

Series MJCF, MJCFE, MJCFEC, FMCFE,  
FMCFEC, JCFX, KJ3FC, J3F & J65X.



**Master Jet CF Series Atmospheric  
Gas Fryers  
Service & Parts Manual**



NON-CE &  
**CE**



Frymaster, a member of the Commercial Food Equipment Service Association, recommends using CFESA Certified Technicians.

**24-Hour Service Hotline 1-800-551-8633**

**MARCH 2011**

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[www.frymaster.com](http://www.frymaster.com)

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Email: [service@frymaster.com](mailto:service@frymaster.com)

**Please read all sections of this manual and retain for future reference.**

**NOTICE**

This appliance is intended for professional use only and is to be operated by qualified personnel only. A Frymaster Factory Authorized Service Center (FASC) or other qualified professional should perform installation, maintenance, and repairs. Installation, maintenance, or repairs by unqualified personnel may void the manufacturer's warranty.

**NOTICE**

Drawings and photos used in this manual are intended to illustrate operational, cleaning and technical procedures and may not conform to onsite management operational procedures.

**NOTICE**

IF, DURING THE WARRANTY PERIOD, THE CUSTOMER USES A PART FOR THIS ENODIS EQUIPMENT OTHER THAN AN UNMODIFIED NEW OR RECYCLED PART PURCHASED DIRECTLY FROM FRYMASTER/DEAN, OR ANY OF ITS AUTHORIZED SERVICE CENTERS, AND/OR THE PART BEING USED IS MODIFIED FROM ITS ORIGINAL CONFIGURATION, THIS WARRANTY WILL BE VOID. FURTHER, FRYMASTER/DEAN AND ITS AFFILIATES WILL NOT BE LIABLE FOR ANY CLAIMS, DAMAGES OR EXPENSES INCURRED BY THE CUSTOMER WHICH ARISE DIRECTLY OR INDIRECTLY, IN WHOLE OR IN PART, DUE TO THE INSTALLATION OF ANY MODIFIED PART AND/OR PART RECEIVED FROM AN UNAUTHORIZED SERVICE CENTER.

** DANGER**

Improper installation, adjustment, maintenance or service, and unauthorized alterations or modifications can cause property damage, injury, or death. Read the installation, operating and service instructions thoroughly before installing or servicing this equipment. Only qualified service personnel may convert this appliance to use a gas other than that for which it was originally configured.

** DANGER**

Adequate means must be provided to limit the movement of this appliance without depending upon the gas line connection. Single fryers equipped with legs must be stabilized by installing anchor straps. All fryers equipped with casters must be stabilized by installing restraining chains. If a flexible gas line is used, an additional restraining cable must be connected at all times when the fryer is in use.

** DANGER**

The front ledge of the fryer is not a step. Do not stand on the fryer. Serious injury can result from slips or contact with the hot oil.

** DANGER**

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other cooking appliance.

** WARNING**

No structural material on the fryer should be altered or removed to accommodate placement of the fryer under a hood. Questions? Call the Frymaster Service Hotline at 1-800-551-8633.

**⚠ DANGER**

Instructions explaining procedures to be followed **MUST** be posted in a prominent location in the event the operator detects a gas leak. This information can be obtained from the local gas company or gas supplier.

**⚠ DANGER**

The crumb tray in fryers equipped with a filter system must be emptied into a fireproof container at the end of frying operations each day. Some food particles can spontaneously combust if left soaking in certain shortening material. Additional information can be obtained in the filtration manual included with the system.

**⚠ WARNING**

Do not bang fry baskets or other utensils on the fryer's joiner strip. The strip is present to seal the joint between the frypot. Banging fry baskets on the strip to dislodge shortening will distort the strip, adversely affecting its fit. It is designed for a tight fit and should only be removed for cleaning.

**IMPORTANT**

Safe and satisfactory operation of Frymaster equipment depends upon its proper installation. Installation **MUST** conform with local codes, or in the absence of local codes, to European Community (CE) Standards.

**COMPUTERS**  
**FCC**

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:  
1) This device may not cause harmful interference, and 2) This device must accept any interference received, including interference that may cause undesired operation. While this device is a verified Class A device, it has been shown to meet the Class B limits.

**CANADA**

This digital apparatus does not exceed the Class A or B limits for radio noise emissions as set out by the ICES-003 standard of the Canadian Department of Communications.

Cet appareil numérique n'émet pas de bruits radioélectriques dépassant les limites de classe A et B prescrites dans la norme NMB-003 édictée par le Ministre des Communications du Canada.

**⚠ DANGER**

**THIS PRODUCT CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND/OR BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.**

Operation, installation, and servicing of this product could expose you to airborne particles of glasswool or ceramic fibers, crystalline silica, and/or carbon monoxide. Inhalation of airborne particles of glasswool or ceramic fibers is known to the State of California to cause cancer. Inhalation of carbon monoxide is known to the State of California to cause birth defects or other reproductive harm.

# Master Jet CF Series Atmospheric Gas Fryers

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# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS

## CHAPTER 1: SERVICE PROCEDURES

### 1.1 Functional Description

Master Jet (MJ) CF Series Atmospheric gas fryers contain a welded stainless steel frypot that is directly heated by gas flames that are diffused evenly over its lower surface by ceramic targets.

The flames originate from orifices in a U-shaped burner manifold positioned beneath the frypot. The orifice diameters differ for natural and propane gas as shown in the table below. For altitudes of 2000 feet and greater, contact factory for correct orifice part number.

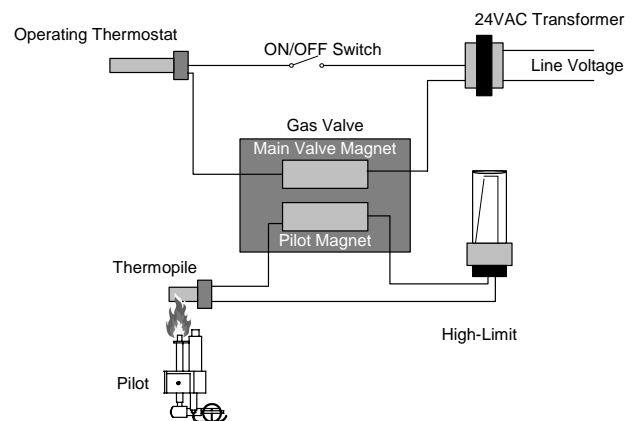
CF Series Orifice Sizes (0-1999 ft/609 m)		
Gas	Inches	Millimeters
Natural	0.055	1.4
Propane	0.035	0.9

Gas flow to the manifold is regulated by an electromechanical gas valve. MJCF Series gas fryers are equipped with millivolt gas valves, and MJCFE Series gas fryers are equipped with 24-volt gas valves. All models use a pilot ignition system.

