CARTER-HOFFMANN
A Division of Carrier Commercial Refrigeration

Carter-Hoffmann

McDonald's Pie Merchandiser

Model(s) MDPM2 and MDPM4

Service Providers Manual

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INTRODUCTION

The MDPM Pie Merchandiser is designed to hold pies at serving temperature. The cabinet has a programmable controller with a low temperature alarm. The controller is factory pre-set for a holding temperature of 165°F (74°C) for baked pies or 155°F (69°C) for fried pies, and a low temperature alarm of 140°F (60°C). The heater and most electrical components can be accessed for service by removing the top cover. There is also a bottom panel to access the wiring and the switch. The cabinet is designed to hold 42 baked or 36 fried pies. Each cabinet includes a removable pie caddy, also known as an insert.

SAFETY

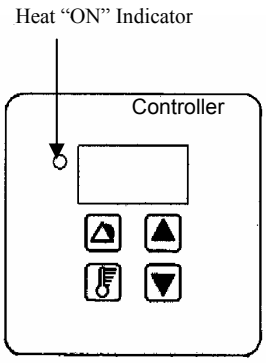
Knowledge of proper installation, operation and maintenance procedures is essential to ensure safe operation of any equipment.

1. Always have dry hands prior to turning the ON/OFF switch ON or OFF.
2. Turn OFF the ON/OFF switch any time the cabinet is not in use.
3. If an electrical shock is felt when touching the cabinet, disconnect the power immediately and call Carter-Hoffmann's Technical Service Department for assistance and service.
4. If you find the power cord is frayed or the plug damaged, DO NOT PLUG IT INTO THE ELECTRICAL RECEPTACLE. IF IT IS ALREADY PLUGGED IN, SHUT OFF THE MAIN CIRCUIT BREAKER, LOCATED IN THE BREAKER BOX AT THE REAR OF THE STORE. THEN DISCONNECT THE PLUG.
5. DISCONNECT THE POWER CORD BEFORE ATTEMPTING ANY REPAIRS TO THE CABINET AND/OR CLEANING THE UNIT.
6. DO NOT SUBMERGE THE CABINET. ELECTRICAL COMPONENTS AND WIRING PRESENT A HIGH SHOCK HAZARD WHEN WET.

INSTALLATION

1. Remove the cabinet from shipping carton making sure all packing materials are removed from the carton and cabinet.
2. Check to ensure all components are included: Cabinet, Pie Caddy, Equipment Manual
3. Read this equipment manual completely before operating the cabinet.
4. Locate cabinet on clean, dry surface.
5. Clean cabinet thoroughly before use. See PM Card
6. Connect the cabinet power cord to a correctly-wired and protected power source.

OPERATION



1. The power switch is located at the base of the cabinet, underneath the door. Turn the power switch on. Preheat cabinet for 30 minutes. When the cabinet is turned on, the air heater will operate until the cabinet reaches the air temperature setpoint. The display will read the actual cabinet temperature. The heat "ON" light will illuminate when the cabinet air temperature is below the air temperature setpoint. The controller display will flash alternately LO and the actual cabinet air temperature until it reaches the low temperature alarm temperature setpoint.
2. After preheat, load cooked/baked, boxed pies into cabinet.
3. Cabinet dispenses pies from the bottom, underneath the door.
4. When cabinet is not in use, turn power off.
5. This cabinet must be cleaned **DAILY**. See PM Card.

NOTE: The pie caddy has a reserve storage for additional pies. This reserve is intended to provide additional pies while a new batch of pies are being baked. Holes beneath the door provide visual indication of pie levels in the cabinet.

PROGRAMMING INSTRUCTIONS

The controller has been factory pre-set for a holding temperature of **165˚F (74˚C) for baked pies, 155˚F (69˚C) for fried pies**, **and a low temperature alarm of 140˚F (60˚C).** In most cases, the temperature will not need to be changed. However, if changes are necessary, the controller is programmable.

To View or Change the Temperature setpoint:

Turn the power on. To view the temperature setpoint, press and hold the temperature set button. To change the temperature setpoint, press and hold the temperature set button, press the up or down arrow button until the desired air temperature is displayed. The display will advance in 1° increments.

