TI-1093: "E 08" on TD3030 Dryer

Refer to the TD3030 Control Service Manual (p/n 487 032931) and Programming Manual (p/n 487 193711), as needed, when troubleshooting dryer error codes. These manuals are available free of charge from Wascomat's spare parts department (Tel: 516-371-2000).

On TD3030 dryers, error "E 08" (flashing) indicates that the main circuit board corresponding to the pocket on which the error appears is reporting that the high-limit safety thermostat circuit is open. Five conditions can lead to this error:

- Open inlet air high-limit thermostat (manually resettable).
- Open outlet air high-limit thermostat (manually resettable).
- Open high-limit thermostat wiring harness.
- Loss of Voltage to high-limit thermostat circuit (blown fuse F3).
- Defective main circuit board (process module).

To identify the cause of the E 08 error code:

1. Disconnect electrical power from the dryer. Check and reset the inlet and/or outlet high-limit thermostats, as necessary, and then correct the condition that led to the thermostat trip.

HIGH-LIMIT THERMOSTAT NOTES:

Tripping of the inlet thermostat (one located at the top of each burner compartment on the rear of the dryer) may indicate insufficient airflow. However, this can also result from installation of an incorrect thermostat (dismount thermostat and verify that the flange of the device is stamped "150 C"). Improper positioning or operation of the inlet air thermistor (less likely cause), or improperly programmed drying temperatures (high temperature should be programmed to 160°F) can also result in tripping of the inlet thermostat. Also check for lint accumulation in the lint screen drawer, on the secondary lint screen, on the blower wheel, in the exhaust plenum, and in the exhaust ducting. Verify that sufficient makeup air has been provided (1.75 square feet EFFECTIVE makeup air allowance per stack dryer (for 2 pockets)) and that the air inlet grating on the rear of the dryer is not obstructed). Verify that the exhaust duct outlet (outdoors) is pointing straight downward, and that it is not positioned in a corner or other location where wind might cause excessive backpressure on the outlet. Verify that the exhaust outlet is not directed at a roof or other surface that is less than one foot away. The main circuit board monitors the inlet thermistor, and controls the temperature of the air entering the drum by turning the burner on and off, as necessary. A defective or improperly positioned inlet thermistor could cause the actual inlet air temperature to rise above the safety thermostat trip temperature. Check the inlet air thermistor position and its resistance at room temperature (see Service manual).

Tripping of the outlet thermostat (located near the blower, behind the secondary lint screen) may also indicate insufficient airflow, but is more likely the result of incorrect temperature settings in the main circuit board memory. Verify that the dryer is programmed for 120/140 and 160 +/-2 degrees F (see Programming Manual). Verify that the heating demand indicator light on the control panel turns off when the dryer reaches the programmed temperature (you can see the outlet air temperature in real-time by pressing and holding the SELECT key while the dryer is operating). The displayed temperature can be compared to a thermometer measurement (technician-supplied measuring instrument) at the outlet thermistor location, to verify accuracy of the dryer's measurement system. The dryer's display and the

thermometer measurement should be within 10 degrees F when the dryer is HOT. Note that the displayed temperature may not be accurate when the dryer is cool (<100° F). This is normal.

In the event that an E 08 is displayed, but nether thermostat has tripped, verify continuity between the thermostat terminals on both the inlet and outlet thermostats. Replace defective thermostat(s), as necessary. Note that the inlet (150° C) and outlet (120° C) thermostats have DIFFERENT trip temperatures, and are NOT interchangeable. If these checks do not reveal a problem, continue with step 2.

2. Disconnect electrical power from the dryer. Remove plug P4 from the main control circuit board for the pocket exhibiting the E 08 error (note that there are TWO main boards in the dryer: be sure to locate the one for the pocket experiencing trouble!). Check for continuity between pin 6 and pin 11 on the wiring harness connector. The bent-open end of two small paper clips can be carefully inserted into the female connector shell to make this measurement (one clip into each of the two pins of the connector). If the circuit is open, but the thermostats were checked and found to be closed, trace and repair the break in the harness, as necessary. If the circuit is closed, check for continuity between one of these connector pins and the chassis of the dryer. If continuity exists, the high-limit harness or one of the thermostats is shorted to the frame of the dryer, and must be repaired or replaced, as necessary. If a short circuit is found, F3 on the main circuit board will be blown as a result, and must also be replaced. If these checks do not reveal a problem, reconnect plug P4, and continue with step 3.

3. Disconnect electrical power from the dryer. Check fuse F3 on the main curcuit board for the pocket exhibiting the error. If this fuse is blown, a short to ground in the high-limit thermostat harness (already checked in step 2), or the door-switch harness, is the likely cause. Check continuity between the bottom F3 fuse clip and the chassis of the dryer (leave the blown fuse in the circuit board, or remove the fuse completely for this measurement). If a short circuit is confirmed, remove plug P12A from the main control circuit board for the pocket exhibiting the error and repeat the continuity measurement. If the short-circuit has disappeared, the most likely cause is damage to the spare door switch wiring harness (used for door-swing reversal) behind the front panel of the dryer. Remove the loading door, and the front panel of the suspect pocket. Inspect and repair/restrain the harness, as necessary.

4. If the short-circuit does not disappear when plug P12A is removed, repeat the continuity test three more times, first with plug P7 removed, then with plug P10 removed, and, finally, with P6A removed. Two of these plugs each have a pair of wires that pass through the drum motor (P7-pins 5 and 6) and fan motor (P6A-pins 2 and 5) over-temperature switches, which are embedded in the respective motor windings. The remaining plug (P10) feeds power to the heating system. All of these circuits receive power from the F3 fuse, and can, if an overload exists, blow the fuse.

Refer to the wiring diagram for the dryer being serviced, and contact Wascomat's Technical Support Department at 516-371-0700 if you need further information or assistance.

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WASCOMAT LAUNDRY EQUIPMENT • 461 DOUGHTY BLVD., INWOOD, NY 11096-0338 • TELEPHONE: 516.371.4400
SALES AND ADMINISTRATION Fax (US & CANADA): 516.371.4204 • e-mail: sales@wascomat.com
PARTS AND SERVICE Parts: 516.371.2000 • Service: 516.371.0700 • Fax (US & Canada): 516.371.4029 • e-mail: parts@wascomat.com

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