### Pilot Ignition System

The pilot ignition system consists of the pilot orifice, pilot hood, and a thermopile (a thermocouple is also used in CE units per CE requirements). The pilot serves two purposes. The first is to light the burner, the second is to heat the thermopile. In operation, the thermopile is in contact with the pilot flame and generates millivolts. The millivolt output passes through a normally closed high-limit switch and energizes the gas valve pilot coil, which in turn opens the pilot valve. If the pilot flame is extinguished, voltage is lost to the gas valve pilot coil and the pilot valve closes.

On MJCFE models, a separate 24-volt circuit, activated by the fryer On/Off switch, provides voltage through the thermostat or controller to the gas valve main coil, which opens the main valve. The gas valve is constructed so that the main valve will not open if the pilot valve is not open. The pilot flame must be manually lit (either with a match or with an optional built-in piezo ignitor) when the fryer is first placed into operation.



The Pilot System (24V Circuit, Non-CE).

# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS

## CHAPTER 1: SERVICE PROCEDURES

### 1.1 Functional Description (cont.)

#### CONTROL OPTIONS

MJCF Series gas fryers may be equipped with thermostat controllers or Computer Magic III.5 computers. KJ3FC variants are equipped with user-supplied or KFC-1 computers.

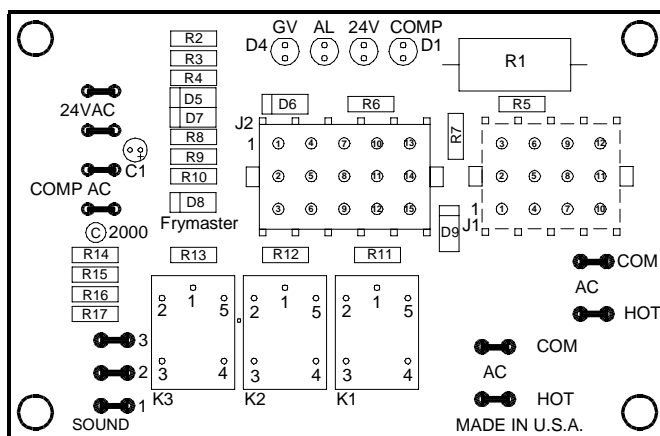
MJCF fryers equipped with thermostat controls are turned on and off with the gas valve control knob (an On/Off switch is optional). The temperature is set by means of a knob connected directly to the frypot-mounted thermostat. MJCFE models come equipped with a rocker switch to turn the fryer on and off. Units equipped with thermostat controllers have no interface board.

MJCFE Series with Melt-Cycle option: When the melt cycle switch is placed in the ON position, the fryer stays in the melt cycle mode until the switch is manually placed in the OFF position, even if the frypot is at setpoint temperature.

Fryers equipped with computers have an interface board located in the component shield behind the control panel.

#### INTERFACE BOARDS

The interface board provides the link between the computer and the fryer's components without requiring excessive wiring, and allows the computer to execute commands from one central point. Depending upon the configuration of the fryer, any of three boards may be used. ***Regardless of the particular board installed when the fryer was built, P/N 806-3548 is the universal replacement part (not applicable to user-supplied computers).***



#### NOTES:

1. RELAYS K1 AND K2 ARE FOR BELL CRANK BASKET LIFTS. THEY ARE NOT PRESENT ON BOARDS 806-5490 (U.S. & NON-CE EXPORT UNITS W/O BASKET LIFTS) OR 806-7501 (CE UNITS, WITH OR WITHOUT BASKET LIFTS).
2. RESISTORS R1, R10, AND R15 ARE NOT USED ON ANY OF THE THREE BOARDS.
3. RESISTORS R11 AND R12 ARE NOT USED ON 806-5490 BOARDS.

INTERFACE BOARDS 806-3548, 806-5490 & 806-7505

# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS

## CHAPTER 1: SERVICE PROCEDURES

### 1.1 Functional Description (cont.)

FREQUENTLY USED TEST POINTS FOR MODELS WITH INTERFACE BOARDS			
Test	Meter Setting	Pins	Results
12 VAC Power to Controller	50 VAC Scale	1 and 3 of J2	12-18
24 VAC Power	50 VAC Scale	24 VAC Terminals	22-28
24 VAC Power to Gas Valve	50 VAC Scale	6 on J1 and GROUND	22-28
120 VAC Power	250 VAC Scale	7 and 12 of J1	110-125
Probe Resistance*	R x 1000 OHMS	2 and 3 of J1	**
* Disconnect 15-Pin harness from controller before testing probe circuit.			
** See Probe Resistance Chart at end of chapter.			

Four LEDs, arranged across the top of the boards and identified in the table below, are provided to assist in troubleshooting.

MASTER JET SERIES INTERFACE BOARD LED DIAGNOSTIC LIGHTS	
<b>GV</b>	Indicates 24 VAC to the gas valve
<b>AL</b>	Indicates open Drain Safety Switch (if installed)
<b>24V</b>	Indicates 24 VAC from transformer
<b>COMP</b>	Indicates 12 VAC to computer

Every board contains one heat relay (K3), and may contain two basket lift relays (K1 and K2). As shipped from the factory, fryers with bell-crank basket lifts will have relays K1, K2, and K3. All other factory-original fryers will have boards with only relay K3.

**NOTE: The basket lift option is not available on MJCF Series fryers. The above diagnostic tables are not applicable to user-supplied or KFC-1 computers.**

### THERMOSTATS AND TEMPERATURE PROBES

MJCF Series fryers equipped with thermostat controls have an adjustable *controlling (operating) thermostat*. The temperature at which the thermostat opens and closes is adjusted by changing the setting of the thermostat with an attached knob. When new, the Fenwal controlling thermostat is sensitive to one-degree changes in temperature.

**⚠ CAUTION**

**Fenwal thermostats are used in a number of *Frymaster* products. The thermostat for the MJCF Series is 4 inches long. Do not use 3-inch Fenwal thermostats in MJCF Series fryers.**



# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS

## CHAPTER 1: SERVICE PROCEDURES

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### 1.1 Functional Description (cont.)

MJCFE Series fryers equipped with computers have a *temperature probe*. In these units, the probe resistance varies directly with the temperature. That is, as the temperature rises, so does resistance at a rate of approximately 2 ohms for every 1° (F or C). Circuitry in the computer monitors the probe resistance and controls burner firing when the resistance exceeds or falls below programmed temperatures (setpoints). The temperatures are programmed by means of a keypad on the face of the computer.

