

Air LiftTM
PERFORMANCE

Kit 27741

Strut Air Management System



AIR LIFT
PERFORMANCETM

INSTALLATION GUIDE

For maximum effectiveness and safety, please read these instructions completely before proceeding with installation.

Failure to read these instructions can result in an incorrect installation.



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Introduction

The purpose of this publication is to assist with the installation, maintenance and troubleshooting of this air management system.

It is important to read and understand the entire installation guide before beginning installation or performing any maintenance, service or repair. The information includes a hardware list, tool list, step-by-step installation information, maintenance tips, safety information and a troubleshooting guide.

Air Lift Company reserves the right to make changes and improvements to its products and publications at any time. For the latest version of this manual, contact Air Lift Company at (800) 248-0892 or visit our website at www.airliftcompany.com.

NOTATION EXPLANATION

Hazard notations appear in various locations in this publication. Information which is highlighted by one of these notations must be observed to help minimize risk of personal injury or possible improper installation which may render the vehicle unsafe. Notes are used to help emphasize areas of procedural importance and provide helpful suggestions. The following definitions explain the use of these notations as they appear throughout this guide.

 DANGER

INDICATES IMMEDIATE HAZARDS WHICH WILL RESULT IN SEVERE PERSONAL INJURY OR DEATH.

 WARNING

INDICATES HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH.

 CAUTION

INDICATES HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN DAMAGE TO THE MACHINE OR MINOR PERSONAL INJURY.

NOTE

Indicates a procedure, practice or hint which is important to highlight.

IMPORTANT SAFETY NOTICES

The installation of this kit does not alter the Gross Vehicle Weight Rating (GVWR) or payload of the vehicle. Check your vehicle's owner's manual and do not exceed the maximum load listed for your vehicle.

Gross Vehicle Weight Rating: The maximum allowable weight of the fully loaded vehicle (including passengers and cargo). This number — along with other weight limits, as well as tire, rim size and inflation pressure data — is shown on the vehicle's Safety Compliance Certification Label.

Payload: The combined, maximum allowable weight of cargo and passengers that the vehicle is designed to carry. Payload is GVWR minus the Base Curb Weight.

 WARNING

DO NOT INFLATE AIR SPRINGS WHILE OFF OF THE VEHICLE. DAMAGE TO ASSEMBLY MAY RESULT AND VOID WARRANTY.

 CAUTION

DO NOT WELD TO, OR MODIFY LIFESTYLE STRUTS/SHOCKS IN ANY WAY. DAMAGE TO UNIT MAY OCCUR AND WILL VOID WARRANTY.

Hardware List

<u>Item</u>	<u>P/N</u>	<u>Description</u>	<u>Qty.</u>
A	16380	Continuous Duty Compressor	1
B	10991	5 Gallon Air Tank	1
C	20966	1/2" Nylon Hose	40 ft.
D	24415	10mm 3/8" Valve	8
E	26228	Double Needle 150 PSI Gauge Assy.	2
F	20946	1/4" Nylon Tube (Black)	50 ft.
G	21754	Drain Valve 1/4" MNPT	1
H	21366	Tank Valve	1
I	21190	1/2" MNPT Plug	1
J	24575	145/175 PSI Pressure Switch	1
K	21391	1/2" Street Tee	1
L	21247	1/2" MNPT x 1/4" FNPT Bushing	2
M	21385	1/4" NPTM x 1/2" Tube	4
N	21869	1/4" FNPT x 1/4" Tube Straight	
4O			
P	21637	3/8" MNPT x 1/2" NPT Tube Elbow	4
Q	21508	3/8" Brass Hex Nipple	8
R	21732	3/8" FNPT x 1/2" MNPT Bushing	4
S	21507	3/8" Brass Street Tee	4
T	21368	3/8" NPTM x 1/2" Straight Tube	4
U	24553	16 Gauge Ring Terminal	10
V	24532	Butt Connector 18-22 Gauge	17
W	17132	1/2" Screw	
9X			
Y	24594	16 Gauge 1/4" Insulated Wire	
1Z			
AA	24649	Butt Connector 12 Gauge	2
AB	24595	12 Gauge 1/4" Push On Terminal	2
AC	24525	Rocker Switch	4
AD	24539	Fuse Holder	2
AE	24547	30 amp. Spade Fuse	1
AF	24652	15 amp. Spade Fuse	1
AG	24542	1/4" Fuse Tap	2
AH	24537	Quick Splice 18-22 Gauge	24
AI	24643	16 Gauge Wire (Red)	106
AJ	24524	3/16" Female Insulated Connector	2
AK	24561	Mini Fuse Adapter	2
AL	21251	1/2" MNPT to 1/8" FNPT Bushing	2
AM	23586	Thread Sealing Compound	2
AN	24647	12 Gauge Wire (Red)	12



Missing or damaged parts? Call Air Lift customer service at (800) 248-0892 for a replacement part.

