

# APPLIGATION NOTE

### **AN-133 Water Fill Valve Replacement Instructions**

SUPPLEMENT TO THE ELECTRONIC STEAM POWER HUMIDIFIERS MODEL # S2000 AND S2020

#### REPAIRS SHOULD BE PERFORMED BY A QUALIFIED TECHNICIAN

To replace the Water Fill Valve in the "S" series steam humidifier, you must *unplug and shut down your steam humidifier and allow it to cool.* The water tank must be drained, the water supply, drain lines and electrical wiring must be disconnected and the unit removed from the duct. Pull straight up on the Green terminal block to disconnect It from the unit.

#### Place the unit on a flat working surface.

Unplug the automatic drain valve assembly from the side of the front cover. Snip the plastic wire tie that secures the drain valve wires to the main power cord. Now use an adjustable wrench at the brass "T" adapter to unscrew the entire drain valve assembly. **DO NOT** use the drain valve itself as leverage when removing or re-installing the drain valve assembly. Doing so will damage the drain valve and void the warranty.

Now use a phillips screwdriver and loosen the four screws securing the front cover and remove the front cover. You can now see the Water Fill Valve assembly.

Use a 5/16" nut driver to loosen the hex nut which secures the water level probe to the printed circuit board. Then you must loosen and remove the ground screw at the top right hand corner of the printed circuit board. This allows some clearance between the circuit board and the Water Fill Valve.

Trace the wires coming from the Water Fill Valve to where they connect to the printed circuit board.

Pull the connector off of the board. Now remove both mounting screws which hold the Water Fill Valve to it's mounting plate. Now you can carefully pull the entire valve assembly straight back and out. You may have to pull back on the printed circuit board a bit for additional clearance. *BE CAREFUL* not to damage the printed circuit board. It will feel a little tight when pulling the valve out, due to the rubber grommet on the front plate where the valve stem protrudes into the tank.

Now install the new valve assembly by pushing it through the rubber grommet and into position. Place a dab of grease or Vaseline on the stem to ease it through the rubber grommet. The grommet may pop out if the stem is forced through.

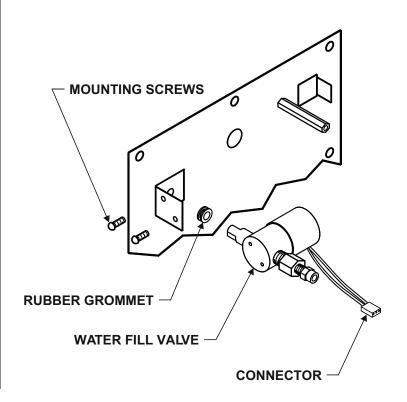
Line up the valve body with the mounting plate and secure it with the new screws provided. NOTE that one screw is longer than the other and doubles, as a front cover screw. Route the wires under the water level probe and plug the connector back onto the printed circuit board J3 pins. Line up the water level probe stem with the hole on the printed circuit board. Re-install the hex nut and tighten firmly while holding the leg of the water level probe straight down towards the tank. Loosen the hex nut and readjust if necessary. Re-install the ground screw removed earlier and secure the circuit board.

## Review the entire project to be sure that nothing has been overlooked.

Now you can re-install the front cover. Make sure to line up with the LED's on the printed circuit board. Do not crush them when pushing the front cover back on. You may have to loosen the front cover screws a bit more. Press the front cover back on all the way and tighten the four front cover screws

Apply Teflon tape to the threads of the "T" adapter on the automatic drain valve. Screw the entire drain valve assembly back onto the drain fitting and tighten with an adjustable wrench. **DO NOT** use the solenoid valve itself as leverage to turn and tighten the assembly. Doing so will damage the valve. Tighten and position the drain assembly to the original position. Plug the drain valve molded connector back in on the side of the front cover until it snaps into place. Secure the drain valve wires with the short cable tie.

Now insert the unit back into the duct and secure it. Re-connect the water, electrical and drain connections. Open the water source valve and plug the steam humidifier into it's electrical outlet. Make sure the humidistat is calling for humidity. Observe the operation of the unit and make sure there are no water leaks.



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