All MJCF Series Atmospheric gas fryers are equipped with a *high-limit thermostat*. In the event that the fryer fails to properly control the oil temperature, the high-limit thermostat prevents the fryer from overheating to the flash point. The high-limit thermostat acts as a normally closed power switch that opens when exposed to temperatures in the range of 415°F to 435°F (213°C to 224°C). The high-limit thermostat is the same for CE and Non-CE applications. When a replacement high-limit thermostat is ordered, ensure the kit appropriate for the valve in use is ordered.

### 1.2 Accessing Fryers for Servicing

 **DANGER**

**Moving a fryer filled with oil may cause spilling or splattering of hot liquid. Follow the draining instructions in the Operator's manual that shipped with the fryer.**

1. Shut off the gas supply to the unit. Unplug the power cord(s). Disconnect the unit from the gas supply.
2. Remove any attached restraining devices.
3. Relocate the fryer for service accessibility.
4. After servicing is complete, reconnect the unit to the gas supply, reattach restraining devices, and plug in the electrical cords.

# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS

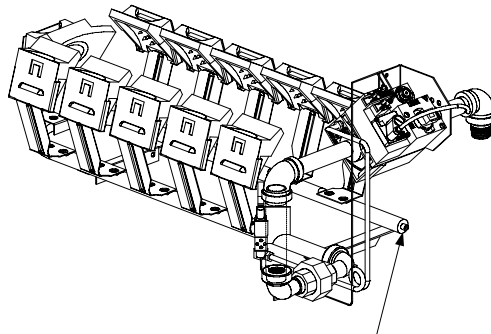
## CHAPTER 1: SERVICE PROCEDURES

### 1.3 Checking Burner Manifold Gas Pressure

**⚠ WARNING**

**This task should be performed by qualified service personnel only.**

1. Ensure that the gas valve knob or button is in the OFF position.
2. Remove the pressure tap plug from the end of the manifold (see illustration below) and connect a gas pressure-measuring device to the port.



Remove plug to connect a gas pressure-measuring device to the port.

3. Place the gas valve in the ON position then place the fryer power switch in the ON position (where applicable). When the burner lights and continues to burn, compare the pressure reading to that for the corresponding gas in the tables below and on the next page.

CE Standards for Incoming Gas Pressures			
Model	MJCF/J65 CE		
Gas Type	G20	G25	G31
Pressure (mbar) <sup>1</sup>	20	20-25	37-50
Orifice Size	1,40	1,40	0,95
Number of Orifices	21	21	21
Manifold Pressure	7,5	10	14,9
Air Flow (m <sup>3</sup> /H)	3,62	4,18	2,35

<sup>1</sup>(mbar) = 10,2 mm CE

# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS

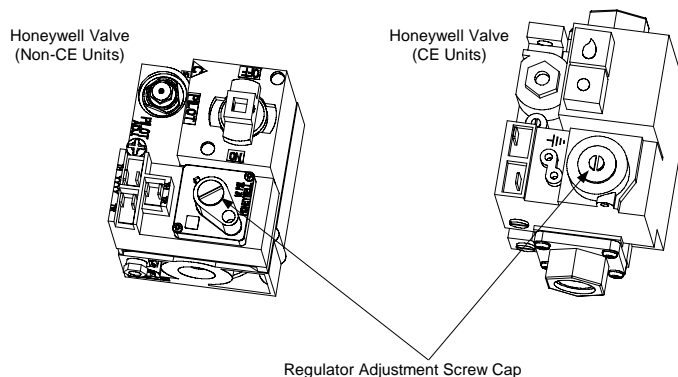
## CHAPTER 1: SERVICE PROCEDURES

### 1.3 Checking Burner Manifold Gas Pressure (cont.)

Non-CE Standard for Incoming Gas Pressures		
Gas	Minimum	Maximum
Natural	6" W.C.	14" W.C.
	1.49 kPa	3.48 kPa
	14.93 mbar	34.84 mbar
LP	11" W.C.	14" W.C.
	2.74 kPa	3.48 kPa
	27.37 mbar	34.84 mbar

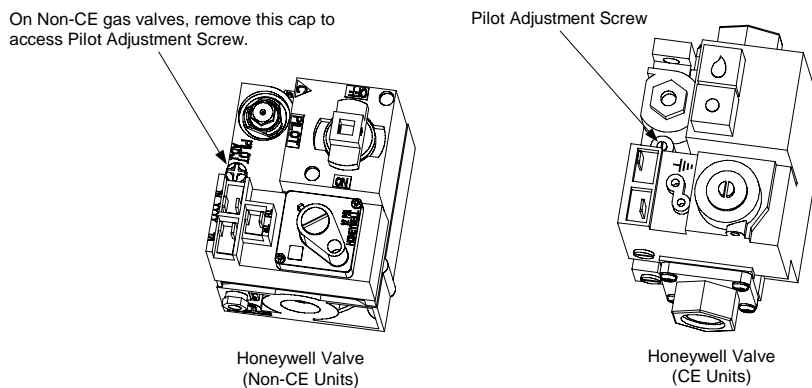
Non-CE Standard for Burner Manifold Gas Pressures	
Gas	Pressure
Natural	3.5" W.C.
	.75 kPa
	7.5 mbar
LP	8.25" W.C.
	2.0 kPa
	20.0 mbar

4. If the measured manifold gas pressure does not match the appropriate pressure in the preceding tables, remove the cap from the gas valve regulator and adjust to the correct pressure.



### 1.4 Adjusting Pilot Flame

1. On non-CE valves, remove the cap covering the pilot adjustment screw. On all valves, turn the pilot adjustment screw counterclockwise to increase the length of the flame or clockwise to decrease the length of the flame. Adjust the flame to a length of 1 to 1-1/2 inches (25 to 38 mm).



2. On Non-CE valves, reinstall the pilot adjustment screw cap.

# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS

## CHAPTER 1: SERVICE PROCEDURES

### 1.5 Cleaning Gas Valve Vent Tube

1. Carefully unscrew the vent tube from the gas valve. **NOTE:** The vent tube may be straightened for ease in removal.
2. Pass a piece of ordinary binding wire (.052 inch diameter) or equivalent through the tube to remove any obstruction.
3. Remove the wire, and then blow through the tube to ensure it is clear.
4. Reinstall tube and bend it so that the opening is pointing downward.

