Air Lift[a] PERFORMANCE

Kits 27665 and 27666

AIR LIFT

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.

MN-726 • (031107) • ECR 7119

Introduction

The purpose of this publication is to assist with the installation, maintenance and troubleshooting of the 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 here includes a hardware list, tool list, step-by-step installation information, maintenance guidelines and troubleshooting guide.

IMPORTANT SAFETY NOTICE

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.

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.

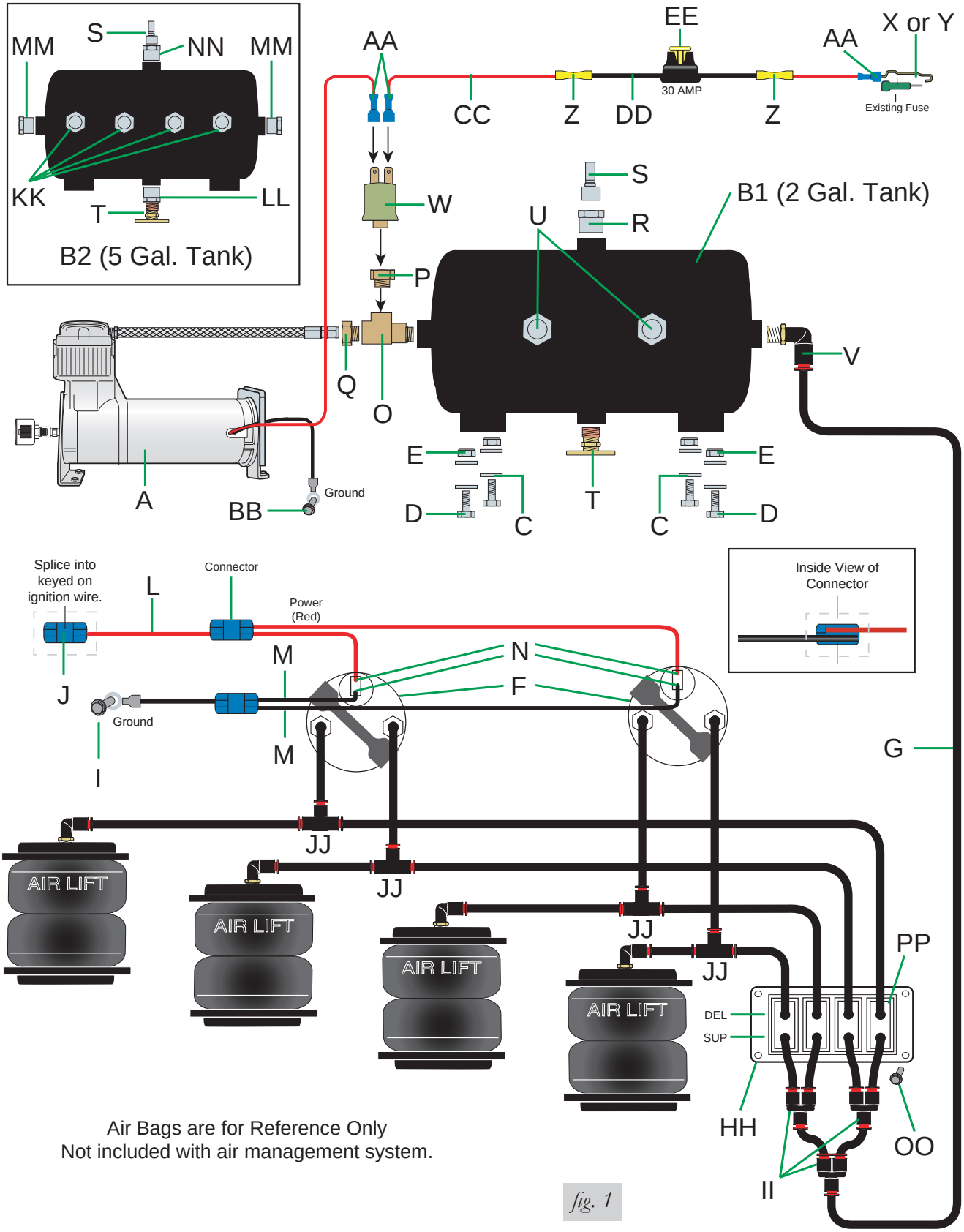
⚠ DANGER INDICATES IMMEDIATE HAZARDS WHICH WILL RESULT IN SEVERE PERSONAL INJURY OR DEATH.

