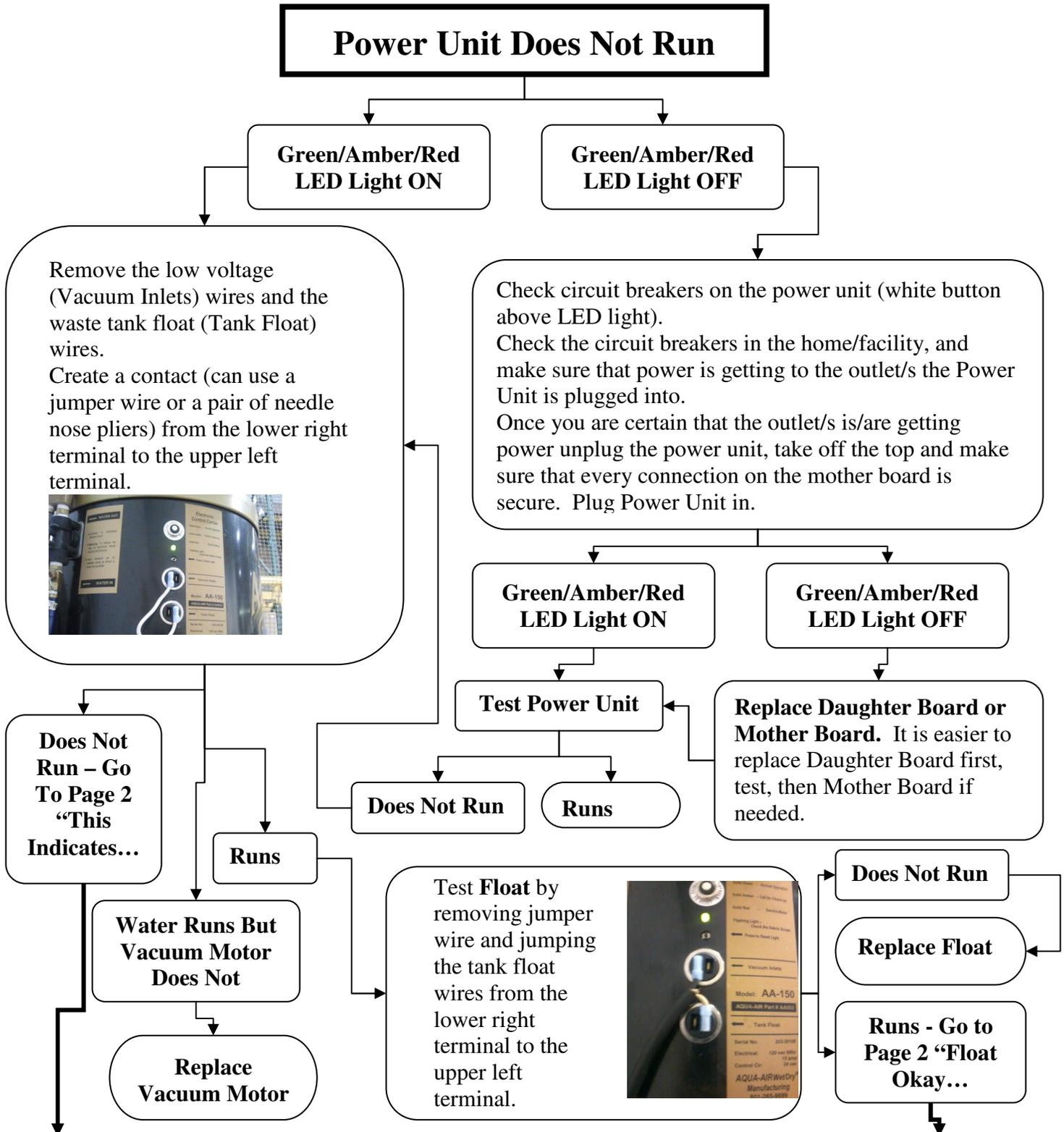


# AQUA-AIR Wet/Dry Basic Trouble Shooting Guide

(For Reference only. Intended to be reliable but not all inclusive)

(This guide assumes you have already checked the debris screen, double mesh screen, power source, waste tank and other general maintenance items.)



This indicates that the problem is within the power unit. The problem is most likely the **Mother Board** or the **Daughter Board** but could also be the **Temperature Probe** or **faulty/loose wires**. If you have the capability to direct wire the vacuum motor to some kind of extension cord you could verify this for sure. Replace the mother board, test – if still not working replace the daughter board (refer to picture on page 9). To test temperature probe jump the pins it connects to.