To View or Change Alarm setpoint:

Turn the power on. To view the alarm setpoint, press and hold the alarm-reset button. To change the alarm setpoint, press and hold the alarm-reset button, press the up or down arrow button until the desired alarm temperature is displayed. The display will advance in 1° increments.

To View or Change Temperature Scale:

The cabinet is programmable for a temperature scale in degrees Fahrenheit and Centigrade (Celsius). Turn power off. Hold down both arrow buttons. Turn power back on while holding both arrows. Display will show current scale (C or F). If desired, push the up or down arrow to change the scale. Turn power off to save change.

Changing the Temperature Range

The temperature range is the range that this cabinet is designed to operate under. **The factory defaults the cabinet should be programmed to are 190°F Maximum and 150°F Minimum.** The cabinet operating temperature can be programmed to operate within these two setpoints.

1. Turn the cabinet off.
2. Press and hold the **UP** and **DOWN** arrow buttons
3. While still holding down the arrow buttons, turn back on the power to the cabinet.
4. The display will read: **Ser F** and then **F** will display**.**
5. To change the range, press and release the **TEMP SET** button.
6. The display will read: **rLo** and the current low temperature range setpoint.
7. To change the temperature lower, press the **DOWN** arrow until the desired temperature is displayed. Minimum setting should be set to **150°F**.
8. Press the **TEMP SET** button again. The display will read **Rhi**. and the current high temperature range setpoint
9. To change the temperature higher, press the **UP** arrow button until the desired temperature is displayed. Maximum setting should be set to **190°F.**

When the desired changes are complete, turn off the power to the cabinet. This will allow the controller to save the changes in the controller memory.

Changing the Alarm Range

The alarm range is the range that the low temperature alarm is designed to operated under. The factory defaults are 150°F maximum and 110°F minimum. The cabinet low temperature alarm can be programmed to operate within these two setpoints.

1. Turn the cabinet off.
2. Press and hold the **UP** and **DOWN** arrow buttons
3. While still holding down the arrow buttons, turn back on the power to the cabinet.
4. The display will read: **Ser F** and then **F** will display.
5. To change the range, press and release the **ALARM RESET** button.
6. The display will read **ALo** and the current temperature range setpoint.
7. To change the alarm range lower, press the **DOWN** arrow until the desired range is displayed. Minimum setting should be set to **110°F**.
8. To change the alarm range higher, press the **ALARM RESET** button.
9. The display will read: **AHi** and the current temperature.
10. Press the **UP** arrow button until the desired range is displayed. Maximum setting should be set to **150°F.**

When the desired changes are complete, turn off the power to the cabinet. This will allow the controller to save the changes in the controller memory.

NON-SCHEDULED MAINTENANCE

Changing Illuminated Front Graphic on Door:

Tools: Phillips Screwdriver

Remove the four screws on the sides of the door and remove the door trim. Slide the POP graphic out. Slide new POP graphic in, making sure to leave white diffuser background panel in place. Replace the door trim and secure with screws.

