



## **Service Bulletin**

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## Bulletin 2003-45-ABDE

Page 1 of 1

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## SUBJECT: Current-Limiting Circuit in M2000 and CM III.5 Computers

Frymaster has added a current-limiting circuit to the M2000 and CM III.5 computer families. The circuit protects the computer from over-current conditions of up to 60 volts (ac or dc) on Pin 5 (V-Relay) of the computer plug. (**NOTE:** The signal to close the latch relays on electric fryers, the heat relays on gas fryers, and the hood interlock on both gas and electric McDonald's fryers is transmitted through Pin 5.)

Over-current conditions on Pin 5 (i.e., voltages greater than 12-17 VDC) could irreversibly damage earlier computers without the circuit. M2000 computers manufactured beginning 15 September 2003 and CM III.5-based computers manufactured beginning 1 October 2003 have the new circuit.

If a computer with this circuit experiences an over-current condition on Pin 5, the circuit shuts down the computer. The computer ON/OFF switch must be pressed to turn the computer back on.

Troubleshooting computers with the new circuit is different. If the computer shuts down on its own and can be turned back on (particularly if it does so repeatedly), perform the following tests:

- 1. Make sure the computer is off. Unplug the harness from the back of the computer and check for zero voltage (both ac and dc) on Pin 5 of the harness with chassis ground. Back Pin 5 out of the harness, reconnect the harness to the computer, and again check for ac and dc voltage on Pin 5 with chassis ground. If there is voltage on Pin 5 in either or both cases, the problem is not with the computer but with another component of the power supply.
- 2. If the voltage on Pin 5 is zero in both cases, turn the computer on and again check the voltage on Pin 5. DC voltage greater than 17 volts or the presence of any ac voltage indicates a problem in the power supply outside the computer. The computer is OK.