**Float Okay.** Problem must be in the **wires** or **inlet valves**. Test the low voltage wiring. This can be done with an ohm meter. Plug a metal cuff into one of the vacuum inlets and test the wires at the power unit for continuity. Repeat for each inlet.  
**OR** place one of the low voltage wires in the lower right terminal and the other one in the upper left terminal and plug a metal cuff in one of the vacuum inlets (you can also remove the inlet and connect the wires directly to check each inlet). The vacuum should start immediately. Repeat for each inlet. **Important – DO NOT LEAVE THE WIRES IN THIS POSITION.**  
 Replace Vacuum Inlet Covers and rewire as needed.

### Power Unit Surging

**Green/Amber/Red LED Light FLASHING in rhythm with the surging or the power unit begins surging immediately when you turn it on.**

**Green/Amber/Red LED Light NOT FLASHING in rhythm with the surging and/or after a few minutes of running.**

When the power unit surges in time with the blinking LED light the **Daughter Board** is bad. Replace the daughter board.

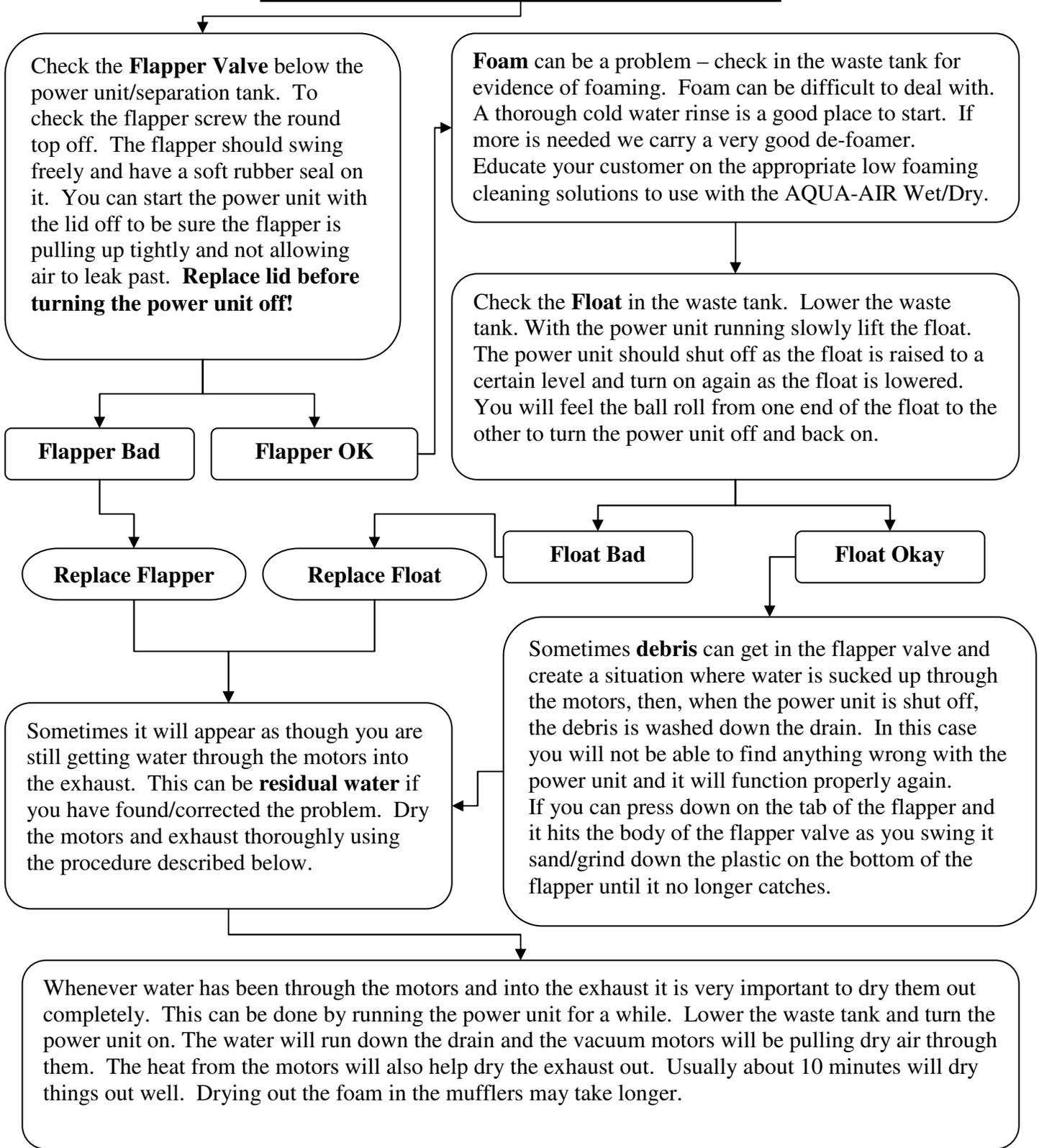
The most likely problem is the **float** or the **float wires**. Test the float wires by dropping the waste tank, starting the power unit, and moving the float around slowly. Move it up and down and wiggle it around quite a bit. If you can get the power unit to pause or stop before the ball rolls to the other end of the float the float wires are bad. Replace the float.