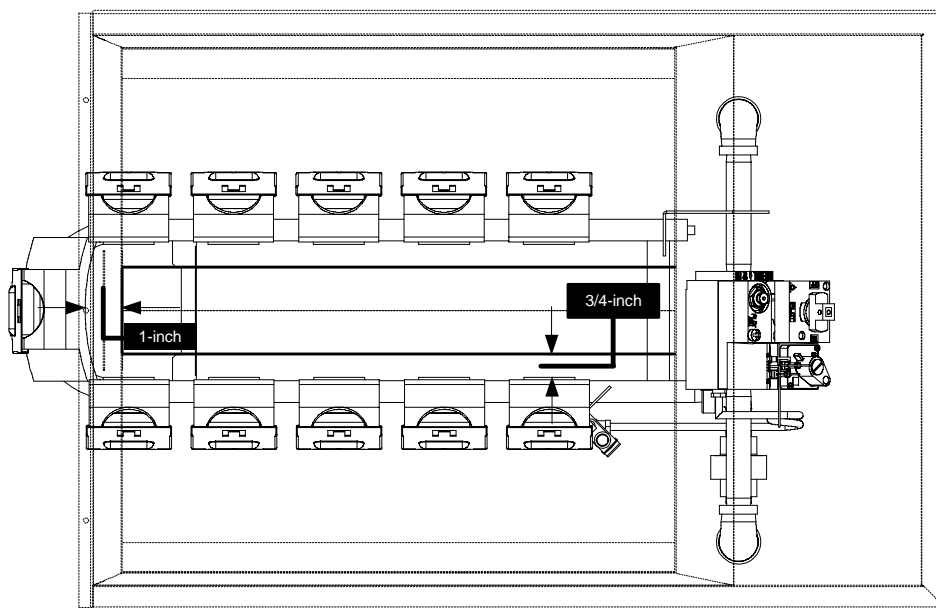
### 1.6 Adjusting Burner Ceramic Target Spacing and Alignment



**DANGER**

**Drain the frypot or remove the handle from the drain valve before proceeding further.**

Proper spacing of the top edge of the burner ceramic targets is  $\frac{3}{4}$ -inch (13 mm) from the frypot side [The rear target should be adjusted to 1-inch (25 mm) from the frypot back]. To adjust target spacing, bend the brackets to which they are attached away or toward the frypot to the proper distance. (A length of board of the proper thickness is useful as a gauge to verify spacing and alignment.)



There should be about  $\frac{3}{4}$ -inch spacing between the top edge of the targets and the side of the frypot, and 1-inch between the rear target and the frypot back.

# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS

## CHAPTER 1: SERVICE PROCEDURES

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### 1.7 Calibrating Thermostat Control

1. Fill the frypot to the lower OIL-LEVEL line with oil. If solid shortening is used, it must be tightly packed into the frypot.
2. Light the pilot. (Refer to Installation and Operation Manual that shipped with the fryer for detailed lighting instructions.)
3. Insert a good grade thermometer or pyrometer into the frypot, about one inch from the thermostat.
4. Set the thermostat to 325°F (163°C).
5. Allow the fryer to heat to 325°F (163°C) and cycle on and off three times.
6. With the oil temperature at 325°F (163°C) turn the flexible shaft slowly **clockwise** until the burner shuts off. (Turning the shaft counterclockwise causes the temperature to increase and the burner to light; turning it clockwise causes the temperature to decrease and shut off.)
7. Allow the fryer to sit for a few minutes and then slowly turn the flexible shaft **counterclockwise** until the burner lights.
8. Repeat steps 6 and 7 at least three times to ensure an accurate setting is obtained. The thermostat control is calibrated if the burner lights as the oil cools to 325°F (163°C) – not when the burner shuts off as the temperature rises.
9. Compare the reading of the pyrometer to the setting on the thermostat plate. The position of the knob on the thermostat and the reading from the pyrometer should be within 5°F (3°C) of each other.
10. If not, loosen the setscrew and stop screw securing the thermostat shaft extension to the flexible shaft. Remove the extension to expose the slot in the end of the flexible shaft. Use a flat-blade screwdriver to adjust the thermostat.
11. Once the calibration point of 325°F (163°C) is determined, allow the burner to cycle on and off at least three times to ensure it will light at the calibrated temperature.
12. Carefully replace the thermostat shaft extension, ensuring that the stop screw is pointed straight up. Tighten the stop screw and locking nut and the setscrew, being careful not to rotate the flexible shaft.

 **CAUTION**

**The thermostat flexible shaft must not be rotated while installing the thermostat shaft extension!**

**When handling the thermostat, do not rotate the shaft more than two turns in either direction. Doing so will cause damage to the thermostat.**

# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS

## CHAPTER 1: SERVICE PROCEDURES

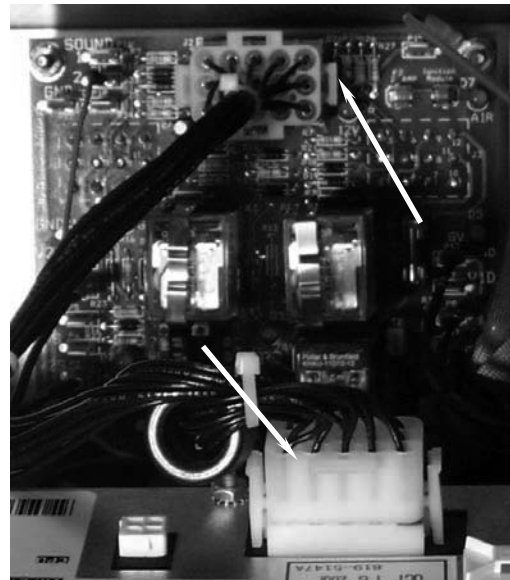
### 1.7 Calibrating Thermostat Control (cont.)

13. Close the fryer control panel and replace the screws in the upper corners.
14. Reinstall the thermostat knob with its pointer aligned with the 325°F (163°C) index mark on the temperature dial.
15. Reconnect the fryer to the electrical power supply.

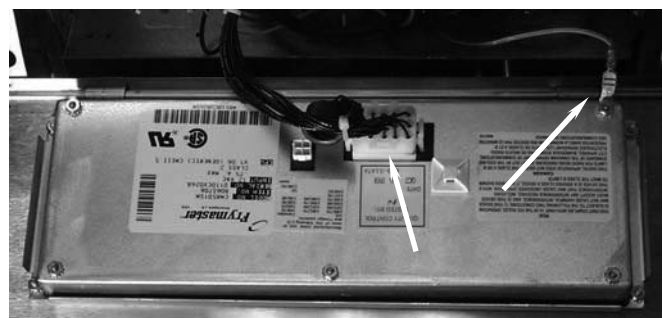
### 1.8 Replacing Fryer Components

#### 1.8.1 Replacing Computer

1. Disconnect the fryer from the electrical supply.
2. The controller bezel is held in place by tabs at the top and bottom. Slide the bezel up to disengage the lower tabs. Then slide the bezel down to disengage the upper tabs.
3. Remove the two screws in the upper corners of the control panel and swing the panel open from the top, allowing it to rest on its hinge tabs.
4. Disconnect the wiring harness from the back of the controller and, if replacing the harness, disconnect it from the interface board (arrows).
5. Disconnect the ground wire, and then remove the controller by lifting it from the hinge slots in the control panel frame.
6. Ensure the new computer is properly configured for the fryer on which it is installed (i.e., gas or electric, full or split pot and Celsius or Fahrenheit). Although identical in appearance, computers configured for use on one type of fryer are not directly interchangeable with those configured for use on another type.
7. Reverse the procedure to install a new controller or wiring harness.