Installing the Air Management System

RECOMMENDED COMPRESSOR LOCATIONS

Important

LOCATE COMPRESSOR IN DRY, PROTECTED AREA ON VEHICLE.
DIRECT SPLASH OR EXCESSIVE MOISTURE CAN DAMAGE
THE COMPRESSOR AND CAUSE SYSTEM FAILURE.

Disclaimer: If you choose to mount the compressor outside the vehicle please keep in mind the compressor body must be shielded from direct splash and the intake should be snorkeled inside the vehicle. If the compressor does not include a remote mount air filter or if mounting the compressor outside the vehicle, make sure to orient the compressor intake filter so that all moisture can easily drain.

Please also remember...

- To avoid high heat environments
- To avoid mounting the compressor under the hood.
- To check to be sure the compressor harness #2 will reach the compressor and connect to harness #1.
- The compressor can be mounted in any position — vertical, upside down, sideways, etc. (please refer to the instruction manual).

This kit is designed to be used in conjunction with an Air Lift air suspension system or equivalent. It includes a 12V compressor, an air storage tank, electrically actuated solenoids, gauges and switches for operating the system. It is designed with 1/2" pneumatic tubing to give the best response for inflating and deflating the air suspension. It does not include the actual air struts for the vehicle. You should contact your dealer or Air Lift directly, or visit the Easy Street section of the Air Lift web site (www.airliftcompany.com) to find the right air strut components for your vehicle.

This instruction manual will give general guidelines for installing the system. Since this kit will be used primarily on custom vehicles, the instructions will cover the components involved, their general operating principles, suggestions for mounting locations, suggestions for routing, etc. It will not give specific instructions on how to install your particular system.

THE SYSTEM

The system consists of five subsystems: air compressor, air storage tank, solenoids for inflation and deflation, gauges and switches, and the tubing and fittings for connecting everything together both pneumatically and electrically.

When installed on your vehicle, you will have the capability of increasing or decreasing the inflation pressures in your air suspension rapidly, using the switches on the gauge panels. The gauge will provide a reading of the air pressure in each individual air strut, front and rear. The air supply system (compressor and tank) will maintain a high pressure so that rapid inflation will be available whenever you hit the switch.

Following are some installation points/guidelines:

- We recommend installing the air compressor and air tank in a location that is out of the way. Once the system is installed, these components will not need much attention.

- The gauges can be placed anywhere you want to put them. Air Lift offers gauge panels that mount to the “A” pillar. Order part #10893 for the ‘94-’00 Acura Integra, or part #10891 for the ‘92-’95 Honda Civic, or part # 10890 for the ‘94-’97 Honda Accord.
- The solenoid valves will mount to the air tank. Refer to the schematic in Figure 1 to determine the correct sequences of valves.
- The remainder of the system, primarily pneumatic tubing and electrical wiring, needs to be routed, taped and tie-wrapped to be as “invisible” as possible.

CONNECTING THE SYSTEM

This kit should be installed after the air struts are in place.

1. Assemble the compressor by attaching the air filter to the inlet side as shown in Figure 3. **IMPORTANT: If the compressor is mounted inside the vehicle, use caution. The compressor gets very hot and will burn or melt components.**
2. The tank must be mounted so that the drain port is on the bottom of the tank.
 - Run the steel-braided line from the compressor to the pressure switch assembly mounted on the air tank (Figure 3). Attach using the provided thread sealant.
 - Plumb the rest of the system as shown in Figure 3. Route the lines as appropriate for your vehicle.

NOTE

When attaching the air fittings, be sure that a flat edge of the air fitting is facing downward as shown in figure 3A. If a point is facing downward, it may contact the sleeve and failure may result.

