

Solenoid Valve Replacement for 1021/1022 Compressor

INTRODUCTION

KEISER CORPORATION has always taken pride in designing and engineering the highest quality equipment on the market. This means that you will receive years of low maintenance and minimal repairs from every one of our machines. Only the highest quality products have the KEISER name on them.

WORD DEFINITIONS

SAFETY CAUTIONS and WARNINGS:

We've put a number of safety cautions in this book. We use the word ***Caution!*** to tell you about things that could cause bodily injury to persons on or around the equipment if you were to ignore the following instructions and the word ***Warning!*** to ensure the proper installation of components and that the instructions are followed for the safety of the users and for maximum machine life or the warranty is void.

HINTS:

We use the word ***Note!*** in this book to tell you about things that we recommend you doing or things to be aware of before performing the instructions. These notes were placed in the manual to aid you during a certain procedure.

Warning!

Failure to follow the assembly or operation instructions as provided by this manual or any other instructions pertaining to the assembly and/or operation of KEISER equipment will result in voiding the warranty and could lead to serious injury.

Tools Required: ½ inch open-end wrench
 needle nose pliers
 #1 and #2 Phillips screwdriver
 wire cutters

These items have been provided: 1 Allenair® valve

A packet containing:

1 ft. extra tubing
2 extra Phillips head screws
2 little tubes that go inside
compression fittings
O ring
1 zip tie

Solenoid Valve Replacement for 1021/1022 Compressor

WARNING: Unplug compressor before beginning. Before replacing valve, draw all of the air out of the compressor by pressing both the + and – buttons on the exercise equipment until you can not hear more air flowing.

The Mac® valve was used in our compressor until May of 2001. This valve cannot be cleaned. Therefore, once faulty, it must be replaced. Keiser has changed production to an Allenair Ò valve. This valve is more reliable and if it does become plugged, it can be cleaned.

There are Three steps in the solenoid valve replacement:

Step One: Remove cover and tank

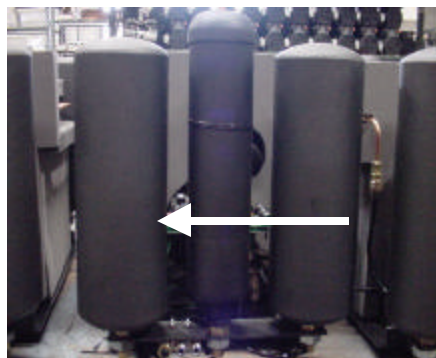
Step Two: Cut hoses, remove wiring, and remove old valve

Step Three: Install new valve, replace tank and cover

Step One: Remove cover and tank

Tools Required: Phillips screwdriver, O ring

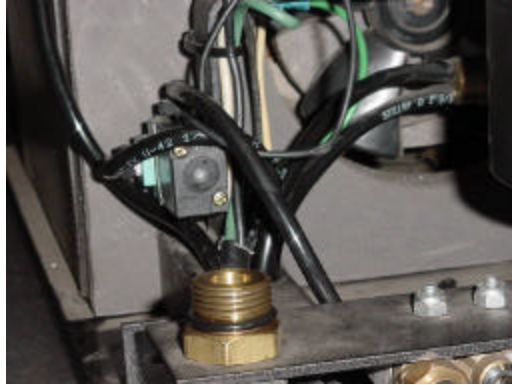
1. After the compressor has been unplugged, and all the air has been drained, remove the four Phillips head screws that hold the compressor's cover on.
2. Unscrew (counter-clockwise) the tank on the left-hand side, which is directly in front of the solenoid valve. If you should hear any air leaking, stop unscrewing the tank until air leakage has stopped.
3. If the O ring should become damaged, replace with the new O ring supplied for you.



Step Two: Cut hoses, remove wiring, and remove old valve

Tools Required: Wire cutters, Phillips screwdriver, needle nose pliers

1. Using the wire cutters, cut each hose attached to the old valve, right below the elbow.
Caution: Use extra caution not to pull the hose out of the inner housing of the compressor. Once out, this hose is very difficult to replace.

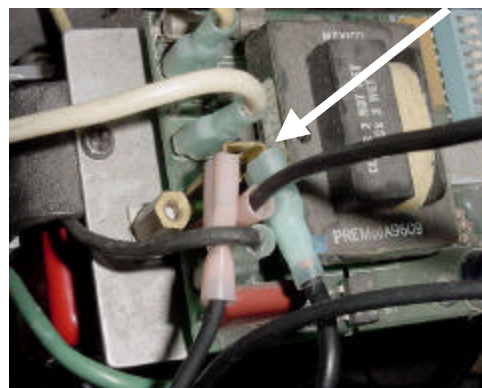


2. To remove the wires, hold the circuit board in one hand, and detach the wires on V1 and V2 by pulling up with the other hand.
3. Hold the nuts with the needle nose pliers, and remove the two screws on the side (bracket) to take out the old valve.
4. Discard the old valve.