If replacing harness, disconnect the harness from the controller and interface board (arrows).



If replacing controller, disconnect the ground wire and the 15-pin connector (arrows).

# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS

## CHAPTER 1: SERVICE PROCEDURES

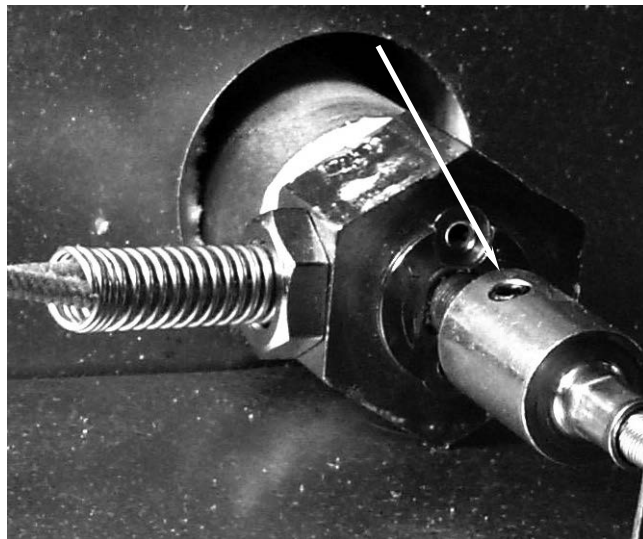
### 1.8.2 Replacing Operating Thermostat

#### CAUTION

The thermostat must be calibrated after installation is complete. Refer to Section 1.7 for calibration instructions.

When handling the thermostat, do not rotate the shaft more than two turns in either direction. Doing so will cause damage to the thermostat.

1. Disconnect the fryer from the electrical supply and drain the frypot.
2. Loosen the setscrew securing the thermostat knob and remove the knob. Remove the screws from the upper left and right corners of the control panel. The control panel is hinged at the bottom and will swing open from the top.
3. Disconnect the 9-pin connector and remove the control panel from the fryer by disengaging its tabs from the hinge slots in the mounting frame.
4. Loosen the setscrews (2) securing the flexible shaft to the thermostat shaft and slip the flexible shaft off the thermostat shaft (arrow).
5. Remove the flexible shaft guide by removing the two sheet metal screws securing it to the upper frame.
6. Disconnect the thermostat leads from pin 14 in the 20-pin terminal block and from the gas valve terminal.



Remove setscrews (arrow) to remove flexible shaft from thermostat shaft.

**NOTE:** If the fryer is configured with a melt cycle, the thermostat leads will be connected to the melt cycle timer motor or PC board rather than to the terminal block and gas valve. Disconnect the leads from the motor or PC board if this is the case.

7. Unscrew the thermostat from the frypot and remove.
8. Apply Loctite PST567 thread sealant or equivalent to the replacement thermostat threads.
9. Reverse steps 1 through 7 to install the replacement.

## **MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS**

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#### **1.8.3 Replacing Temperature Probe**

1. Disconnect the fryer from the electrical supply.
2. Drain the frypot.
3. Remove the screws from the upper left and right corners of the control panel. The panel is hinged at the bottom and will swing open from the top.
4. Unplug the wiring harness from the back of the controller and disconnect the grounding wire (see Section 1.8.1, Step 4).
5. Remove the controller from the fryer by lifting it from the hinge slots in the control panel frame.
5. Remove the two screws from the base of the interface board mounting-bracket.
6. Disconnect the 12-pin plug from the back of the interface board and lay the board in the left end of the compartment with all other wires still connected.
7. Remove the 12-volt transformer from the component shield and lay it in the left end of the compartment with wires still connected.
8. Using a pin-pusher, remove the temperature probe wires (pins 1 and 2) from the 12-pin plug disconnected in step 7.
9. Unscrew the temperature probe from the frypot and remove.
10. Apply Loctite PST567 thread sealant or equivalent to new probe threads.
11. Reverse steps 1 through 10 to install the replacement probe.

#### **1.8.4 Replacing High-Limit Thermostat – Operating Thermostat Controls**

1. Disconnect the fryer from the electrical supply.
2. Drain the frypot.
3. Loosen the setscrew securing the thermostat knob and remove the knob. Remove the screws from the upper left and right corners of the control panel. The control panel is hinged at the bottom and will swing open from the top.
4. Disconnect the 9-pin connector and remove the control panel from the fryer by disengaging its tabs from the hinge slots in the mounting frame.
5. Disconnect the high-limit thermostat leads from the gas valve pilot coil.



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**1.8.4 Replacing High-Limit Thermostat – Operating Thermostat Controls (cont.)**

6. Unscrew the high-limit thermostat from the frypot and remove.
7. Apply Loctite PST567 thread sealant or equivalent to the replacement thermostat threads.
8. Reverse steps 1 through 7 to install the replacement.

**1.8.5 Replacing High-Limit Thermostat – Computer Controls**

1. Disconnect the fryer from the electrical power supply.
2. Drain the frypot.
3. Remove the screws from the upper left and right corners of the computer panel. The computer is hinged at the bottom and will swing open from the top.
4. Unplug the wiring harness and disconnect the grounding wire from the controller.
5. Remove the controller from the fryer by lifting it from the hinge slots in the fryer control panel frame.
6. Remove the two screws from the base of the interface board-mounting bracket.
7. Disconnect the 12-pin plug from the back of the interface board and lay the board in the right end of the compartment with all other wires still connected.
8. Remove the 12-volt transformer and lay it in the right end of the compartment with wires still connected.
9. Remove the high-limit thermostat wires from the gas valve pilot coil and pull them up through the control shield.
10. Unscrew the high-limit thermostat from the frypot and remove.
11. Apply Loctite PST567 thread sealant or equivalent to the replacement thermostat's threads and screw it into the frypot.
12. Attach the appropriate terminals (furnished in the replacement thermostat kit) to the thermostat leads.
13. Reverse steps 1 through 9 to complete installation of the replacement thermostat.