3. For wiring the solenoids, connect the appropriate wire from the switch on the gauge panel to one of the red solenoid wires and insure that the black solenoid lead is connected to a suitable chassis ground. Refer to Figure 4 to hook up solenoids and the sending unit and gauges.
 - The inflate solenoids are the ones mounted towards the top of the tank. The hot lead for these valves comes from the top terminal on the switches.
 - The deflate solenoids are the ones mounted towards the bottom of the tank. The hot lead for these valves comes from the bottom terminal on the switches.
 - Ground the black wire on the back of the gauge.
 - The white wire, is for the gauge light. Connect this wire to an appropriate dash light wire if you want the gauge light to operate in sync with the dash lights (on, off, dimming), or connect it to a keyed terminal on the fuse box if you want the light on continuously.
4. Wire the compressor as shown in Figure 4, connecting the red wire to one side of the pressure switch on the tank, and the black wire to a suitable ground.
5. Run a power wire for the system from an accessory terminal on the fuse box.

NOTE

If using two compressors, add relays and connect to the positive side of the battery.

Using an in-line fuse (30 amp), connect power to the remaining terminal on the pressure switch. Connect a 15 amp fuse from the accessory terminal on the fuse box to the middle terminal on all four gauge switches.

6. If connecting to an existing fuse, be sure to connect to the power side if the fuse in the fuse box.
7. **IMPORTANT:** This compressor is continuous duty, but in the event that the compressor stops running, allow the compressor to cool down and provide adequate time for the thermal breaker to reset before starting the compressor again.

After the system is properly installed, it is ready to go. Insure that there is power to the system, let the pressure build in the system, and inflate your air suspension.

To improve recovery time in the tank, we recommend using two 16450 air compressors.

If the tank is mounted inside the vehicle and you wish to drain it, put a rag under the drain valve and open the drain valve until the water has been cleared.

SETTING UP THE TANK

NOTE

Use thread sealant provided to install all fittings.

1. Install a 1/2" x 1/8" bushing to the top of the air tank. Install the fill valve to the 1/2" x 1/8" bushing. (Figure 2).
2. Assemble a 1/2" x 1/4" bushing to the side of the street tee provided. Install the 145/175 PSI pressure switch and a 3/8" to 1/8" reducer to the top of the tee. Install this assembly to the port on one end of the air tank (Figure 1).
3. Install the supplied plug to the other end of the air tank (Figure 1).
4. Install a 1/2" to 1/4" reducer bushing to the bottom port and attach the drain valve to the bushing.
5. Attach a 1/2" x 3/8" reducer bushing to a 3/8" pipe nipple. Attach the 10mm fill valve to the nipple (Figure 2).

NOTE

Make sure the "In" port faces the tank.

- Attach a 3/8" nipple to the street tee facing down. Attach the dump valve with the "In" port facing the street tee. Attach a 3/8" x 1/2" tube fitting to the other side of the dump valve. Install a 2"-3" piece of 1/2" hose to this fitting. Attach a 3/8" x 1/2" tube 90° fitting to the last port on the street tee. This port goes to the air strut (Figure 2). Assemble the valve assemblies this way for the two outer most ports on the tank (Figure 1).
6. Attach the two assemblies to the outer ports on the air tank, leaving the two inside ports empty for the other assemblies (Figure 1).
 7. Assemble the inner valve assemblies in the same manner as detailed above, but leave the 3/8" street tee and the dump valve off for now. In order to install the assemblies to the tank, the fill valves will need to be disassembled (Figure 2). Once the fill valve is taken apart, install the assemblies to the inner ports on the tank.
 8. Install the tank assembly in an appropriate location and complete the installation by routing the air lines to the existing air management system (Figure 3).

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 - Run the steel-braided line from the compressor to the pressure switch assembly mounted on the air tank (Figure 3). Attach using the provided thread sealant.
 - Plumb the rest of the system as shown in Figure 3. Route the lines as appropriate for your vehicle.

NOTE

When attaching the air fittings, be sure that the edge of the air fitting is facing downward as shown in figure 3A. If a point is facing downward, it may contact the sleeve and failure may result.

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to one of the red solenoid wires and insure that the black solenoid lead is connected to a suitable chassis ground. Refer to Figure 4 to hook up solenoids and the sending unit and gauges.

