

LOAD CONTROLLER II

ON-BOARD COMPRESSOR CONTROL SYSTEM



MN-333
(12508)
ECR 5278

P/N 25592 – 5 p.s.i. Low Pressure Sensor

This part of the installation should be done after the air spring kit is installed. If you have any questions, please call our technical service number: 1-800-248-0892, ext 2.

P/N 25594 has been superceded by P/N 25592.

If you are adding this control system to an Air Lift LoadLifter 5000 application, no modifications to the Low Pressure Sensor are necessary. If you are adding this control system to an AirLift 1000 or RideControl application, and if your specific application requires a minimum of 10 p.s.i., then it will be necessary to adjust the Low Pressure Sensor to 10 p.s.i. To increase the pressure in the Low Pressure Sensor, remove the rubber plug with pliers (Figure 2). Using an allen wrench, turn the screw clockwise 4 1/4 turns (Figure 3). Push rubber plug back into the top of the Low Pressure Sensor. Proceed with the step by step installation instructions.

Do not cut, trim, modify, or disassemble the harness. If you have excess length, simply coil it up and secure out of the way with the provided tie straps. All preassembled gauge panels have been 100% leak & function tested. DO NOT attempt to tighten, loosen, or adjust any fittings or connections. This will likely cause a leak or malfunction and void the warranty.

