

## 1975-FA34 (Air Tower Troubleshooting Manual)

### Overview

This manual has been arranged as a tool for diagnosing, and repairing Universal Air Towers. Please read closely to identify the components that are on your Universal Air Tower.

### Technical Support

When calling for technical support please have the serial number of the machine and model number on hand.

### Modular internal frame

For easy maintenance the modular frame can be taken out of the unit. This frame holds all components including the compressor allowing for easy maintenance. To remove the frame unscrew the four mounting bolts located in the bottom front of the inside of the cabinet and disconnect the power. The complete modular frame with all components can be sent back to the factory, making repairs easier for you.

### Troubleshooting

#### **WARNING**

**DO NOT attempt to service or repair this unit unless ALL ELECTRICAL POWER HAS BEEN DISCONNECTED.**

**FAILURE TO OBSERVE THIS SAFETY PRECAUTION MAY RESULT IN FATAL ELECTRICAL SHOCK OR PROPERTY DAMAGE.**

#### CHECK ELECTRICAL COMPONENTS/SWITCHES

1. Push the front push button.
2. If the compressor comes on then go to compressor section of this manual.
3. If the unit does not come on then see Electrical section of this manual.

#### CHECKING COMPRESSOR

1. Check the compressor output with an air gauge that has a known accuracy.
2. If compressor output is below required output or if the compressor operates intermittently then see the compressor section of this manual.

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## Electrical Section

### **Reset On/Off Switch**

All Universal Air Tower are equipped with an in unit on/off switch. This switch (see Picture 1) is located on the upper right hand side of the unit if you are looking at the unit from the front. Try pushing the button in front of the unit. If the unit starts test the flow output from the compressor. If the unit does not start test the continuity of the switch when the switch is in the up position. If there is no continuity then the switch needs to be replaced. The replacement part number is 1975-3.

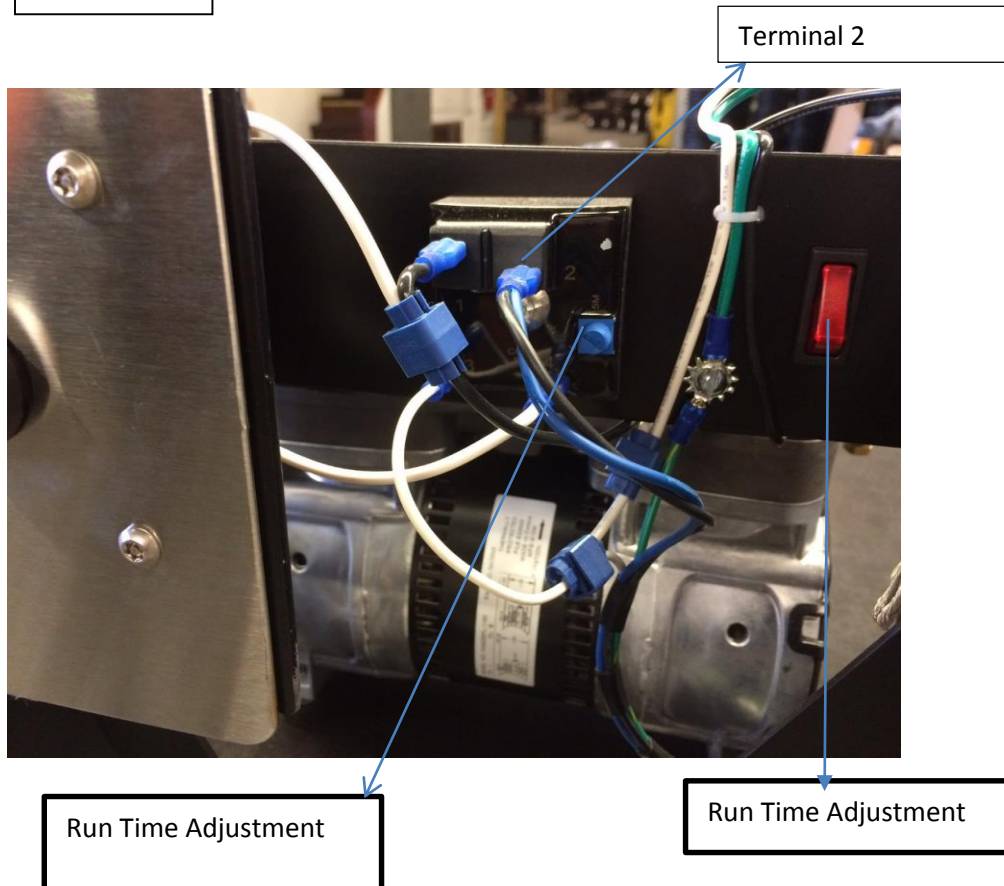
### **Push Button**

The push button needs to be tested for continuity. Depress the button and test continuity on the electrical contacts of the switch. If there is no continuity the button must be replaced. The replacement part for the button is 1975-16 .