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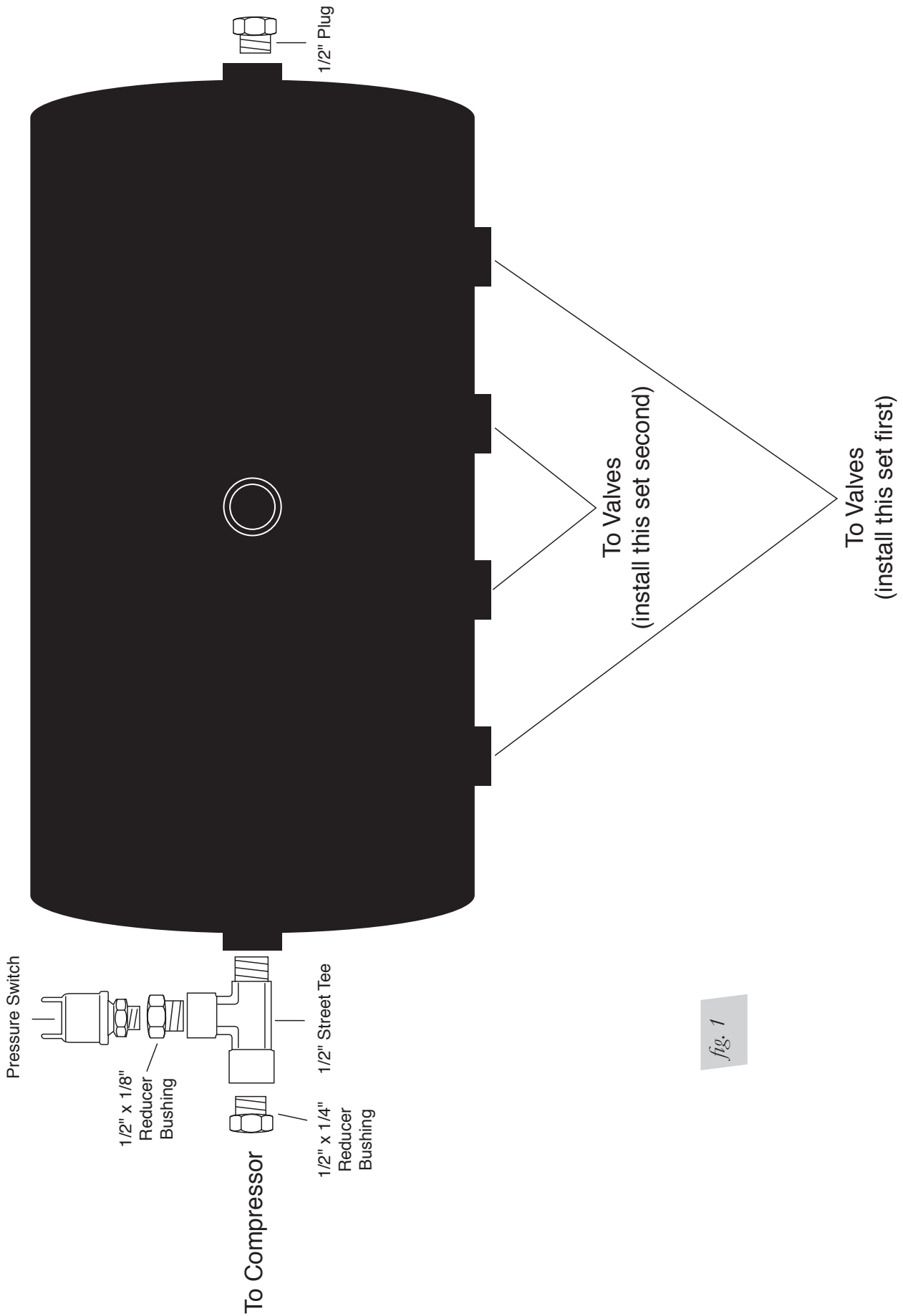