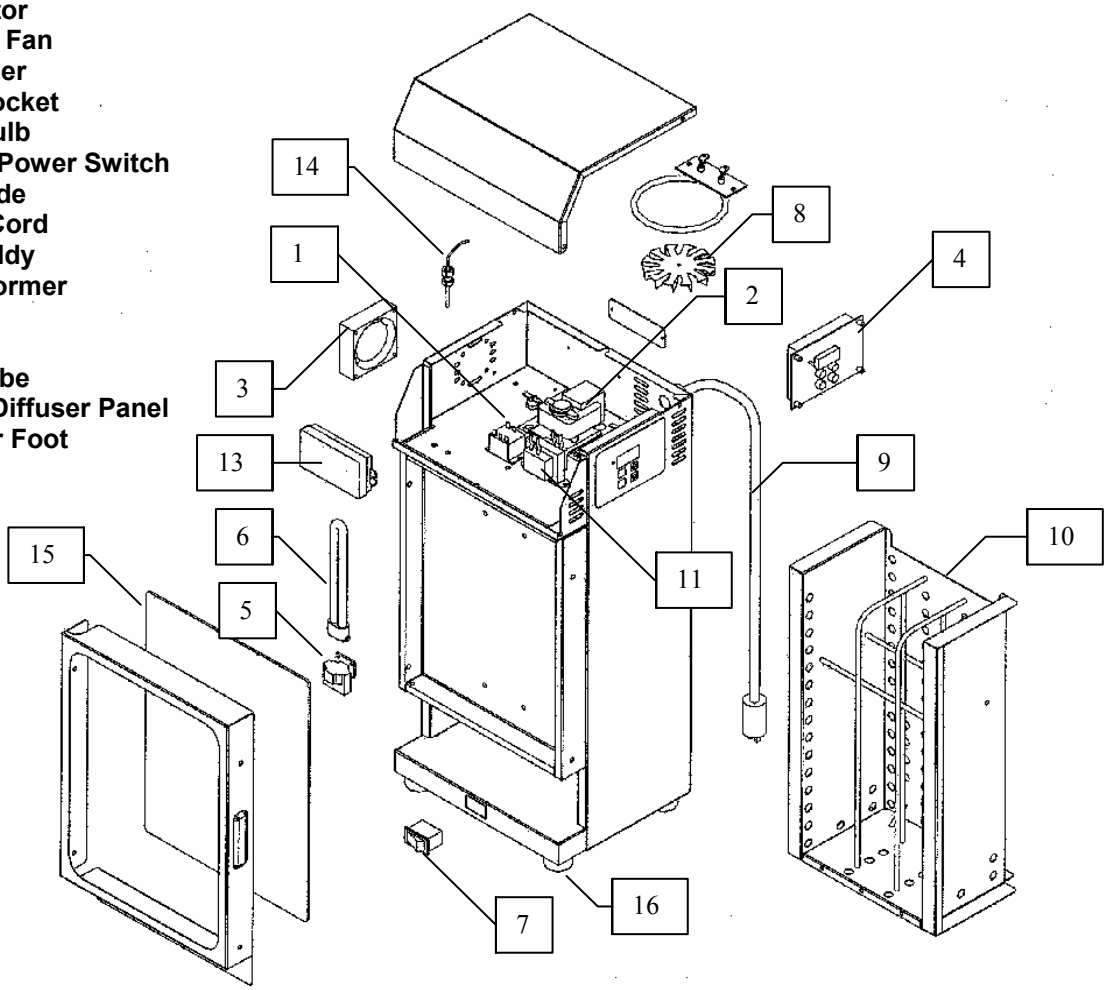
Changing the Light Bulb in the Door:

Tools: Phillips Screwdriver

The POP graphic on the front door is illuminated by one fluorescent bulb. If a bulb burns out, turn off the cabinet. Remove the four screws on the sides of the door and remove the door trim. Replace the burned out bulb, replace door trim, and secure with screws. Turn the power switch on.