**Power Unit Surging**

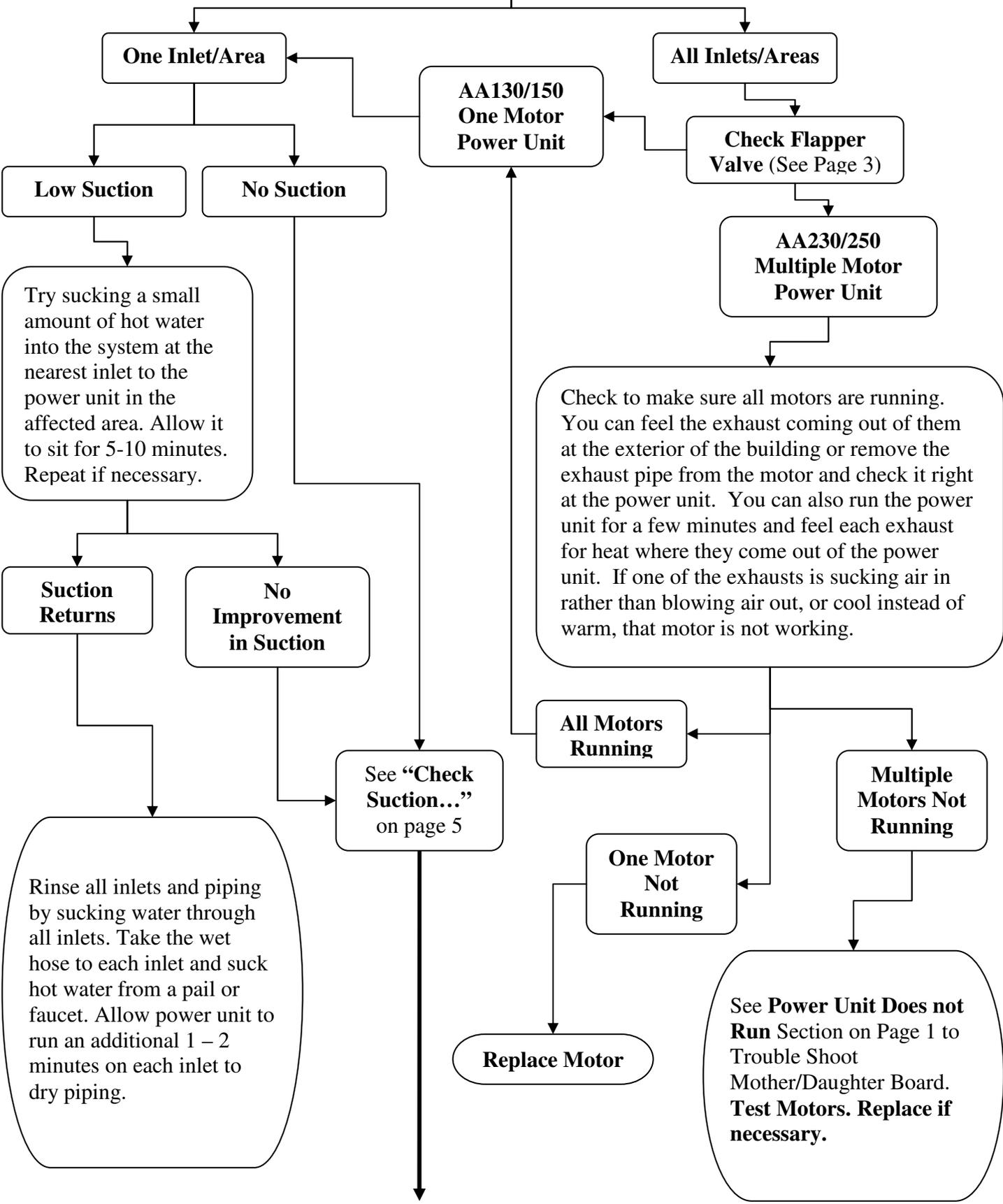
**Power Unit Not Surging**

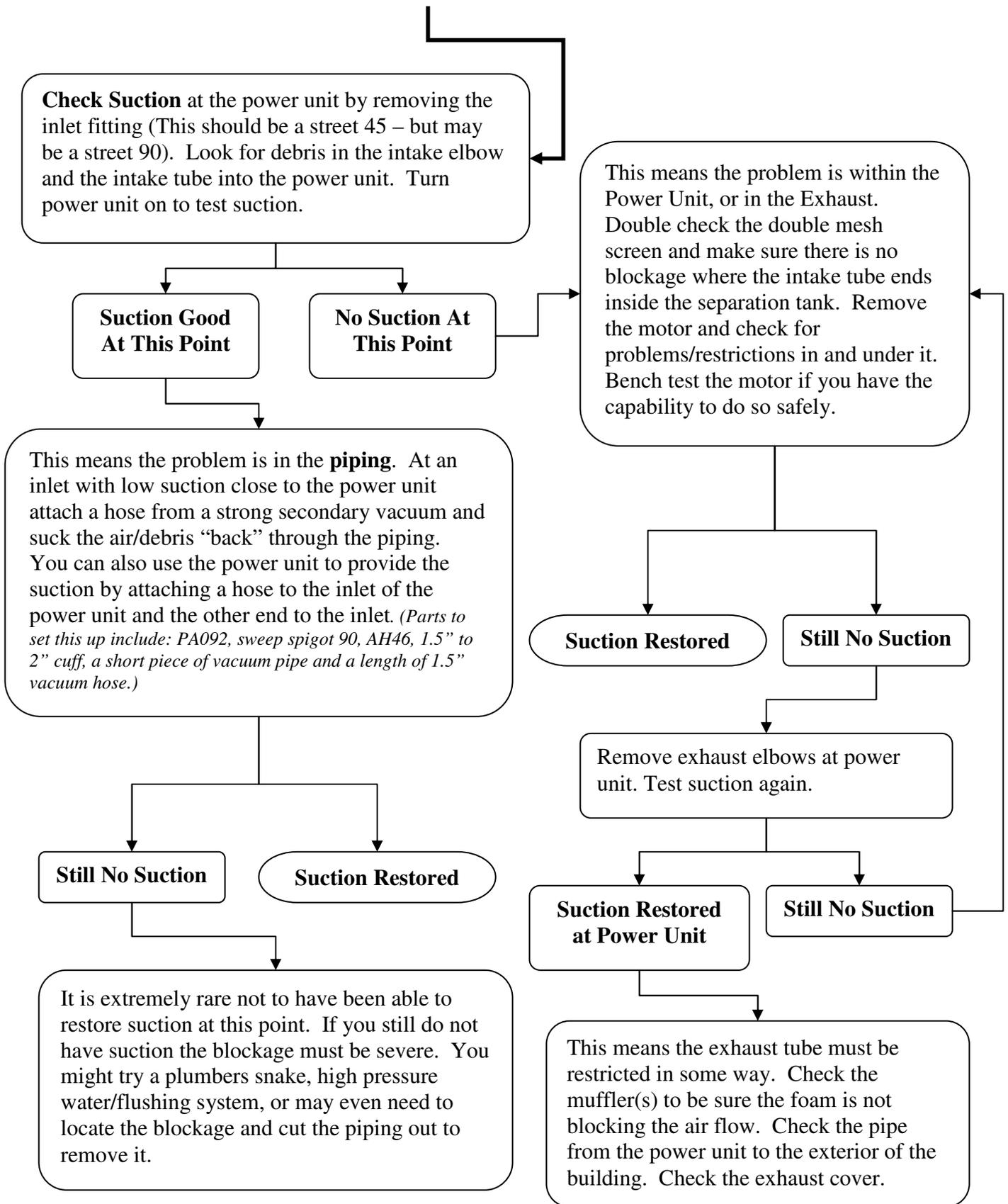
Test the vacuum motor(s) on an extension cord (female spade connectors on cord – plug motor in directly). If vacuum motor surges replace motor. If the vacuum motor runs without surging replace the daughter board.