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#### 1.8.6 Replacing Heat Mode Indicator Light – Operating Thermostat Controls

1. Disconnect the fryer from the electrical supply.
2. Loosen the setscrew securing the thermostat knob and remove the knob. Remove the screws from the upper left and right corners of the control panel. The control panel is hinged at the bottom and will swing open from the top.
3. Disconnect the 9-pin connector and remove the control panel from the fryer by disengaging its tabs from the hinge slots in the mounting frame.
4. Carefully press the light out from the back of the control panel. Disconnect one wire at a time and reconnect it to the replacement light until all wires are transferred.
5. Carefully press the light back into the control panel.
6. Reverse steps 1-3 to reassemble the fryer.

#### 1.8.7 Replacing Power/Melt Cycle Switch – Operating Thermostat Controls

**NOTE:** The Power/Melt-Cycle Switch, P/N 807-1404, has been replaced with a new switch, P/N 807-3498. When ordering the new switch, order Kit 826-1792, which contains the new switch and wiring instructions. The new switch is wired differently than the old one. Ensure the new switch is wired properly before operating fryer. Consult P/N 819-5889 (MJCF, MJ45 Switch Replacement Instructions) for further detail.

1. Disconnect the fryer from the electrical supply.
2. Loosen the setscrew securing the thermostat knob and remove the knob. Remove the screws from the upper left and right corners of the control panel. The control panel is hinged at the bottom and will swing open from the top.
3. Disconnect the 9-pin connector and remove the control panel from the fryer by disengaging its tabs from the hinge slots in the mounting frame.
4. Using a flat-tipped screwdriver, disconnect the chrome bezel from the tabs on the switch and press the switch out from the front.
5. Carefully press the new switch back into the chrome bezel, ensuring the tabs on the switch engage the slots in the bezel.
6. Disconnect the wires from the old switch and reconnect to the new switch until all wires have been transferred (see note at the beginning of this procedure).
7. Reverse steps 1-3 to reassemble the fryer.

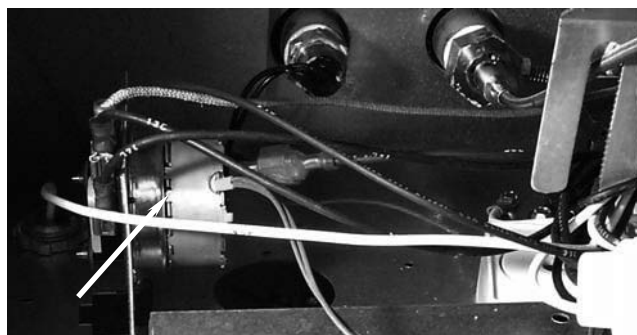
# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS

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### 1.8.8 Replacing Melt Cycle Timer – Operating Thermostat Controls

The mechanical melt cycle timer is no longer available. A solid-state timer replaces the mechanical unit. To replace the mechanical melt-cycle timer:

1. Remove all electrical power from the fryer. Unplug fryer and ensure all power switches are off.
2. Access timer by removing the control panel. Remove timer by removing two screws that hold it in place. Detach wires.



Remove the control panel to reveal the mechanical timer (arrow). The metal plate that holds the timer-unit in place is secured with two screws. Remove the screws, lift out the timer and detach the wires.

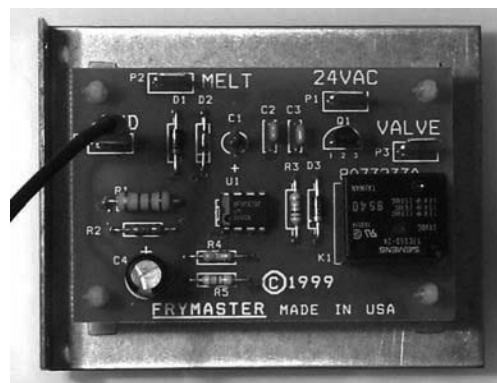
3. Attach wires to the new timer as follows:

**Ground** -To number 4 of clip terminals.

**24VAC** - To wire 28C.

**Melt** - To wire 29C.

**Valve** - To thermostat.



The solid-state timer mounted on a metal plate, bolts into the space previously occupied by the mechanical timer.

4. Bolt new timer into place. Reattach control panel.

## MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS

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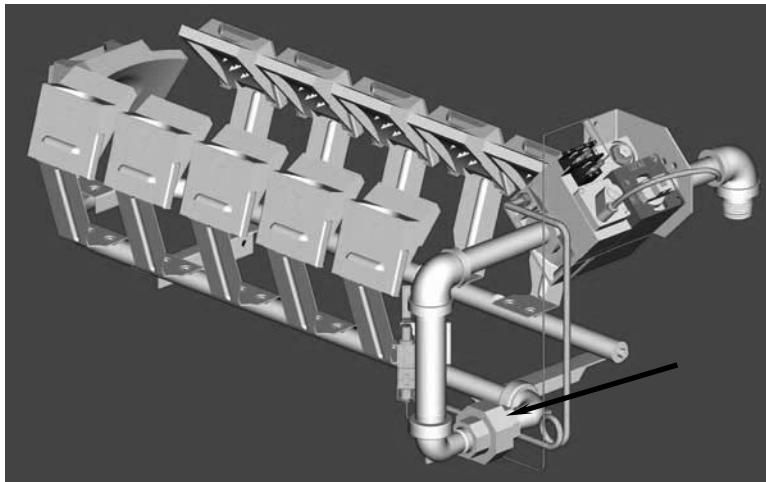
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#### 1.8.9 Replacing Burner Ceramic Targets



**Drain the frypot or remove the handle from the drain valve before proceeding further.**

1. Disconnect fryer from electrical and gas supplies.
2. On FMCF fryers, remove square-drain sections as necessary to expose burner.
3. Disconnect the wires from the gas valve terminal block, marking each wire to facilitate connections.
4. Remove the high-limit thermostat wires from the gas valve pilot coil.
5. Disconnect the pipe union collar at the left side of the gas valve (arrow).



Disconnect union (arrow) to remove burner manifold assembly.