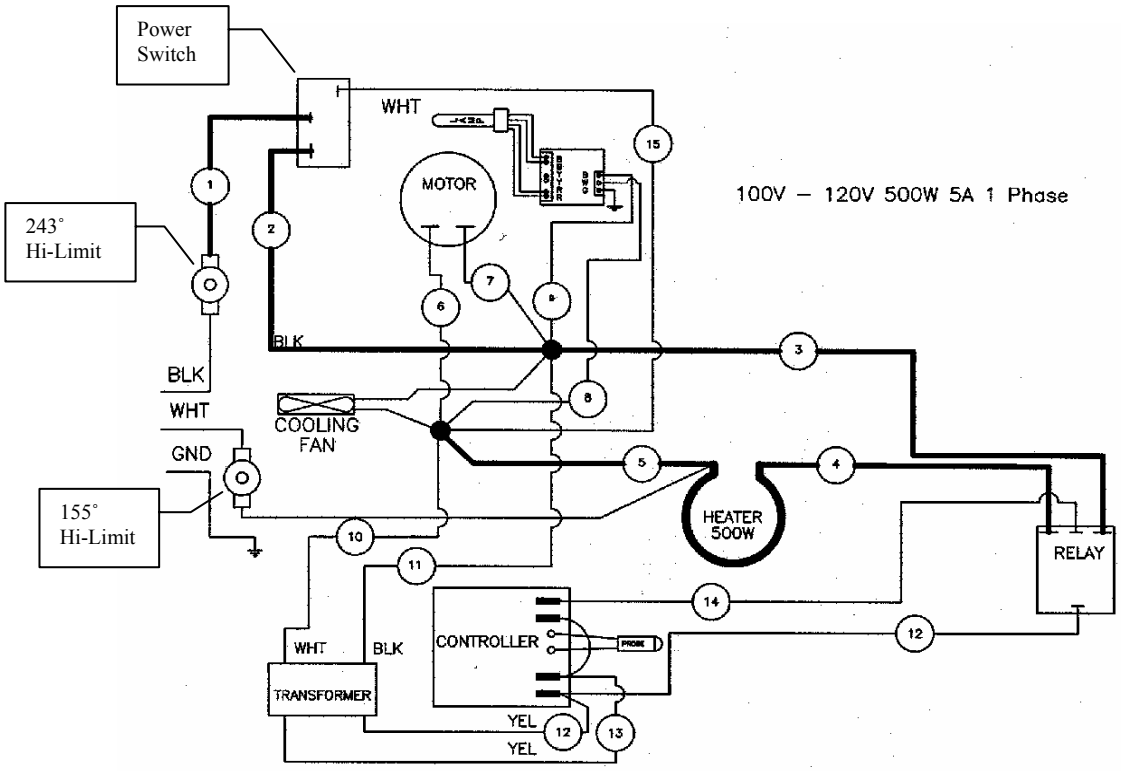
PARTS IDENTIFICATION

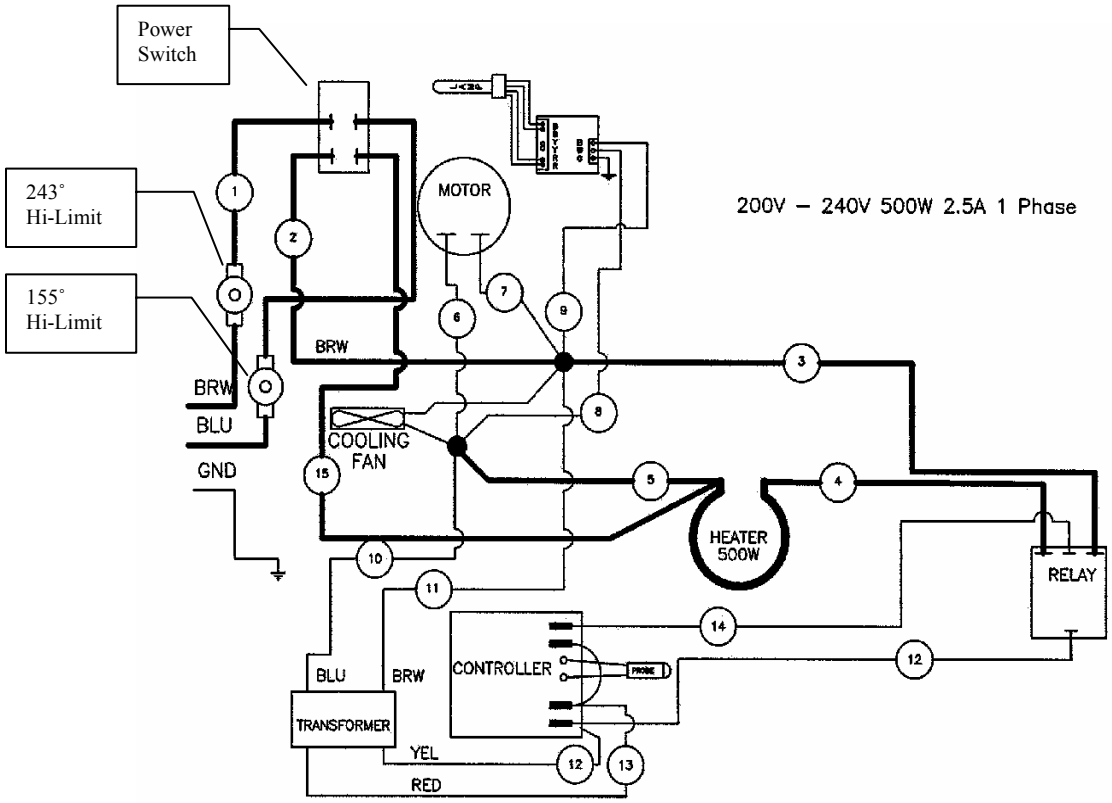
1. **Heating Element**
2. **Fan Motor**
3. **Cooling Fan**
4. **Controller**
5. **Light Socket**
6. **Light Bulb**
7. **On /Off Power Switch**
8. **Fan Blade**
9. **Power Cord**
10. **Pie Caddy**
11. **Transformer**
12. **Relay**
13. **Ballast**
14. **Air Probe**
15. **White Diffuser Panel**
16. **Rubber Foot**