⚠ 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.*

Installation Diagram



Air Bags are for Reference Only
Not included with air management system.

fig. 1

Hardware List

Item	Part No.	Description	Quantity	Item	Part No.	Description	Quantity
A	16380	Viair Compressor	1	U	21731	Plug	2
B1	10980	2 Gallon Air Tank	1	V	21846	3/8” x 1/4” PTC Elbow	1
B2	10991	5 Gallon Tank	1	W	24575	145-175 PSI Pressure Switch	1
C	18444	3/8” Flat Washer	8	X	24542	Fuse Tap	1
D	17188	3/8”-16 x 1.25 Bolt	4	Y	24561	Mini Fuse Adapter	1
E	18435	3/8” Nyloc Nut	4	Z	24649	12 Gauge Butt Connector	2
F	26228	Dual Needle Gauge	2	AA	24595	12 Gauge Female Terminal	2
G	20946	1/4” Air Line	80 ft.	BB	17263	1/4” x 1” Self-Tapping Screw	1
H	17132	1/2” Self-Tapping Screw	3	CC	24647	12 Gauge Red Wire	20 ft.
I	24568	18 Gauge Ring Terminal	1	DD	24539	Fuse Holder	1
J	24537	Quick Splice	3	EE	24547	30 AMP Fuse Spade	1
K	24532	Butt Connector	2	FF	23586	Thread Sealant	1
L	24643	16 Gauge Red Wire	8 ft.	GG	10530	Air Line Cutter	1
M	24644	16 Gauge Black Wire	8 ft.	HH	11031	Panel	1
N	24594	16 Gauge Female Terminal	4	II	21842	“Y” Fitting	3
O	21507	3/8” Street Tee	1	JJ	21838	Tee	4
P	21735	1/8” FNPT x 3/8” MNPT Bushing	1	KK	21190	1/2” Plug	4
Q	21738	1/4” FNPT x 1/8” FNPT Bushing	1	LL	21247	1/4” x 1/2” Bushing	1
R	21610	1/4” MNPT x 1/8” FNPT Bushing	1	MM	21732	3/8” 1/2” Bushing	2
S	21366	Inflation Valve 1/8” MNPT	1	NN	21251	1/8” x 1/2” Bushing	1
T	21754	1/4” MNPT Drain Cock	1	OO	17434	#8 X 3/4” Stainless Steel Screws	4
				PP	21703	Paddle Switch	4

Installing the Air Management System

The following instructions correspond to Figure 1 on the previous page of this instruction manual.

ASSEMBLING THE AIR TANK

NOTE *All fittings must be pre-coated with thread sealant.*

1. Install a 1/8” bushing (P) to the top port of the street tee (O) and a 1/4” bushing (Q) to the other port.
2. Attach the pressure switch (W) to the 1/8” bushing previously installed onto the street tee.
3. Attach the street tee assembly to the end port of the air tank (B).
4. Install a drain cock (T) to the port that is at the base of the tank.

NOTE *If the tank is mounted with the feet up, the drain cock must be installed on the other side of the tank. The drain must always be installed in the port that is facing downward.*

5. Install a 1/4” x 1/8” bushing (R) to the port that is facing upwards on the air tank. Attach an inflation valve (S) to the bushing.
6. Install an air fitting (V) to the remaining end port of the air tank.
7. Install plugs (U) to the two ports on the front of the air tank.
8 Find a suitable mounting location for the air tank and mount using the provided bolts (D), flat washers (C), and nyloc nuts (E).

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).

ATTACHING THE COMPRESSOR

1. Find a suitable mounting location for the compressor and mount using the hardware included with the compressor.
2. Attach the leader hose from the compressor (A) to the 1/4” x 1/8” bushing previously attached to the street tee.

