Excellence Without Compromise

EWC® CONTROLS INC.

ULTRA-ZONE HUMIDIFIERS

APPLICATION NOTE

AN-132 Printed Circuit Board Replacement Instructions

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

REPAIRS SHOULD BE PERFORMED BY A QUALIFIED TECHNICIAN

IMPORTANT: Before proceeding check the replacement part number to verify the correct component and voltage rating. Read these instructions thoroughly!

To replace the Printed Circuit Board 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 low voltage 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.

Use a 5/16" nut driver to loosen and remove the hex nut which secures the water level probe to the printed circuit board. Remove the ground screw at the upper right hand corner of the printed circuit board. Remove the two small phillips screws at the bottom corners of the printed circuit board. The printed circuit board can now be laid flat.

Locate the wires from the Thermistor Probe and trace them to where they connect to the printed circuit board. Pull the connector off of the board from the J2 pins. Locate the wires from the Water Fill Valve and trace them to where they connect to the printed circuit board. Pull the connector off the board from the J3 pins.

Locate the two black wires connected to the large relay on the printed circuit board. Use needle nose pliers and pull them off the relay "COM" and "NO" terminals.

Locate the single white wire where it connects to the printed circuit board "NEUT" terminal. Pull it off using the needle nose pliers. Remove the green "ground" wire last from the printed circuit board.

The defective printed circuit board should now be loose in your hands. Set it down on the work surface out of the way.

NOTE: Your new printed circuit board may include a new 7 pin green terminal block and a new Front Cover. If the defective circuit board had a 5 pin green terminal block, you must use the new 7 pin terminal block and the new front cover! Otherwise reuse the existing 7 pin terminal block and front cover.

Make sure the J5 jumper is set to the RUN position not TEST! Set the new printed circuit board in position and reverse the process. Be careful not to damage it! Push the ground wire terminal back onto the connector on the upper right hand corner of the board. Push the white wire back on to the "NEUT" terminal. Push the black wire lead from the power cord on to the "NO" terminal on the large relay. Push the other black wire lead from the heating element back on to the "COM" terminal on the large relay.

NOTE: This may be reversed from the old circuit board.

Push the connector from the water fill valve back on to the J3 pins. Push the connector from the thermistor probe back on to the J2 pins.

Now you can raise the printed circuit board up and into it's proper position.

Make sure that no wires are pinched between the transformer and the front plate. Re-route the wires as necessary. Review your work for accuracy!

Tighten the two small phillips screws at the bottom corners of the printed circuit board. Be careful not to break the insulating bar.

Tighten the ground screw at the upper right hand corner of the board. Position the water level probe back into the hole on the printed circuit board. Re-install the hex nut and tighten down firmly against the other hex nut, while holding the water level probe leg straight down towards the bottom of the tank. Loosen the hex nut and readjust if necessary. 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.

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

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. Review the original owner's manual for operational sequence and other helpful information. If you have any questions call the technical support hotline @ 1-800-446-3110.

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