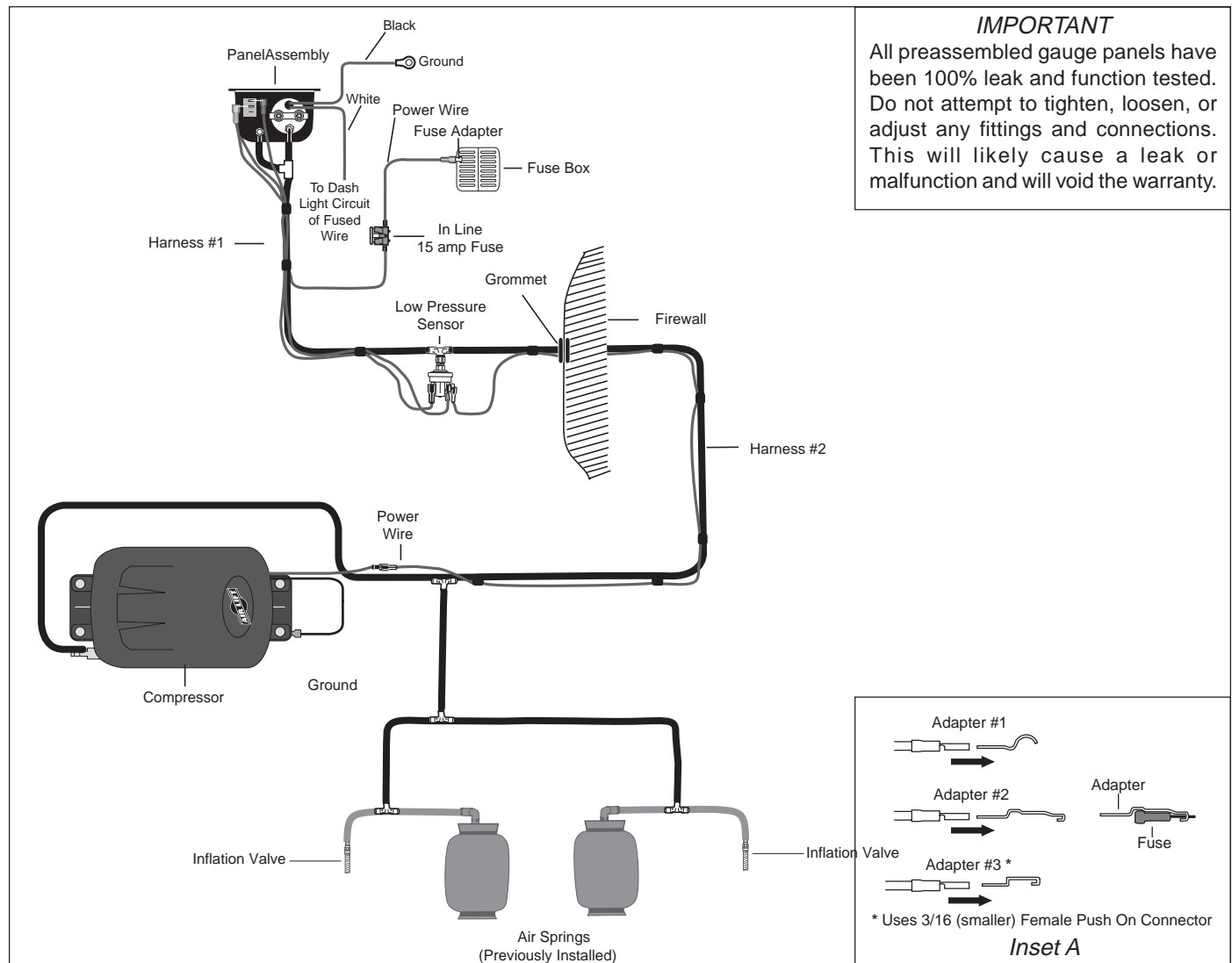


Figure 1

Step by Step Installation (refer to pages 3 and 4 for line drawings):

All of the electrical connections are matched by male-to-female push-in terminals. All of the air line connections will be white-to-white, green-to-green, indicated by the color band. The color band also serves as a reference point for installing the air line into the fitting. Properly installed, the front edge of the color band should be against the collar of the fitting (Figure 4 & 6).

We recommend that you install the air spring kit first per the instructions provided with the air spring kit.

1. Install the gauge panel. Select a convenient mounting location that has a sturdy rigid surface, such as the bottom edge of the dash on either side of the steering wheel. Attach the panel to the selected location with the black self tapping screws.
2. Now install the compressor unit. Hold the compressor in the recommended location and attach the mounting brackets to the vehicle with the provided silver self tapping screws. In some cases the mounting area does not provide enough room to use a drill to drive the screws in. It may be necessary to use the mounting brackets as a template to drill $13/64$ " holes through the frame first and then use a $7/16$ " nut driver to install self tapping screws. *NOTE: Attach the ground wire to one of the screws (Figure 1 & 5).*

For Box Frames: In some cases the frame section will not be wide enough to mount the compressor legs flat to the rail. Refer to Figure 7 in this situation.

CAUTION: Do not drill any holes into the frame or the floor board before checking for hydraulic lines, gas lines, and/or electrical wires that may need to be moved aside. Also, when attaching to the floor board, it is important to check where the screws protrude through the floor board. It may be necessary to trim or cover the top of the screws inside the vehicle. A sealer should be used around the screw to prevent the elements from entering the cab area.

3. Now connect Wiring Harness #1 to the back of the gauge panel. With your thumb against the front side of the switch, connect the wire by pushing the female connectors onto the blade connectors on the switch. Push the air line onto the "T" fitting until the air line completely covers the barb. Lubricating the air line will ease pushing the air line over the barb (Figure 4). Do not connect the power wire at this time.

Wiring Harness #1 also connects the gauge panel to the Low Pressure Sensor assembly. The Low Pressure Sensor protects the air springs from failure resulting from low pressure in the unloaded condition. The sensor is preset to maintain a *minimum* pressure of 5 or 10 p.s.i., depending on the kit you have. The sensors measure the pressure in each air spring and turn on the compressor if the pressure should fall below 5 or 10 psi. *NOTE: The Low Pressure Sensor is preassembled onto Wiring Harness #1. The sensor should be located under the dash inside the vehicle and secured with the provided tie straps.*

4. Attach Harness #2 to the Compressor unit. Push the air line completely over the barbed fitting on the compressor and connect the power wire (red) (Figure 5).

Route Wiring Harness #2 from the compressor. Use existing grommets in the floorboard or firewall to route the Harness from the compressor to the low pressure sensor. A hole may have to be drilled to allow access for the Harness. Drill a $5/8$ " diameter hole and install the provided grommet (Figure 8). It will be necessary to seal any grommets or holes that have been cut, drilled or removed so as not to allow elements to enter the cab area of the vehicle (Figure 5).