# Water Coming Out of Exhaust

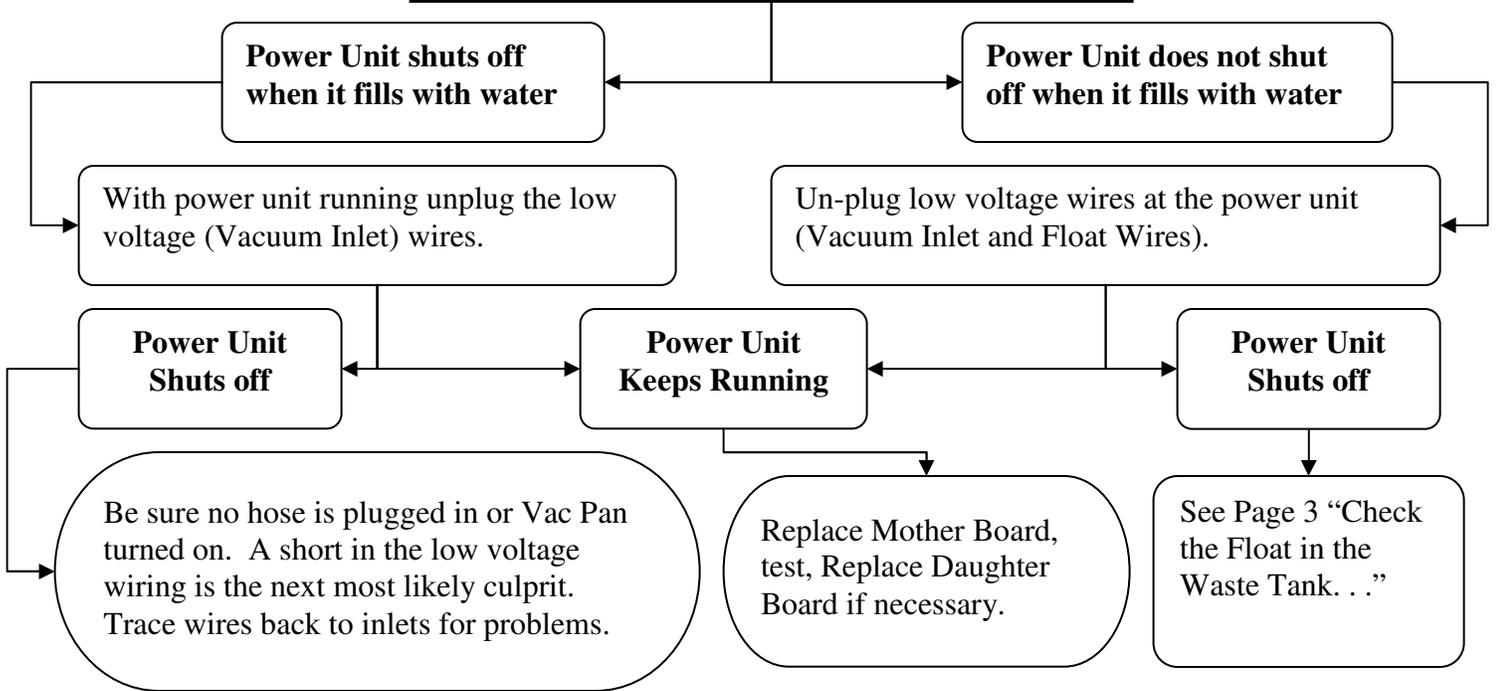


# Low/No Suction

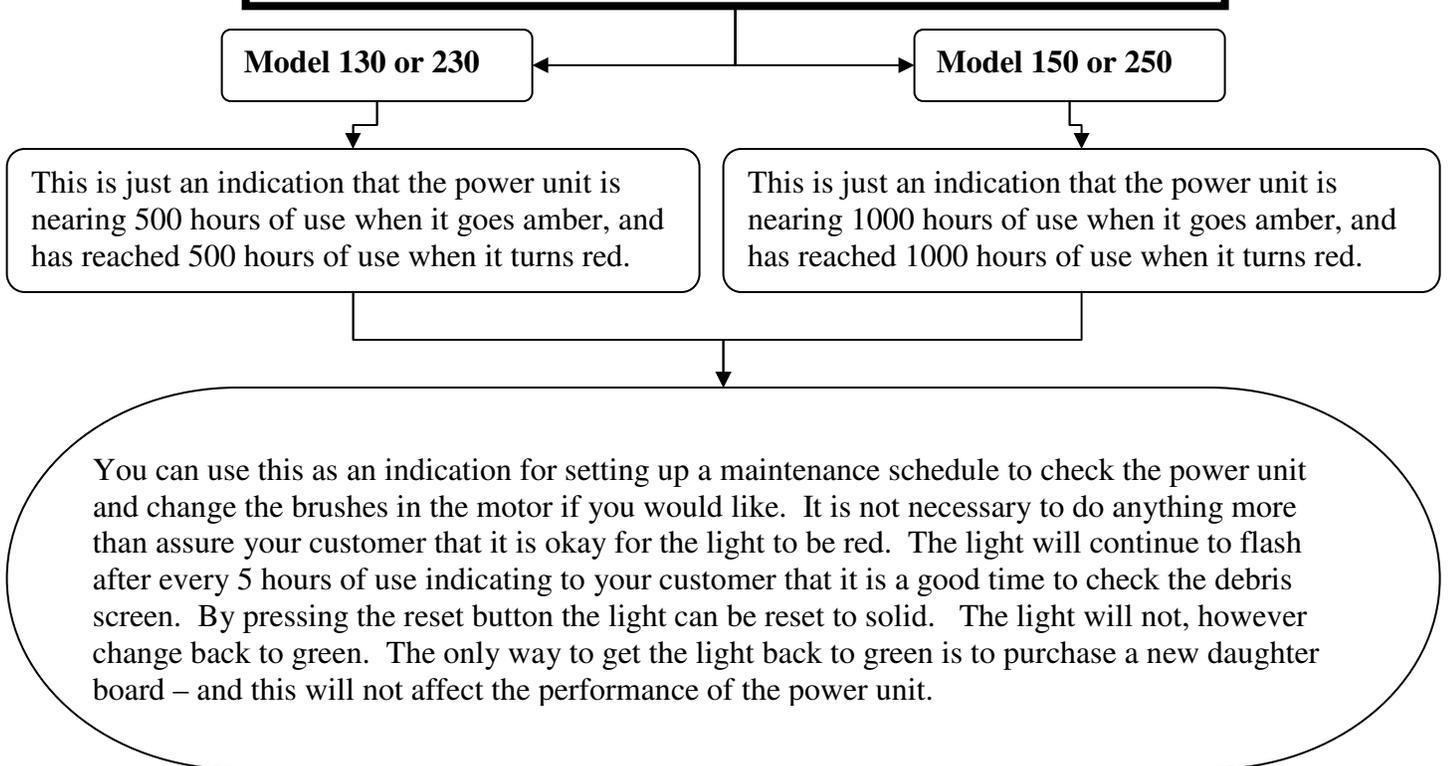




## Power Unit Will Not Shut Off



## The Green Light Changed to Amber or Red



## **Getting into the Motor Cavity AQUA-AIR Wet/Dry Model 130, 150, and 230**

Unplug the power unit. Remove the two screws on each side of the grey or gold ring. Remove the top cover. Sometimes the back flow preventer must be twisted slightly out of the way to remove the top cover.

## **Getting into the Motor Cavity AQUA-AIR Wet/Dry Model 250**

Unplug the power unit. Loosen the clamp on the ABS fitting on the top of the power unit. There may be enough movement to remove the 2" ABS or PVC pipe out of the top of the power unit and move it to the side – if not loosen the clamp on the top of the separation tank and then remove the pipe connecting the power unit to the separation tank. Remove the two screws on each side of the grey/gold ring. Remove the top cover. Loosen the clamp on the bottom of the "S" shaped ABS, and remove the "S" shaped ABS piping. Lift the plastic plate out of the cavity.

## **Replacing the Motor AQUA-AIR Wet/Dry 130 and 150**

Unplug the power unit and remove the top. The vacuum motor is held in place with 3 springs, and connected to power with 3 terminal spade connectors. Unplug all three wires. Remove the exhaust by loosening the hose clamp and pulling the exhaust out of the way. With a pair of pliers carefully pull the springs off the motor. Lift motor out.

Install new motor by pulling the springs up and into the correct holes on the motor housing. Plug the three wires in to matching color wire. Re-attach exhaust. Replace top. Test.

## **Replacing the Motor AQUA-AIR Wet/Dry 230**

Unplug the power unit and remove the top. The vacuum motor is held in place with 3 bolts, washers, and compression springs, and connected to power with 3 terminal spade connectors. Unplug all three wires. Remove the exhaust by loosening the hose clamp and pulling the exhaust out of the way. Carefully remove the bolts, washers and springs. Lift motor out.

