



# Service Bulletin

Bulletin 2003-10-ABDE

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Date: 01/16/2003

## SUBJECT: UHC Service Notes

**This bulletin cancels and replaces Service Bulletins 2001-26-ABDE and 2001-08-ABDE. Remove these bulletins from your active file.**

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### Relay and Power Switch Kit:

A kit for upgrading the power switch in UHCs manufactured before June 2001 is available. The kit, P/N 826-1718, includes a relay, which routes line voltage to the transformer and heating elements. The main external power switch is protected from line voltage and feels only the small amount of voltage necessary to operate the new relay. A new switch is also provided in the kit.

All orders for the main power switch, 807-3308, are filled with the 826-1718 kit. This part number should be used on all orders for power switches. The list price for the kit is \$46.00.

The kit installation instructions, 819-5831, are available online at Frymaster's Web site.

### Fan and Fuse Replacement:

UHC fans should be of a ball bearing type. To determine whether a fan has ball bearings, check the manufacturer's part number. Elina, Orion, Sinwan, and Sunon fans will have "BT" or "TB" as the last two characters of the fan. Crouzet fans, however, may or may not have the "BT" or "TB" suffix. Crouzet model 70546289 has sleeve bearings and should not be used to replace the UHC fans. Crouzet model 70546285 has ball bearings and is an appropriate OEM part.

Frymaster initiated a "Find-and-Fix" program in March 1998 to replace the fans in UHCs with serial numbers between 9607UHXXXX and 9708UHXXXX. The program also replaced the fuse on the driver boards with one of higher amperage. UHC rating plates on units that were reworked were marked by the servicer with "FC" to indicate that the fan had been changed. The program was ended August 31, 1999. ***All fan replacements completed after August 31, 1999 fall under normal warranty policy.*** The fan and fuse replacement procedure is republished below for your convenience.

**Part numbers:**

- Fan: 807-2665.
- Fuse (1.5 Amp): 807-2770.

**Tools required:**

- Offset common (flat-tip) screwdriver.
- 11/32-inch open-end wrench.
- 1/4-inch nut driver.

1. **Disconnect the unit from the power supply.** Remove the two screws from each side panel, and remove both side panels. Remove the 4 top retaining screws, and remove the top. (For stacked units, refer to the service manual for the disassembly procedure)
2. If replacing a blown fuse, remove the fuse from the driver boards and replace with 1.5-amp fuse P/N 807-2770.
3. Fans may be secured in either of two ways:
  - a. Long screws through both the top and bottom of the fan. Use a 1/4-inch nut driver to remove the screws. Remove the fan, disconnect the wires and reconnect to the new fan. Mount the new fan using the same screws.
  - b. Four short screws coming up through the equipment shelf and bottom of the fan with four nuts on top. Remove the side plate to gain access to the bottom side of the equipment shelf. Use a 1/4-inch nut driver to remove the 4 transformer mounting screws. Without disconnecting the wiring, move the transformer aside to gain access to the fan nuts. Use an offset screwdriver to prevent the screws from rotating. Use an 11/32-inch open-end wrench to remove the nuts securing the fan and remove the fan. Disconnect the wires and reconnect to the new fan. Use only two screws and nuts per fan to remount the fans (opposite corners) and discard the rest. Put the screws through the fan and equipment shelf and mount the nuts from underneath the equipment shelf. Tighten the screws. Remount the transformer and side plate.
4. Reassemble the unit and verify proper operation.

## Circuit Boards:

Many of the Universal Holding Cabinet (UHC) master control boards and display driver boards that are replaced by servicers are found to have no defects when subjected to failure mode analysis testing at the factory.

One of the primary reasons for replacing the boards is a blank display. Although a failed board will certainly result in a blank display, there are other possibilities that should be explored before a board is replaced.

Loose wiring connections may cause intermittent or consistently blank displays, and an open wiring connection will damage the master control board.

***Any time you have multiple master control board or display driver failures, replace the wiring harness (P/N 807-2448) and recheck the unit to be certain the boards are bad before replacing them.***

The troubleshooting guide and tests in the service manual (P/N 819-5551A), will help to isolate defective parts.

## RTD Circuit Repair:

The following error messages in the display of a Universal Holding Cabinet (UHC) usually indicate a poor connection between the wire and terminal on the brown and red RTD wires:

- SENS ALRM (sensor alarm)
- HHHH
- SLOT TEMP HIGH\*

\*SLOT TEMP HIGH, with no audible alarm is normal. It indicates a change in menu that has caused a temporary over-temperature condition to occur.