When routing Wiring Harness #2 from the compressor, it should *not* be routed so as to lay on, or near, the exhaust pipe/muffler/catalytic convertor of the vehicle. Routing along the top of a crossmember or over a heat shield is the recommended way of routing the harness.

5. Now connect Wiring Harness #2 to Wiring Harness #1 inside the vehicle. You need only to connect the red wire from Harness #2 and the banded air line to the Low Pressure Sensor. See Figure 6 for air line and electrical connection.
6. The next connection is between each air spring and the air line "T" fitting located just ahead of the check valve in Harness #2 near the compressor (Figures 1 & 5). With the air springs deflated, use a hose cutter, a razor blade, or very sharp knife to cut the air line already installed between the air spring and the inflation valve. Install the provided "T" fittings in each air line (Figure 1). Push the air line into each leg of the "T" until you feel a definite "click". The line should go in $9/16$ ". Connect a single length of air line to the open leg of each "T". Cut this piece of air line in half and install another "T" fitting. Connect another length of air line to run from this "T" to the "T" already installed in Harness #2. Avoid heat sources, sharp edges and tight bends (Figure 1).
7. Now connect the power wire from Harness #1. Route it to the vehicle fuse box. Use a test light to determine which open terminal (accessory, etc.) works only when the key is in the "on" or accessory position (or refer to the owners manual for an available accessory fuse). The terminal should have an amperage rating equal to or higher than the