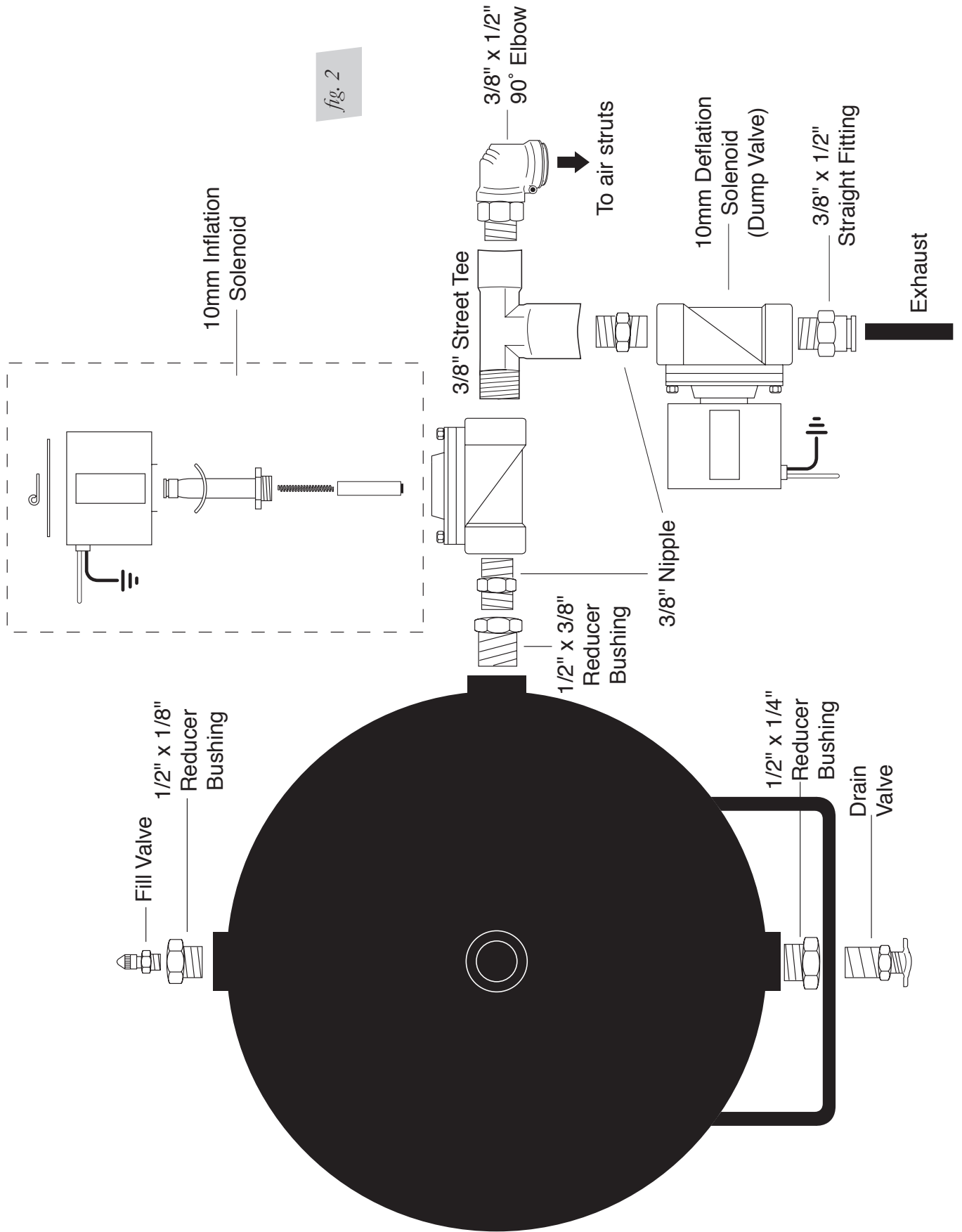
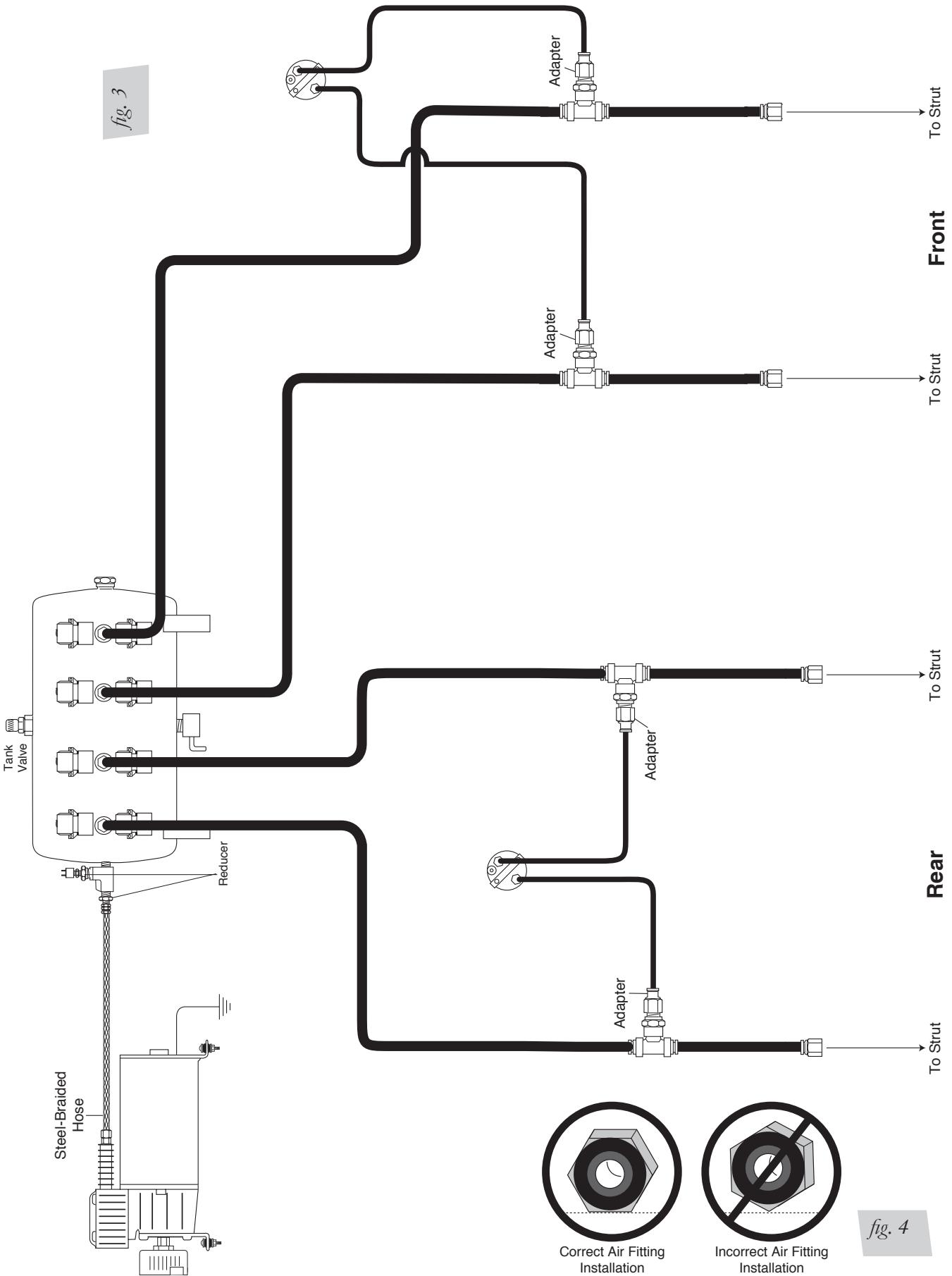