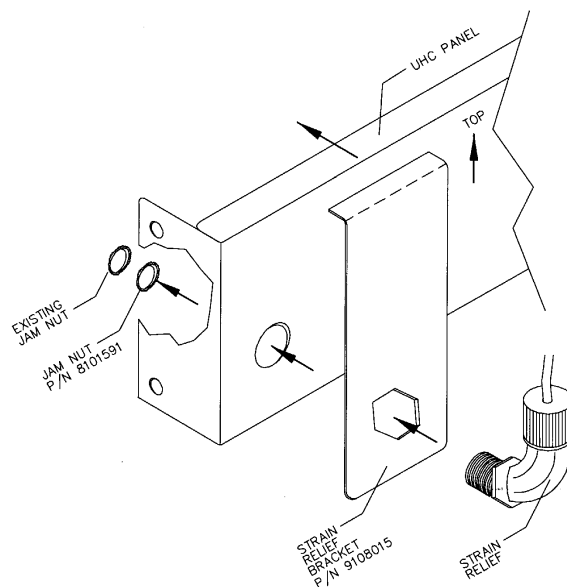
Almost all terminals have been recrimped as part of prior rework programs and this has substantially reduced the incidence of the error messages above. If any of these error messages occur, remove the RTD terminals from the master control board and solder the wires to the terminals. **Do not replace components before soldering terminals.**

**Never change a display driver board to correct the error messages above.** The RTD circuits are totally independent of the display drivers.

## Power Cord Strain Relief:

The right angle strain relief on the UHC power cord may loosen. The loosening is usually caused by crewmembers rotating the power cord or strain relief.

It is **important** that the strain relief be secure. When servicing a UHC, check the right angle strain relief. If it is loose, install UHC Strain Relief Kit P/N 826-1495 (illustrated below). Installation of the kit will prevent the strain relief from loosening again. **NOTE:** Inspection of cabinets with a straight strain relief is not necessary.



### Sound Device Replacement:

The UHC Master Control Board (P/N 807-2443) has a sound device soldered onto the board. In the past, if the sound device failed, the entire master control board had to be replaced. Consequently, a sound device replacement kit (P/N 826-1529, list price \$20.00) was developed. The kit contains a replacement sound device with two lead wires, double-sided mounting tape, and installation instructions.

### Master Control Board Replacement Chip:

In April 2000, a new chip was introduced for the UHC. The new chip, which plugs into the master control board, adds two new features: the *Buffer Timer* and the *Cook More* prompt.

The **Buffer Timer** allows the holding time on UHCs to be adjusted. The time elapsed while food items were held in remote holding cabinets can be subtracted from the remaining holding time when the items are added to a UHC in the food preparation area. The **Cook More** prompt calls the operator's attention to the need to cook additional product as the holding time elapses on UHC slots.

The replacement chips, installation instructions, a chip removal tool, and an operator's manual are included in Kit 826-1568 (list price \$164.00). The replacement chips are not difficult to install and most McDonald's will choose to install them with in-store personnel after purchasing Kit 826-1568 from a KES.

Should a store request an FASC to install the chips, we strongly recommend verifying the UHC is working properly **before** installation of the new chips.

With the new chips properly installed, the UHC will display Version 3.00 on its display panel upon startup.

## Displays and Membrane Switch Replacement Parts:

The tables below identify UHC Display replacement parts currently available.

Cabinets manufactured prior to approximately March 1997 (9703 serial numbers) were made with the display and membrane switch soldered together. These cabinets require a complete display assembly (except for any replacement displays that may be of the newer design).

Replacement Displays for UHCs Built Before 3/97		
Part Number	Description	List Price
807-3309	Front Display Assembly	\$168.00
807-3310	Rear Display Assembly	\$168.00

The display and membrane switch can be separated on cabinets manufactured since March 1997 (9703 serial numbers). If the membrane switch will not accept input (i.e., nothing happens when you push a button), changing only the membrane switch will almost always correct the problem.

Replacement Membrane Switches for UHCs Built Since 3/97		
Part Number	Description	List Price
807-3311	Front Membrane Switch	\$64.00
807-3312	Rear Membrane Switch	\$64.00

Specially priced membrane switch kits are also available. Some operators may choose to purchase one of these kits and change all the membrane switches on an older cabinet to prevent down time, save on parts cost, and save the cost of the technician's travel time and mileage for multiple trips.

Specially Priced Membrane Switch Kits		
Part Number	Description	List Price
826-1581	Front and Rear Membrane Kit	\$216.00*
826-1585	SPOD Front Membrane Kit	\$108.00**

\* Special discount part. FASC net cost is \$144.00.

\*\* Special discount part. FASC net cost is \$72.00.

The UHC Front Display Assembly, P/N 807-2445, and the UHC Rear Display Assembly, P/N 807-2446, are no longer available and have been replaced by 807-3309 and 807-3310, respectively.