### **Timer**

All Universal Air towers are equipped with a solid stat timer that has a variable time set resistor. The run time is preset at the factory but also can be field adjusted for the desire run time. To adjust the run time turn the blue knob (see picture 1) clockwise to increase the run time. The blue knob only turns about 180 degrees if you force the knob past the 180 degrees of rotation the time will break and must be replaced.

Picture #1



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To make sure that the timer is working properly push the pushbutton switch at the front of the unit. There should now be voltage on terminal 4 in picture 1. If there is no voltage in terminal 4 then the timer needs to be replaced. The part number for the timer is 1975-15-A .

## **Abbreviated Electrical Troubleshooting**

- Unit will not start
- No power – Check to make sure breakers are not tripped. Reset breaker and test.
- Pushbutton Failure – Test for continuity with pushbutton depressed. If there is no continuity replace pushbutton.
- Inadequate power supply – Check voltage and circuit for 120 volts at the Timer. Restore power.
- Timer failure – Activate the timer by pushing the pushbutton Check voltage at terminal 2 in Picture 1.
- Compressor Failure – hook compressor directly to power. If the compressor runs then timer or pushbutton is bad. If the compressor does not run replace or repair compressor.

## **Compressor Section**

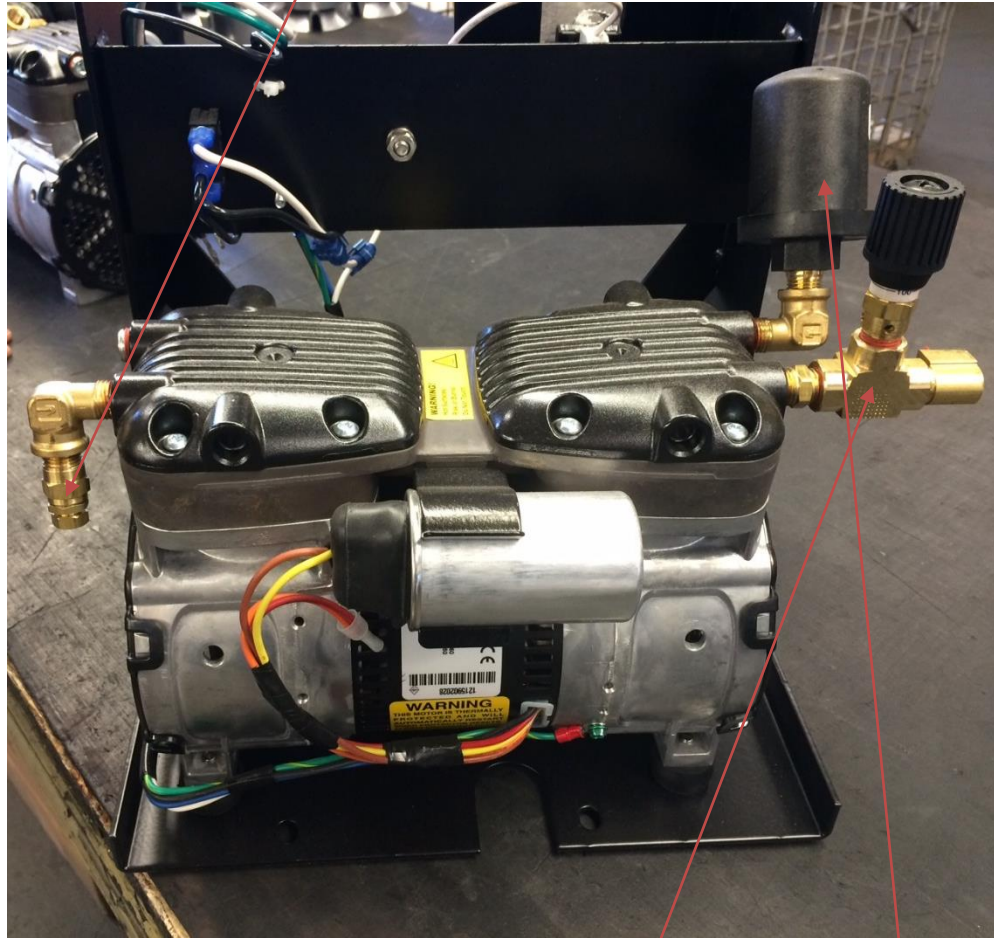
- No air pressure – Chuck is frozen remove chuck and restart. Air should flow freely from hose. Replace chuck with a new chuck. If this was not the problem then check for a failed or improperly adjusted pressure relief valve. Universal's air towers come with two pressure relief valves for long compressor life. On the left side of the outlet for the compressor where the air hose is connected is a black knob (see picture 3), turn the knob clock wise to increase pressure. If this does not correct the situation then check the other pressure relief valve located on the right side of the unit (see picture 2). Only a small amount of air should be coming out of this one. If a large amount is coming out replace pressure relief.
- Low air pressure – Check to ensure that all fittings are tight and not leaking. If fittings are leaking retighten.
- Low air pressure – Check to ensure that filter is not dirty. If filter is dirty replace filter.
- Low air pressure – Worn air compressor ensure that the compressor is putting out at least 50 PSI. If not rebuild or replace compressor.
- Compressor runs intermittently – Compressor overheating check compressor fan and check for blocked vents. Replace fan and clear vents.
- Compressor runs intermittently - Check power supply to ensure correct power is coming into unit.