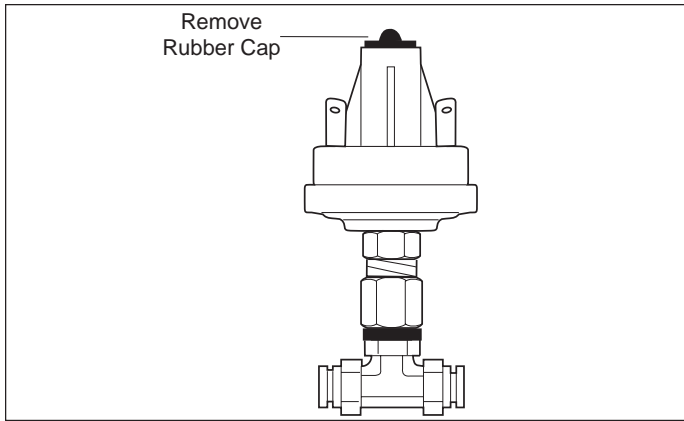


Figure 2

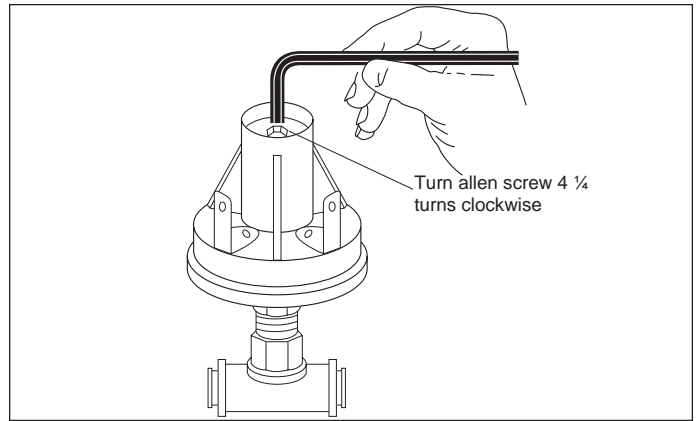


Figure 3

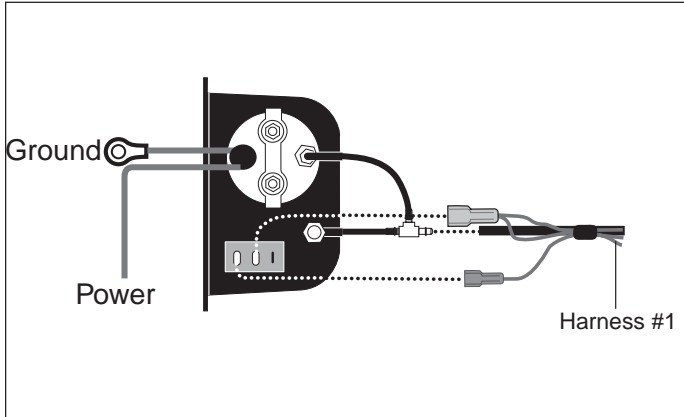


Figure 4

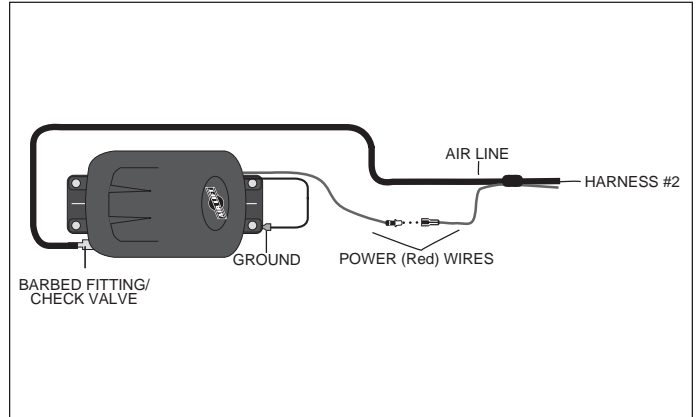


Figure 5

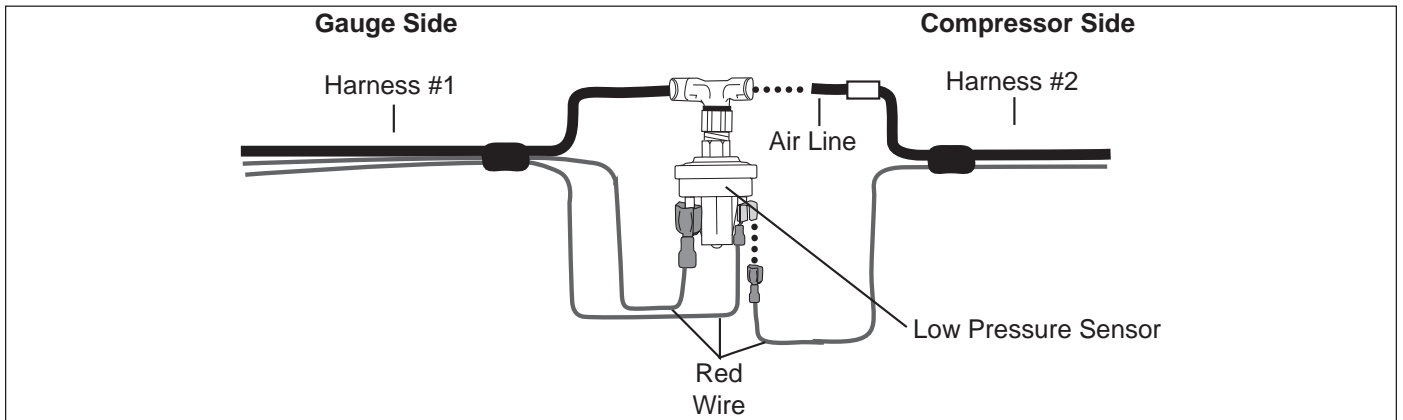


Figure 6

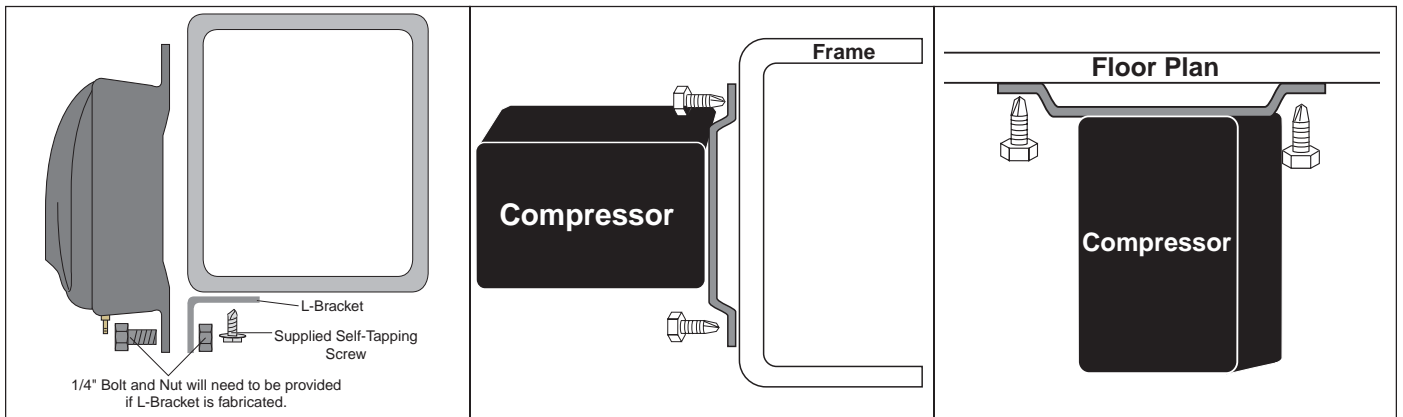


Figure 7

You will find the flexible grommet in the sealed parts package.

After the hole is drilled (see the instruction manual for correct hole size) and before you route the harness through the firewall, simply insert the grommet and "walk" the material around the inside edge of the drilled hole. You may have to trim it to get an exact fit.

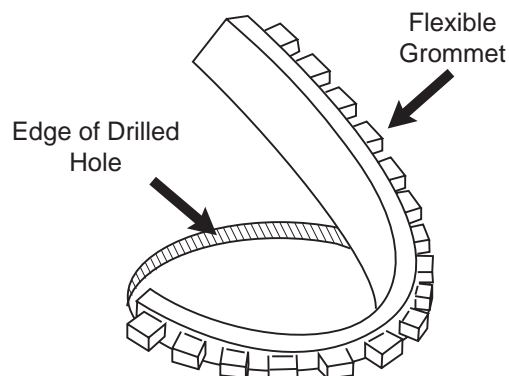


Figure 8

15 amp in-line fuse. Connection to the fuse terminal will depend on what type of fuse your vehicle uses. If your vehicle uses the barrel type fuse, use adapter #1. If you have the standard spade type fuses, use adapter #2. Many late model vehicles use a smaller spade type fuse which requires adapter #3 (see Inset A on the front page). If adapter #1 or #2 are used, it will be necessary to cut off the $\frac{3}{16}$ " female connector attached to the power wire and crimp the larger $\frac{1}{4}$ " female connector supplied with this kit. *NOTE: Connect adapter to "HOT" side of the fuse (use a test light to determine). With the ignition on, the compressor will turn on and fill the system to 10 p.s.i. before shutting off.*

8. GAUGE LIGHT: Route the white wire for the illuminated gauge to harness number one's fused wire or to a dash light wire circuit and attach with the quick splice provided. Ground the black wire to an adequate ground. Use the additional wire and connectors supplied if longer leads are needed (Figure 1).
9. Press the off/on button to inflate both air springs and use the small deflate button to adjust the pressure. Inflate to 20 p.s.i. Check all fittings and inflation valve cores with a solution of $\frac{1}{5}$ dish soap to $\frac{4}{5}$ water in a spray bottle for leaks.
10. Recheck air pressure after 24 hours. A 2–4 p.s.i. loss after initial installation is normal. If pressure has dropped more than 5 p.s.i., retest for leaks with soapy water solution. Please read and follow the Maintenance and Operating tips in the installation manual that came with your air spring kit.

IMPORTANT: If the compressor runs continually or often, then there is a leak. Disconnect the compressor at the fuse box and test for leaks with a soapy water solution.

CAUTION: Never run the compressor longer than four minutes continuously. Allow at least five minutes for cool down before starting the compressor again.

Thank you for purchasing Air Lift Products



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"The Choice of the Professional Installer"

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Product Use Information

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 time and how much pressure will they need?