Step Three: Install new valve, replace tank and cover

Tools Required: Phillips screwdriver, needle nose pliers, ½” open end wrench, single to double splitter (for Rev. A or B circuit boards only)

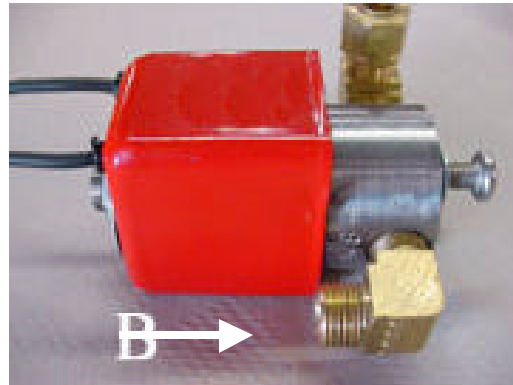
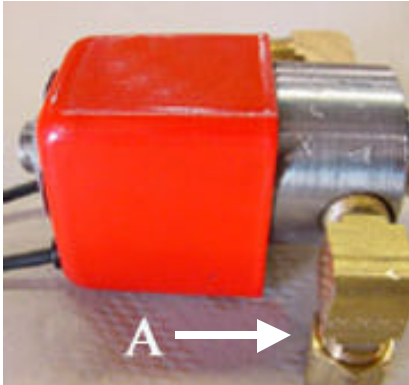
1. If any wires are routed to the front (toward the tank), you will need to detach each wire, **one at a time**, re-route them underneath the circuit board, to the back of the circuit board, and reattach them. **Warning:** If you route the wires to front, the cover may sever the wires when you place it back on the compressor
2. Take the wires from the new valve, and route them underneath the circuit board, around the back to connect them to the circuit board. If you have circuit board **Rev. C through K**, attach the wires to V1 and L1. If you have **Rev. L** circuit board, attach wires to V1 and V3. If you have **Rev. A or B**, attach one wire to V1, take the wire off L1, attach the single to double splitter to L1, (bending the arms out slightly to accommodate both wires) reattach the wire to one side of the splitter, and attach the other wire from the new valve to the second arm of the splitter. **Note:** You will only use the single to double splitter if you have circuit board Rev. A or B. Otherwise, discard this adapter. **Rev. A and B** boards only have 6 terminals for wires; Rev. C and later have 8 terminals.



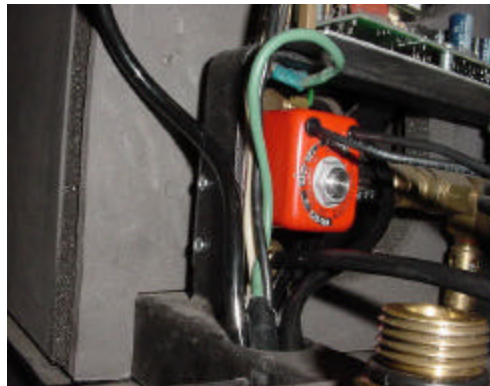
3. Make sure each hose is cut flush (not at an angle.) Insert a brass hose insert into the hose that goes to the foam chamber, until it is flush against the end of the hose. Push the hose as far as it will go into the compression nut on port A.

Note: Be careful not to pull this hose out of the foam chamber as it is very difficult to replace.

Tighten the nut finger tight, then one full turn with a 1/2" open end wrench. Insert a brass hose insert into the B port hose, which goes to the dryer, as you did for the first hose. Next, slide the compression nut over the end of the hose, push the hose into the B port fitting and tighten finger tight, then one full turn with a 1/2" open end wrench.



4. Take the new valve, and align the mounting holes by moving it all the way back behind the (bracket) until you can line up the holes. Then, move the new valve forward until the holes match. Insert the two new screws. **Note:** Use the new screws supplied for you.



5. Take all of the wires and bind them together with the zip tie out of the way of the cover, as shown below.



6. To replace the tank, gently place it on, then turn it first counter-clockwise until you feel it drop slightly. Next, turn the tank clockwise until it is tightened.
7. Make sure that all wires are out of the way before lowering the cover back into place.
8. When the cover is back on, replace the four screws.
9. To test the compressor, plug it in. The displays should light up, and if the pressure is below 95 PSI the compressors should start. **(If the compressor is not already at 95 PSI, slowly lower the air in the compressor to approximately 95 PSI and the compressor should start.)** The compressor should pump up to approximately 117 PSI and shut off. When the motor shuts off, you should be able to hear the air dryer purge for approximately 10-15 seconds.

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