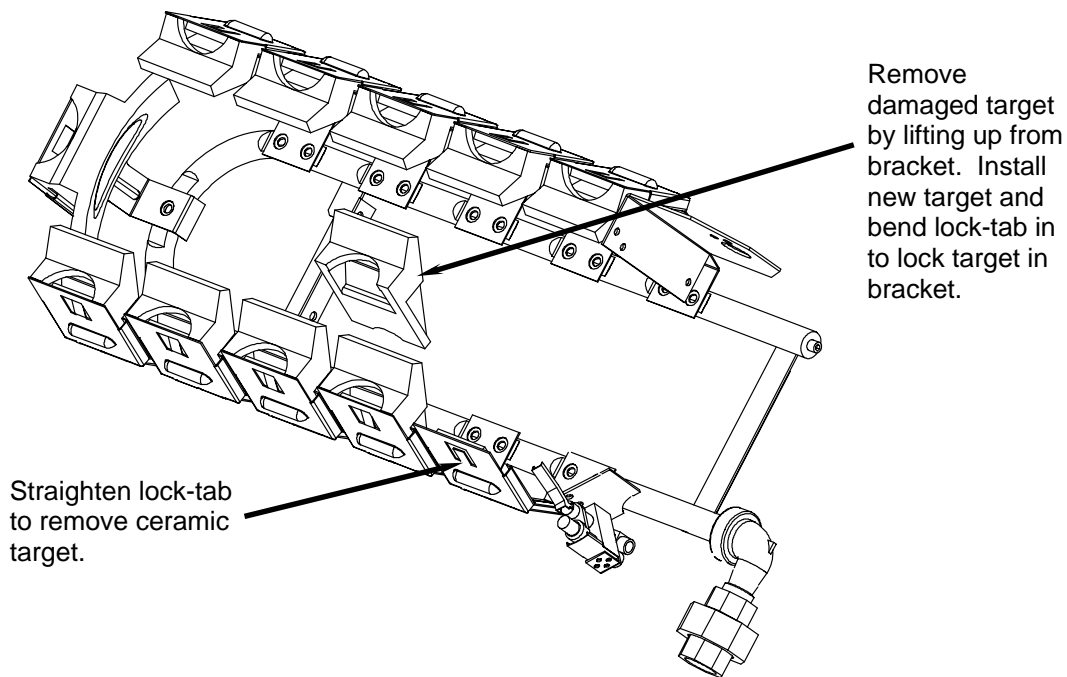
6. Remove front burner shields to access burner assembly.
7. Remove the burner heat shield hanger screws at the front of the burner and remove the heat shield.
8. Remove the burner hanger screws and lower the front of the main burner. Pull it forward to clear the rear burner hanger, and then lower the burner to the floor.
9. Raise the front of the fryer enough to slide the burner from under the fryer cabinet.

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#### 1.8.9 Replacing Burner Ceramic Targets (cont.)

- To replace only the ceramic targets, straighten the target locking tabs with a pair of needle nose pliers or a screwdriver, and slide the target up and off the bracket. Slide the replacement target onto the bracket and bend the locking tabs inward towards the burner target.



To replace the entire target assembly, use a ½-inch (13 mm) box end wrench to remove the two brass orifices that hold the assembly to the burner manifold. Position the new assembly and replace the orifices.

#### **WARNING**

**Use extreme care to prevent cross-threading and stripping when reinstalling the brass orifices.**

- Reverse steps 1-8 to reinstall the burner assembly. Check spacing and alignment of targets in accordance with Section 1.6.

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#### 1.8.10 Replacing Gas Valve



**DANGER**

**Drain the frypot or remove the handle from the drain valve before proceeding further.**

1. Disconnect fryer from electrical and gas supplies
2. Disconnect the wires from the gas valve terminal block, marking each wire to facilitate reconnections.
3. Remove the high-limit thermostat wire from the gas valve pilot coil.
4. Disconnect the pilot gas line fitting from the gas valve.
5. Disconnect the pipe union collars to the left and right of the gas valve and remove the valve.
6. Remove the pipefittings from the old gas valve and install on the replacement valve, using Loctite PST567 or equivalent pipe-thread sealant on threads.
7. Reverse steps 1-5 to install the replacement gas valve.

#### 1.8.11 Replacing Pilot Assembly or Thermopile

1. Remove the burner assembly in accordance with steps 1-8 of Section 1.8.9.
2. To replace only the thermopile:
  - a. Bend the clip at the bottom of the pilot assembly and press the thermopile out of the pilot assembly from the top.
  - b. Disconnect the thermopile fitting from the gas valve pilot coil.
  - c. Reverse the above two steps to install the replacement thermopile.



Bend the clip (arrow) outward, and then press the thermopile out of the pilot assembly.

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#### 1.8.11 Replacing Pilot Assembly or Thermopile (cont.)

3. To replace the complete pilot assembly:
  - a. Disconnect the pilot tubing from the bottom of the pilot assembly.
  - b. Remove the screw from the pilot mounting-bracket to release the pilot assembly.
  - c. Disconnect the thermopile fitting from the gas valve pilot coil.
  - d. Reverse steps a through c to install the replacement pilot assembly.
4. Reinstall the burner assembly by reversing steps 1-8 of Section 1.8.9.

#### 1.8.12 Replacing Frypot

1. Drain the frypot.
2. Remove all accessories (e.g., frypot covers, basket lift arms, etc.) from the fryer.
3. Disconnect the fryer from gas and electrical supplies.
4. Remove the screws from the top-cap above the control panel and lift it up and off the fryer(s).
5. If the fryer is equipped with other than a thermostat control, skip to Step 10.
6. Perform steps 1-6, section 1.8.2.

 **CAUTION**

**When handling the thermostat, do not rotate the shaft more than two turns in either direction. Doing so will cause damage to the thermostat.**

7. For fryers with other than thermostat controls, perform steps 1-4, section 1.8.1.
8. Disconnect the 12-pin plug from the back of the interface board. Use a pin pusher to remove the temperature probe leads (pins 1 and 2) and the high-limit thermostat leads (pins 6 and 8) from the plug. Leave all other wires connected. Leave the interface board lying on the shield.
9. Remove the louvered frame above the control panel opening.
10. Remove the screws securing the component shield to the fryer.
11. Disconnect the wires from components in component shield and mark to facilitate reconnection.
12. Disconnect the wires from the gas valve terminal block. Mark each wire to facilitate reconnection.

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#### 1.8.12 Replacing Frypot (cont.)

13. Remove the cover from the safety drain switch, disconnect the wires from the switch, and pull them out of the switch box.
14. Pull up and forward on the component shield to clear the rear mounting stud on the front of the frypot and remove it from the fryer by rotating its right side up and to the left.
15. Disconnect the pipe union on the right side of the gas valve.
16. On FMCF fryers, remove the section of square drain from the drain valve of the frypot to be removed.
17. Remove the frypot hold-down bracket.
18. Remove the screws from the flue cap sides and back, and lift it clear of the fryer(s).
19. Remove the oil return line from the front of the frypot to be removed.
20. Lift the complete frypot assembly (frypot, burner, gas valve, and flue) from the fryer cabinet.
21. Transfer the burner heat shield and burner to the replacement frypot.
22. Remove the drain valve, thermostat or temperature probe, and high-limit thermostat and install on replacement frypot.

 **CAUTION**

**Before installing the thermostat/temperature probe, high-limit thermostat, and drain valve on the replacement frypot, clean their threads and apply Loctite PST567 thread sealant or equivalent to the threads.**

23. Reverse steps 1-22 to reassemble the fryer.



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### 1.9 Troubleshooting and Problem Isolation

Because it is not feasible to attempt to include in this manual every conceivable problem or trouble condition that might be encountered, this section is intended to provide technicians with a general knowledge of the broad problem categories associated with this equipment, and the probable causes of each. With this knowledge, the technician should be able to isolate and correct any problem encountered.