The minimum air pressure should be maintained at all times. The minimum air pressure keeps the air spring in shape, ensuring that it will move throughout its travel without rubbing or wearing on itself.

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

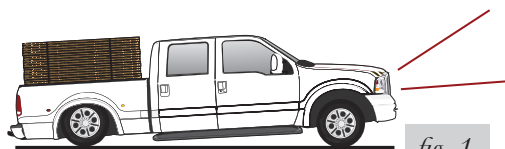
If the vehicle's headlights are shining into the trees or the vehicle is leaning to one side, then it is not level (fig. 1). Raise the air pressure to correct either of these problems and level the vehicle.

2. Ride comfort

If the vehicle has a rough and harsh ride it may be due to either too much pressure or not enough (fig. 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. 3). Tuning out these problems usually requires an increase in pressure.



Bad headlight aim



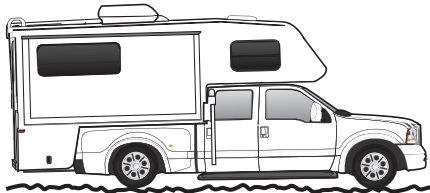
Sway and body roll



Rough ride

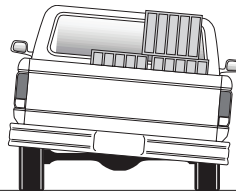
Guidelines for adding air:

1. Start with the vehicle level or slightly above.
2. When in doubt, always add air.
3. For motorhomes, start with 50-100 PSI in the rear because it can be safely assumed that it is heavily loaded.
4. If the front of the vehicle dives while braking, increase the pressure in the front air bags, if equipped.
5. If it is ever suspected that the air bags have bottomed out, increase the pressure (fig. 4).
6. Adjust the pressure up and down to find the best ride.
7. If the vehicle rocks and rolls, adjust the air pressure to reduce movement.
8. 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. 5). As much as a 50 PSI difference is not uncommon.

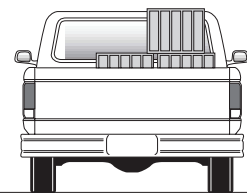


Bottoming out

fig. 4



Unlevel



Level

fig. 5

Warranty and Returns Policy

Air Lift Company warrants its products, for the time periods listed below, to the original retail purchaser against manufacturing defects when used on catalog-listed applications on cars, vans, light trucks and motorhomes under normal operating conditions for as long as Air Lift manufactures the product. The warranty does not apply to products that have been improperly applied, improperly installed, used in racing or off-road applications, used for commercial purposes, or which have not been maintained in accordance with installation instructions furnished with all products. The consumer will be responsible for removing (labor charges) the defective product from the vehicle and returning it, transportation costs prepaid, to the dealer from which it was purchased or to Air Lift Company for verification.

Air Lift will repair or replace, at its option, defective products or components. A minimum \$10.00 shipping and handling charge will apply to all warranty claims. Before returning any defective product, you must call Air Lift at (800) 248-0892 in the U.S. and Canada (elsewhere, (517) 322-2144) for a Returned Materials Authorization (RMA) number. Returns to Air Lift can be sent to: Air Lift Company • 2727 Snow Road • Lansing, MI • 48917.

Product failures resulting from abnormal use or misuse are excluded from this warranty. The loss of use of the product, loss of time, inconvenience, commercial loss or consequential damages is not covered. The consumer is responsible for installation/reinstallation (labor charges) of the product. Air Lift Company reserves the right to change the design of any product without assuming any obligation to modify any product previously manufactured.

This warranty gives you specific legal rights and you may also have other rights that vary from state-to-state. Some states do not allow limitations on how long an implied warranty lasts or allow the exclusion or limitation of incidental or consequential damages. The above limitation or exclusion may not apply to you. There are no warranties, expressed or implied including any implied warranties of merchantability and fitness, which extend beyond this warranty period. There are no warranties that extend beyond the description on the face hereof. Seller disclaims the implied warranty of merchantability. (Dated proof of purchase required.)

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SmartAir 2 Year Limited
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Other Accessories..... 2 Year Limited

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