fig. 1





Limited Warranty and Return Policy

WHAT THIS WARRANTY COVERS

Air Lift Company provides a Limited Lifetime Warranty to the original purchaser of its Air Lift Performance 3H™ and 3P™ Control/Air Management Systems, that the Air Lift Performance products will be free from defects in workmanship and materials for the normal expected life of the part when used on cars and trucks as specified by Air Lift Company and under normal operating conditions, subject to the requirements and exclusions set forth below.

For all other Air Lift Performance products, Air Lift Company warrants to the original purchaser for a period of one year from the date of original purchase, that the Air Lift Performance products will be free from defects in workmanship and materials when used on cars and trucks as specified by Air Lift Company and under normal operating conditions, subject to the requirements and exclusions set forth below.

WHAT THIS WARRANTY DOES NOT COVER

The warranty does not apply to products that have been improperly applied, improperly installed, or which have not been maintained in accordance with installation instructions furnished with all products. This warranty does not apply and is void if damage or failure is caused by: accident, abuse, misuse (including but not limited to racing or off-road activities or commercial use), abnormal use, faulty installation, liquid contact, fire, earthquake or other external cause; operating the product outside Air Lift Company's instructions, specifications or guidelines; or service, alteration, maintenance or repairs performed by anyone other than Air Lift Company to the product from its purchased condition. This warranty also does not apply to: Universal Air (Fabricator Kits), consumable parts, such as batteries; cosmetic damage, including but not limited to scratches or dents; defects caused by normal wear and tear or otherwise due to the normal aging of the product, or if any serial or identification number has been removed or defaced from 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.