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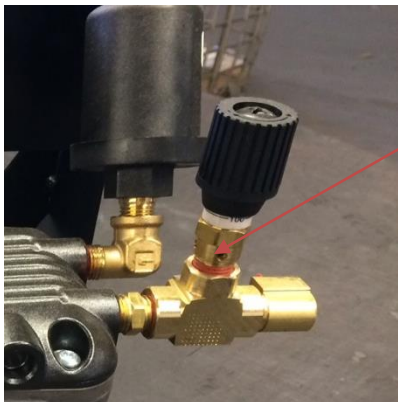
Picture #2

Non Adjustable Pressure Relief Valve



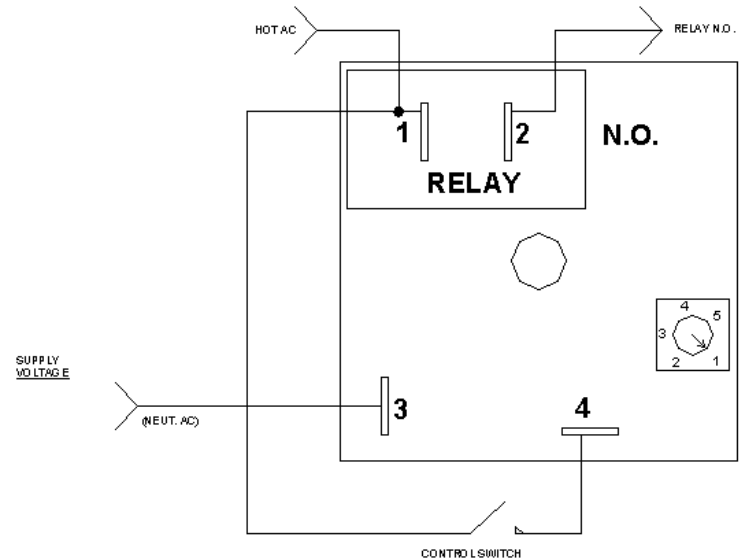
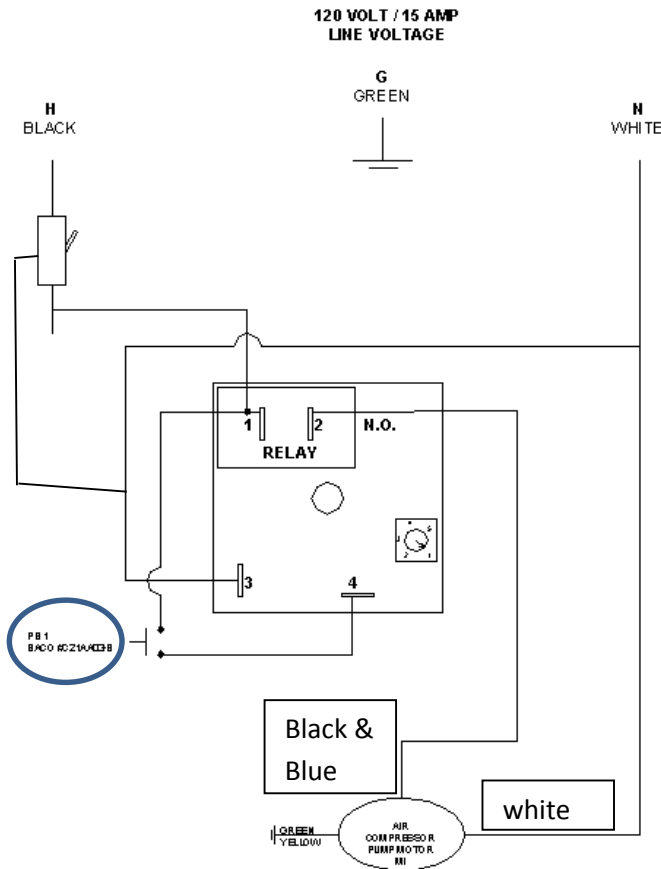
Adjustable Pressure Relief Valve

Air Filter



Picture #3 close up of Adjustable Pressure relief valve

## Wiring Schematics



### 1975-FA

#### Part Number

1975-3  
 1975-15-A  
 1975-16  
 1975-17  
 1975-18  
 1975-19  
 1975-20  
 1975-21  
 1975-37  
 1975-29  
 1975-HDPOST  
 1975-COMPR-G  
 1975-FACHASSIS-G

#### Description

On/off switch  
 Timer Delay Relay  
 Push Button  
 Lock w/ Keys  
 Push Button Face Plate  
 25ft x 3/8 Air Hose  
 Tire Inflator gauge Chuck Assembly  
 Stainless Steel Hose Bracket  
 Air Pressure Relief Valve  
 Brass Pipe Tee  
 Heavy Duty White Painted Post  
 Air Compressor  
 Internal Chassis Assembly Includes all Internals