WIRING DIAGRAMS

(CIRCLED NUMBERS REFERENCE WIRE NUMBERS ONLY)





MDPM PARTS LIST WITH PRICING (ALL MODELS)

Part Number	Part Description	CABINET TYPES							List Price
		INT'L MDPM2 110-120V	U.S. MDPM2 110-120V	INT'L MDPM2 200-208V	INT'L MDPM2 220-240V	U.S MDPM4 110-120V	INT'L MDPM4 200-208V	INT'L MDPM4 220-240V	
18614-0338	FAN MOTOR 110-120 volt	X				X			$63.00
18614-0339	FAN MOTOR 200-208 volt			X			X		$63.00
18614-0340	FAN MOTOR 220-240 volt				X			X	$63.00
16090-2235	MONITOR / MOTOR SHEILD KIT	X	X	X	X	X	X	X	$52.00
18603-5090	FAN BLADE	X		X	X	X	X	X	$15.00
18612-0221	HEAT ELEMENT 110-120 volt	X	X			X			$46.00
18612-0222	HEAT ELEMENT 200-240 volt			X	X		X	X	$46.00
18602-0055	ON / OFF SWITCH 110-120 volt	X	X			X			$25.00
18602-0075	ON / OFF SWITCH 200-240 volt			X	X		X	X	$19.00
18600-0049	HI LIMIT SNAPDISC 243 DEG F	X	X	X	X	X	X	X	$35.00
18600-0062	HI LIMIT SNAPDISC 155 DEG F (neutral)	X	X	X	X	X	X	X	$32.00
18605-0010	POWER CORD HSJO 16/3 W/ PLUG	X	X			X			$46.00
18605-0200	POWER CORD 200-240 volt / ft.			X	X		X	X	$4.00
18614-0322	COOLING FAN 120 volt	X	X			X			$58.00
18614-0323	COOLING FAN 208-240 volt			X	X		X	X	$65.00
18616-0135	TRANSFORMER 110-120 volt (replaces 0139)	X	X			X			$28.00
18616-0131	TRANSFORMER 200-240 volt			X	X		X	X	$191.00
16090-2332	RELAY RETROFIT KIT (relay, bracket & screws, for units produced before 01-2003)	X	X	X	X	X	X	X	$30.00
18616-0223	HEAT RELAY (replaces 18616-0136)	X	X	X	X	X	X	X	$23.00
18616-0147	LIGHT BULB SOCKET 110-120 volt	X	X			X			$14.00
18616-0185	LIGHT BULB SOCKET 200-208 volt			X			X		$14.00
18616-0209	LIGHT BULB SOCKET 220-240 volt				X			X	$14.00
18616-0146	LIGHT BULB 110-120 volt	X	X			X			$21.00
18616-0189	LIGHT BULB 200-208 volt			X			X		$16.00
18616-0208	LIGHT BULB 220-240 volt				X			X	$28.00
18616-0197	LIGHT BULB BALLAST 110-208 volt	X	X	X		X	X		$68.00
18616-0144	LIGHT BULB BALLAST 220-240 volt				X			X	$60.00
18616-0198	AIR TEMPERATURE PROBE	X	X	X	X	X	X	X	$70.00
18616-0207	CONTROLLER BOARD	X	X	X	X	X	X	X	$148.00
18312-0189	CONTROL OVERLAY	X	X	X	X	X	X	X	$26.00
18302-0086	MEDIUM SNAP-IN MAGNET	X	X	X	X	X	X	X	$3.00
16502-8327	DOOR STRIKE MDPM3	X	X	X	X	X	X	X	$3.00
29037-9003	MDPM4 PLASTIC WHITE DIFFUSER					X	X	X	$16.00
29037-9008	MDPM2 PLASTIC WHITE DIFFUSER	X	X	X	X				$16.00
16090-2212	MDPM4 BAKED PIE CADDY ASSY					X			$107.00
16090-2213	MDPM4 FRIED PIE CADDY ASSY						X	X	$107.00
Contact factory	MDPM2 BAKED PIE CADDY ASSY		X						$107.00
Contact factory	MDPM2 FRIED PIE CADDY ASSY	X		X	X				$107.00
29037-9004	POP DISPLAY (USA MDPM4)					X			$21.00
29037-9013	POP DISPLAY (International MDPM4)						X	X	$21.00
29037-9014	POP DISPLAY (International MDPM2)	X	X	X	X				$21.00
16090-2462	TOP HINGE ASSEMBLY	X	X	X	X	X	X	X	$29.00
16502-8542	BOTTOM HINGE ASSEMBLY	X	X	X	X	X	X	X	$15.00
16502-8539	DOOR TRIM MDPM4					X	X	X	$88.00