WIRING THE SYSTEM

1. Attach the red power wire from the compressor to the pressure switch using the attached female terminal.
2. Attach the black ground wire to a suitable location on the frame of the vehicle using a self-tapping screw (BB).
3. Cut a length of red wire (L) long enough to go from the gauges to a keyed on ignition wire. Attach a female terminal (N) to one end of the wire. Attach this end to the gauge panel. Quick splice the two gauge bulbs together.
4. Splice the remaining end of the red power wire to a keyed on ignition wire using the provided quick splice (J).
5. Ground the gauges by attaching the black ground wire to a suitable location using the remaining self-tapping screw (H).
6. Cut a length of red wire (CC) to go between the pressure switch on the air tank to a fuse holder (DD). Attach the two together using a butt connector (Z).
7. Install a 30 AMP fuse into the fuse holder.
8. Cut another length of red wire (CC) long enough to go between the fuse holder and the fuse box. Attach a female terminal (AA) to one end of the wire and attach the remaining end to the fuse holder using a butt connector (Z). Choose a key-on circuit.

9. Attach the female terminal to either the fuse tap (X) or mini fuse adapter (Y). Attach this to the fuse panel.

ATTACHING THE AIR LINES

⚠ CAUTION

WHEN CUTTING OR TRIMMING THE AIR LINE, USE A HOSE CUTTER (GG), A RAZOR BLADE OR A SHARP KNIFE. A CLEAN, SQUARE CUT WILL ENSURE AGAINST LEAKS. 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 (SEE FIG. 2).

1. Run a length of air line (G) from the air fitting on the compressor to the end of the switch cluster.
2. Run a length of air line from the remaining air fittings on the switch to its respective air spring.
3. Repeat step 2 for the remaining air fitting and air spring.
4. Use a tee and connect into each one of the air spring lines to connect to it's respective gauge port.
5. Test and make sure that the switches operate the appropriate air springs.

ASSEMBLING THE PNEUMATIC PADDLE SWITCHES

1. Snap all 4 switches into the panel so that from the back they are all oriented the same way (You may select a different location for switches. They do not need to be used with supplied panel).
2. Cut 6 pieces of hose the same length (approximately 3"6).
3. Push 4 of these hoses onto the "SUP" port. Attach the "Y" Fittings as shown in fig. 1.

Troubleshooting Guide

1. Leak test the air line connections, the threaded connection into the air spring, and all fittings in the control system.
2. Inspect the air lines to be sure none are pinched. Tie straps may be too tight. Loosen or replace the strap and replace leaking components.
3. Inspect the air line for holes and cracks. Replace as needed.
4. Look for a kink or fold in the air line. Reroute as needed.

If the preceding steps do not solve the problem, it is possibly caused by a failed air spring — either a factory defect or an operating problem. Please call Air Lift at (800) 248-0892 for assistance.

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. Raise the air pressure to correct either of these problems and level

the vehicle.

2. **Ride comfort**

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

Checking for leaks

1. Inflate the air spring to suggested driving pressure as listed in the “Product Use, Maintenance and Servicing” section of your air springs installation manual.
2. Spray all connections and the inflation valves with a solution of 1/5 liquid dish soap and 4/5 water. 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 system to normal ride height. Do not deflate to lower than 5 PSI.
4. Check the air pressure again after 24 hours. A 2 - 4 PSI loss after initial installation is

Fixing Leaks

1. If there is a problem with a swivel fitting:
   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 (see fig. 2). Reinsert the air line into the push-to-connect fitting.
   b. Check the threaded connection by tightening the swivel fitting another ½ 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 and then use a wrench for an additional two turns.

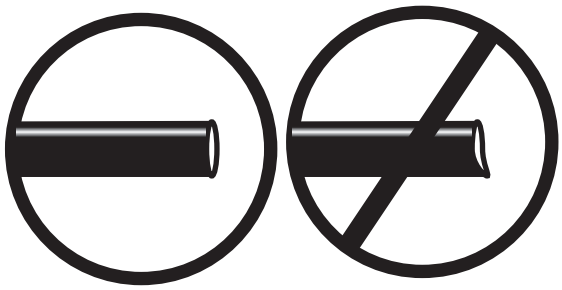


fig. 2