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Technical Guideline

Float Switch Testing for Vacuum Pump

TG-NP-0006

Rev B | 06/07/2016 | Page 1 of 2

PURPOSE

The vacuum pump utilizes a float switch to turn off the vacuum pump in the event the canister is filled with liquid. The float switch is routed through a relay mounted on the vacuum canister bracket. If there is not any power to the vacuum, the following tests can be used to determine a probable cause.

WARNINGS



WARNING! Only qualified personnel should service or repair this device. This device should only be serviced/repared by a qualified service technician who is proficient in the repair of electromechanical dental equipment and who understands the complexities and risks of working within the device and observes proper safety precautions.



WARNING – Electrical Voltage. This system is powered by high voltage electricity. Like any other electrically powered device, if it is not used properly, it can cause electrical shock. Always plug the power cord into an electrical outlet with adequate fuse protection and proper grounding. In the event of a short circuit, grounding reduces the risk of shock by providing an escape wire for the electric current. Improper grounding of the unit can result in a risk of electric shock. Always unplug the unit before doing any service or repair to the unit.

TOOLS REQUIRED

- Flat head screwdriver
- Multi-meter
- Jumper wire

INSTRUCTIONS

1. Open the back door of the unit using a flat head screwdriver.
2. Locate the relay on the suction canister housing.
3. Test Continuity of the Float Switch

Verify that the float switch is working and that the canister has been purged. Ensure that the power to the cart is off or that the vacuum switch is off.

Use a multi-meter and use continuity test to connect 3/A1 to 6 Position on the Terminal Strip. If there is not an audible sound/continuity, the suction canister needs to be purged or the float switch can be inoperable and needs to be cleaned or replaced.

4. Relay Test

If continuity is present, restore power to the vacuum pump, turn on the switch and remove a suction handpiece from the holder if the system is equipped with autoholders. Run a jumper wire from 3/A1 to 6 Position on the terminal block. The vacuum pump should turn on and the light on the relay should illuminate. If not, verify connections to the relay are secure. Proceed with Vacuum test below before replacing the relay.

5. Vacuum Pump Test

Ensure power is active to the vacuum pump. Run a jumper wire from 1/L1 to 2/T1. The vacuum pump should turn on. If it does, the relay may be defective and require replacement. If no power, inspect the vacuum pump and capacitor.

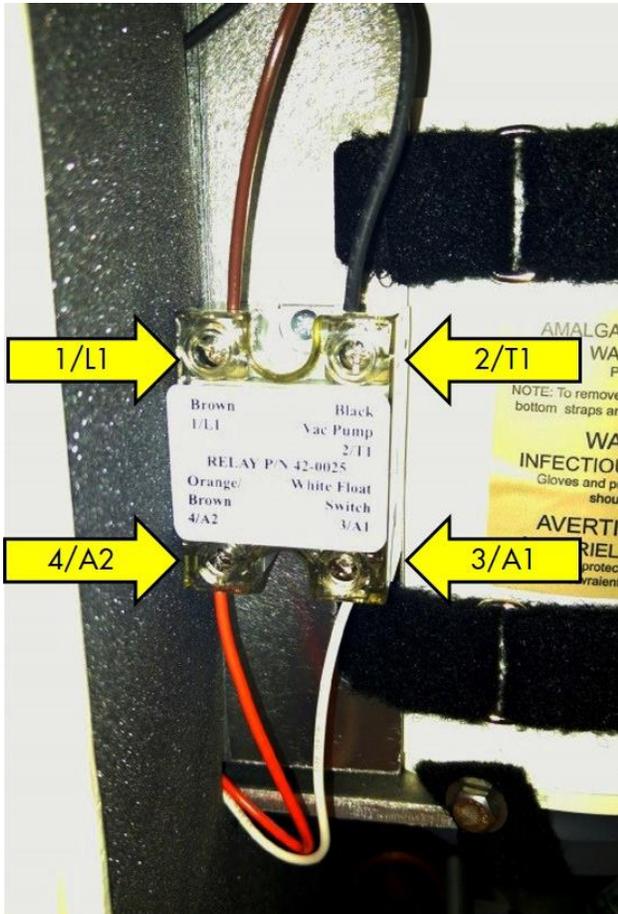


Fig. 1

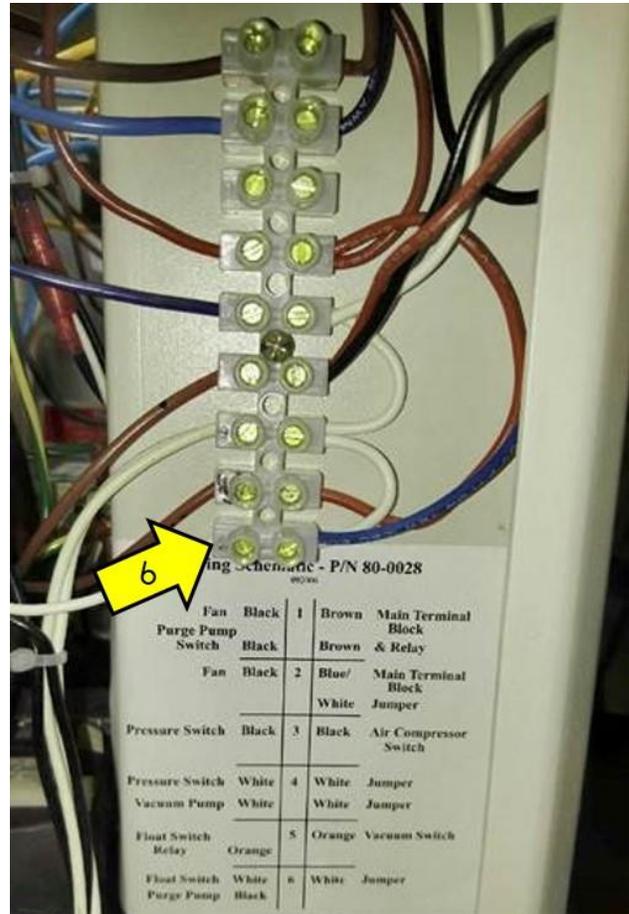


Fig. 2