Set the new motor in the appropriate place. Install the bolts springs and washers as they were. DO NOT over-tighten – snug is good. Plug the three wires in to matching color wire. Re-attach exhaust. Replace top. Test.

## **Replacing the Motor** **AQUA-AIR Wet/Dry 250**

Unplug the power unit and remove the top or bottom. The vacuum motor is held in place with 3 lock nuts, washers, and compression springs, and connected to power with 3 terminal spade connectors. Unplug all three wires. Remove the exhaust by loosening the hose clamp and pulling the exhaust out of the way. Carefully remove the lock nuts, washers and springs. Take motor out. Install the new motor using the lock nuts, springs and washers as they were. **DO NOT** over-tighten – snug is good. Plug the three wires in to matching color wire. Re-attach exhaust. Replace top or bottom. Test.

## **Replacing the Float**

Unplug the float wires from the power unit. Loosen the Phillips screw on the tank float support. Do not lose the nut off the bottom. Slide the cord out of the support, cut cord and pull cord through the grommet on the side of the waste tank. Push the cord of the new float through the grommet from the inside of the waste tank. A little lubricant, like WD-40, can help the cord slide through the grommet a little easier. Put the cord into the support so that there is about an inch between the support and the float. The float should sit so that the triangle, formed by the three dimples on either end of the float, points upward. The center dimple should be right at the top. The float should be able to bend down so the float hangs nearly straight down without hitting the bottom of the tank. It should be able to be lifted easily to a point where the ball inside rolls from one end of the float to the other. Move cord as needed to get the float and cord in the correct position, then tighten the support on the cord. Cut cord to the correct length (Be sure to have the waste tank in the lowered position when cutting the cord and allow plenty of wire to strip, add connectors and attach) Strip the wires, crimp the female spade connectors on the wires, and plug them into the tank float terminals on the power unit. Test.

## **Replacing the Solenoid Valve**

Unplug the power unit. Turn off the cold water supply. Loosen the hose clamp on the barb below the solenoid valve and needle valve. If you have enough hose you can cut the hose off and re-attach it later. (If not, the hose can just turn on the barb as you remove the nipple, needle valve and barb from the bottom of the solenoid valve.)

The solenoid valve is held in place by 4 screws on the inside of the motor cavity. Make a mental note of where the ground wire is connected. Remove the 4 screws (on the 230 it is often easier and faster to remove the motor closest to the solenoid prior to removing the solenoid valve). The black plastic body of the solenoid will now come away from the power unit – allowing the brass parts to be unscrewed from the solenoid.

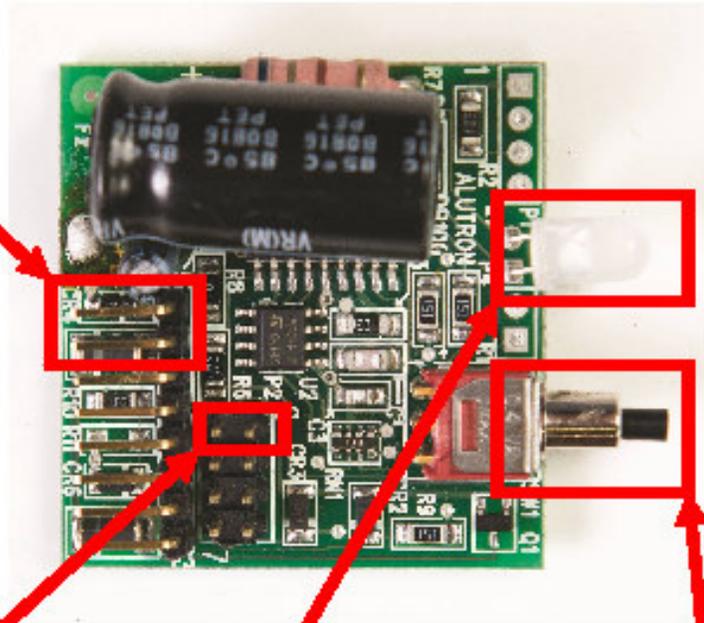
Be sure when you put the new solenoid body in place that the water flow arrow is pointing in the correct direction (upwards). Use Teflon tape or appropriate pipe dope on the threads. **DO NOT** over-tighten. It is usually not necessary to replace the electrical components of the solenoid – but you can if you would like. Reassemble and test.

