pressure required to restore the Normal Ride Height, but do not go below 5 p.s.i.



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.

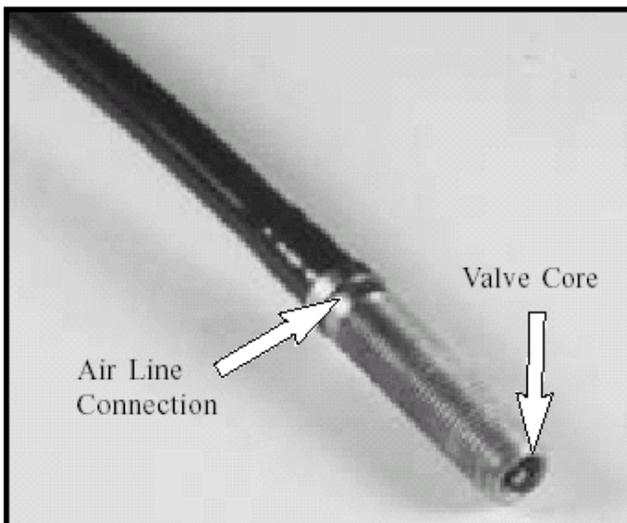
Fixing Leaks

Air Line Connection

Deflate the spring and remove the line by pushing the collar against the fitting and pulling the air line straight out. 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.

Inflation Valve

Tighten the valve core with a valve core tool. If a leak is still detected, repair the air line by removing air line from a barbed type fitting, but **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.



IMPORTANT

If the preceding steps have not resolved the problem, call Air Lift Technical Service at 1-800-248-0892 for assistance.

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 air spring 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 page 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.
- _____ 4. Fastener Test - Recheck all bolts for proper torque.
Torque Guide:
3/8" Frame Bolts 20 ft.-lbs.
Carriage Bolts Lock Nuts 20 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 the 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 11 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., you have a leak that must be fixed. Either fix the leak yourself (see page 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 Normal 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 Normal 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.

Maintenance and Operation

Minimum Air Pressure	Maximum Air Pressure
20 p.s.i.	100 p.s.i.
Minimum Air Pressure for Motorhomes	
50 p.s.i.	

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

By following these steps, vehicle owners should obtain the longest life and best results from their air springs:

1. Check the air pressure in the air springs 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 9.)
4. 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 the 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 or the manufacturers specification plate usually found on the inside door jamb, and do not exceed the maximum load listed for your vehicle.
6. Always add air to springs in small quantities, checking the pressure frequently. Air springs 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 does not require deflation or disconnection.**

Troubleshooting Guide

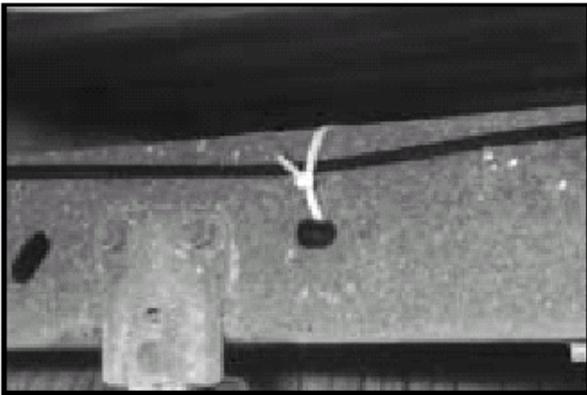
1. Problems maintaining air pressure without an on-board compressor



Leak test the air line connections and threaded connection of the elbow into the air spring. See page 9 to repair.



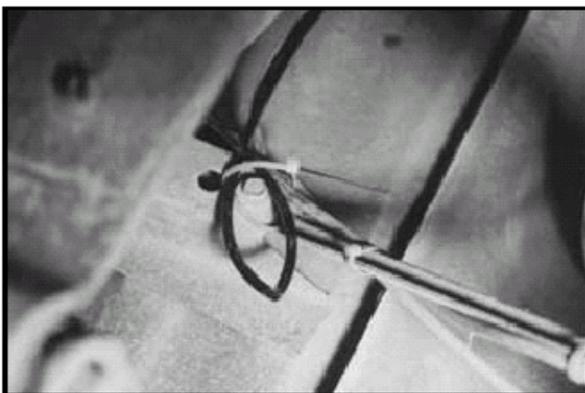
Leak test the inflation valve for leaks at the air line connection or dirt or debris in the valve core. See page 9 for repair.



Inspect air lines to be sure they are not pinched. Tie straps may be too tight. Loosen or replace strap(s). Replace leaking components.



Inspect air lines for holes and cracks. Replace as needed.



Inspect air lines for kinks or folds. Re-route 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. We suggest that you return the vehicle to your installer. If self-installed or you are the professional installer, please call Air Lift at 1-800-248-0892 for assistance or a replacement air spring.

Notes

You may find this space useful for recording information about your system (i.e. weekly pressure readings).
Also record any information from your installer or Air Lift technical assistance personnel.



Thank you for purchasing Air Lift Products

Mailing Address:
AIR LIFT COMPANY
P.O. Box 80167
Lansing, MI 48908-0167

Street Address:
AIR LIFT COMPANY
2727 Snow Rd.
Lansing, MI 48917

Local Phone: (517) 322-2144
Fax: (517) 322-0240

For Technical Assistance call 1-800-248-0892, extension 2

“The Choice of the Professional Installer”

Printed in the USA