LIMITATION OF LIABILITY

other warranties, remedies and conditions, whether oral, written, statutory, express or implied. AIR LIFT COMPANY DISCLAIMS ALL STATUTORY AND IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND WARRANTIES AGAINST HIDDEN OR LATENT DEFECTS TO THE EXTENT PERMITTED BY LAW. To the extent such warranties cannot be disclaimed, such implied warranties shall apply only for the warranty period specified above. Please note that some states do not allow limitation on how long an implied warranty (or condition) lasts. So the above limitation may not apply to you.

Except as provided in this warranty and to the extent permitted by law, Air Lift Company shall not be liable for any direct, special, incidental or consequential damages resulting from any breach of warranty or condition, or arising in connection with the sale, use or repair of air lift products, or under any other legal theory, including but not limited to loss of use, loss of revenue, loss of actual or anticipated profits, loss of the use of money, loss of business, loss of opportunity, loss of goodwill, and loss of reputation. Air Lift Company's maximum liability shall not in any case exceed the purchase price paid by you for the Air Lift product. Please note that some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

HOW TO GET SERVICE

If a defect in workmanship or materials causes your Air Lift Performance product to become inoperable within the warranty period, before returning any defective product, call Air Lift Company at (800) 248-0892 in the U.S. and Canada (elsewhere, (517) 322-2144) to obtain a Returned Materials Authorization (RMA) number. The consumer shall be responsible for removing (labor charges) the defective product from the vehicle and returning it, shipping costs prepaid, to Air Lift Company for verification. Returns to Air Lift Company must be postage prepaid and sent to: Air Lift Company • 2727 Snow Road • Lansing, MI • 48917. You must prove to the satisfaction of Air Lift Company the date of original purchase of your Air Lift Performance product. You must also enclose the RMA number and a return address. A minimum \$10 shipping and handling charge will apply to all warranty claims. You must also pack the product to minimize the risk of it being damaged in transit. If we receive a product in damaged condition as the result of shipping, we will notify you and you must seek a claim with the shipper.

WHAT AIR LIFT COMPANY WILL DO

If you submit a valid claim to Air Lift Company during the warranty period, Air Lift Company will, at its option, repair your Air Lift Performance product or furnish you with a new or rebuilt product. Air Lift Company will not reimburse you for repairs or replacement parts provided by other parties. Your repaired or replacement Air Lift Performance product will be returned to you (subject to payment of the required warranty claim shipping and handling charge) and it will be covered under the warranty for the balance of the warranty period, if any. When a product or part is replaced, any replacement item becomes your property and the replaced item becomes property of Air Lift Company. You are responsible for installation/reinstallation (labor charges) of the product.

HOW THE LAW RELATES TO THIS WARRANTY

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. By this warranty, Air Lift Company does not limit or exclude your rights except as allowed by law. To fully understand your rights, you should consult the laws of your state.

Replacement Information

If you need replacement parts, contact the local dealer or call Air Lift customer service at (800) 248-0892. Most parts are immediately available and can be shipped the same day.

Contact Air Lift Company customer service at (800) 248-0892 first if:

- Parts are missing from the kit.
- Need technical assistance on installation or operation.
- Broken or defective parts in the kit.
- Wrong parts in the kit.
- Have a warranty claim or question.

Contact the retailer where the kit was purchased:

- If it is necessary to return or exchange the kit for any reason.
- If there is a problem with shipping if shipped from the retailer.
- If there is a problem with the price.

Contact Information

If you have any questions, comments or need technical assistance contact our customer service department by calling (800) 248-0892, Monday through Friday. For calls from outside the USA or Canada, our local number is (517) 322-2144.

For inquiries by mail, our address is PO Box 80167, Lansing, MI 48908-0167. Our shipping address for returns is 2727 Snow Road, Lansing, MI 48917.

You may also contact us anytime by e-mail at sales@airliftcompany.com or on the web at www.airliftcompany.com.

Need Help?

Contact our customer service department by calling (800) 248-0892. For calls from outside the USA or Canada, our local number is (517) 322-2144.



Thank you for purchasing Air Lift Performance products!

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