## Daughter Board Installation Instructions

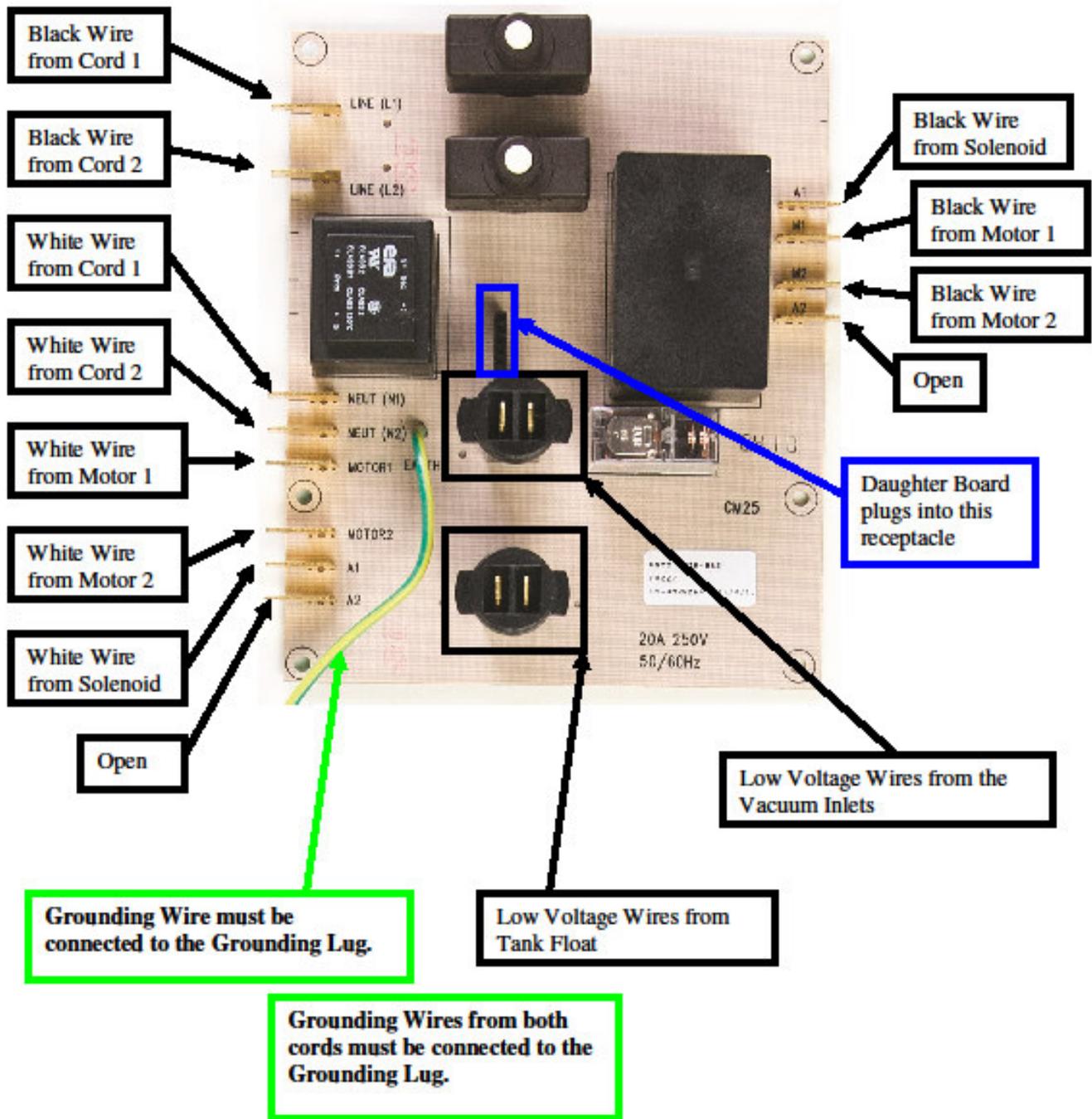
These 2 prongs DO NOT plug into the Mother Board. They are the top two prongs when the board is installed into the Mother Board.

The Thermal Protector Probe must plug into these two prongs.

The LED light is green when you purchase the board/machine. As the 130 or 230 nears 500 hours the light will change to an amber color, and then at 500 hours of use change to red. On a 150 or 250 the light will change to amber as the machine nears 1000 hours and change to red at 1000 hours of use. Once the light is red it will remain red. The light will begin to blink after each 5 hours of use regardless of the color and can be reset back to solid (not blinking) by pressing the reset button.



# Mother Board Wiring (Two Motor – PA022)



# Mother Board Wiring (Single Motor – PA020)