TROUBLESHOOTING MATRIX

PROBLEM	DISPLAY READS	PROBABLE CAUSE	CORRECTIVE ACTION
NO FAN / NO LIGHTS	Blank	Unit unplugged Cabinet hi-limit tripped Facility circuit breaker tripped Faulty On/Off switch Faulty wiring	Plug unit into outlet Reset cabinet hi-limit Reset circuit breaker Replace switch Follow wiring per diagram
HI-LIMIT KEEPS TRIPPING	Blank	Cabinet located too close to heat source Temperature setpoint is too high Cooling fan not running Faulty Relay	Relocate cabinet to another location Factory setpoint should be 165 degrees (F) Check connections, clean or replace Replace
NO HEAT / LOW TEMP	Current air temperature Lo	Faulty Heat Element Faulty Relay Faulty Air Probe Faulty Controller	Replace Replace Replace Replace
CONTROLLER LED's	LED Segments are out /dimly lit	Loose Wiring Faulty controller Faulty transformer	Follow wiring per diagram Replace Check wiring or replace
CONTROLLER DISPLAYS ERROR	"PRB"	Faulty probe connection Faulty probe	Check wiring Replace Probe
	"ERR"	Controller lost memory	Turn unit Off and back On, reprogram setpoints per manual
PRODUCT NOT GETTING HOT ENOUGH	Actual temperature	Wrong temperature setpoint is being used Motor not circulating heated air	Factory setpoint should be 165 degrees (F) Adjust or replace motor
KEYPAD INOPERABLE	Normal	Faulty Controller	Replace, adjust controller mounting

WARRANTY STATEMENT

One-year parts and labor. Repair and / or replacement for covered items. Repair or replacement is at the discretion. of Carter-Hoffmann. This warranty covers defects in material and workmanship to the first end user only.

This warranty does not cover: Abuse or misuse of the unit, shipping damage, service agent travel expenses over 100 miles or two hours, holiday charges or overtime charges, or damage due to the loss of time, loss of use or other consequential items resulting from failure.

NOTE: A “Letter of Agreement Warranty” is on file with McDonald’s Corporation. If there are any concerns regarding the warranty statement in this equipment manual, the “Letter of Agreement Warranty” shall supercede and control.

* FOR WARRANTY SERVICE *
CONTACT CARTER HOFFMANN FOR AUTHORIZATION

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