Problems likely encountered can be grouped into six broad categories:

1. Pilot/Ignition failures
2. Improper burner functioning
3. Improper temperature control
4. Computer-related problems
5. Filtration problems
6. Leakage

The probable causes of each category are discussed in the following sections. Troubleshooting charts are included at the end of the chapter to assist in identifying some of the more common problems.

#### 1.9.1 Pilot/Ignition Failures

There are two categories: no pilot flame and unreliable flame.

##### **No pilot flame**

1. No gas or insufficient gas supply.
2. Clogged pilot orifice.
3. Air in gas lines (usually in new installations).
4. Open or grounded high limit.

##### **Unreliable flame**

1. Loose/corroded wire connections.
2. Low or no voltage out of thermopile / thermocouple (CE units).
3. Defective gas valve.

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### 1.9.1 Pilot/Ignition Failures (cont.)

Ignition failures occur when the 24VAC power supply to the gas valve is interrupted, when the gas supply is interrupted, or when the pilot flame is extinguished.

**There are three primary reasons for ignition failure, listed in order of probability:**

1. Problems related to the gas and/or electrical power supplies.
2. Problems related to the electronic circuits.
3. Problems related to the gas valve.

#### **PROBLEMS RELATED TO THE GAS AND/OR ELECTRICAL POWER SUPPLIES**

The main indicators of this are that an entire battery of fryers fails to light and/or there are no indicator lights illuminated on the fryer experiencing ignition failure. Verify that the quick disconnect hose is properly connected, the fryer is plugged in, the main gas supply valve is **open**, and the circuit breaker for the fryer electrical supply is **not tripped**.

#### **PROBLEMS RELATED TO THE ELECTRONIC CIRCUITS**

If gas and electrical power are being supplied to the fryer, the next most likely cause of ignition failure is a problem in the 24 VAC circuit of the pilot system. If the fryer is equipped with a Filter Magic II filtration system, first verify that the drain valve is fully closed. (The valve is attached to a microswitch that must be closed for power to reach the gas valve. Often, although the valve handle appears to be in the closed position, the microswitch is still open.) If the valve is fully closed, or the fryer does not have a filtration system, refer to the troubleshooting tables in this chapter.

#### **PROBLEMS RELATED TO THE GAS VALVE**

If the problem is not in the 24 VAC circuit of the pilot system, it is most likely in the gas valve itself, but before replacing the gas valve refer to the troubleshooting tables in this chapter.

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### 1.9.2 Improper Burner Functioning

The burner ignites but exhibits abnormal characteristics such as "popping", incomplete lighting of the burner, fluctuating flame intensity, and flames "rolling" out of the fryer.

**"Popping"** indicates delayed ignition. In this condition, the main gas valve is opening but the burner is not immediately lighting. When ignition does take place, the excess gas "explodes" into flame, rather than smoothly igniting.

The primary causes of popping are:

- Incorrect or fluctuating gas pressure
- Misdirected or weak pilot flame
- Burner deflector targets out of alignment or missing
- Clogged burner orifices
- Inadequate make-up air
- Clogged vent tube, causing incorrect gas pressure

If popping occurs only during peak operating hours, the problem may be incorrect or fluctuating gas pressure. Verify that the incoming gas pressure (pressure to the gas valve) is in accordance with the appropriate CE or Non-CE standards found in the tables on Pages 1-5 and 1-6, and that the pressure remains constant throughout all hours of usage. Refer to Section 1.3 for the procedure for checking the burner gas pressure.

If popping is consistent during all hours of operation, verify that the pilot is properly positioned above the burner orifice and that the pilot pressure is correct. Correct pilot pressure is indicated by a flame 1 to 1-½" (25 to 38 mm) long. Refer to Section 1.4 for the pilot flame adjustment procedure.

Clogged burner orifices, especially those near the pilot, are also likely causes of delayed ignition. Clogged orifices are indicated by no flame, flames that are orange-colored, and flames that shoot out at an angle from the rest.

Another cause of popping is an insufficient air supply or drafts that are blowing the pilot flame away from the burner. Check for "negative pressure" conditions in the kitchen area. If when the door is opened to the kitchen and a rush of incoming air is felt, this indicates that more air is being exhausted than is being replenished and the burners may have insufficient combustion air.

If the fryer's gas and air supplies are okay, the problem most likely is with one of the electrical components. Examine the computer for signs of melting/distortion and/or discoloration due to excessive heat buildup in the fryer. (This condition usually indicates improper flue performance.). A discolored or distorted computer should be replaced immediately. To prevent recurring problems, correct the condition immediately.

The **burner lighting on one side only** may be caused by a missing or misaligned rear deflector target or improper burner manifold pressure. Clogged burner orifices are usually the cause of **gaps in burner firing**.

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### 1.9.2 Improper Burner Functioning (cont.)

*Fluctuating flame intensity* is normally caused by either improper or fluctuating incoming gas pressure, but may also be the result of variations in the kitchen atmosphere. Verify incoming gas pressure in the same way as for "popping", discussed in the preceding paragraphs. Variations in the kitchen atmosphere are usually caused by air conditioning and/or ventilation unit air-exchange. As the systems start and stop, the pressure in the kitchen may change from positive or neutral to negative, or vice versa. They may also cause changes in airflow patterns that may affect flame intensity.

*Flames "rolling" out of the fryer* are usually an indication of negative pressure in the kitchen. Air is being sucked out of the fryer enclosure and the flames are literally following the air. If negative pressure is not the cause, check for high burner manifold gas pressure in accordance with the procedures in Section 1.3. An obstructed flue, which prevents the fryer from properly exhausting, may also be the cause.

An *excessively noisy burner*, especially with *flames visible above the flue opening*, may indicate that the burner gas pressure is too high, or it may simply be that the gas valve vent tube is blocked. If the gas pressure is correct and the vent tube is unobstructed, the gas valve regulator is probably defective.

Occasionally a burner may apparently be operating correctly, but the fryer has a *slow recovery rate*. [The recovery rate is the length of time required for the fryer to increase the oil temperature from 250°F to 300°F (121°C to 149°C)]. Low burner manifold pressure and/or misaligned or missing deflector targets are usually the main causes. If both of these causes are ruled out, the probable cause is a gas valve regulator that is out of adjustment. See Section 1.3 to adjust regulator.

### 1.9.3 Improper Temperature Control

Temperature control, including the melt cycle, is a function of several interrelated components, each of which must operate correctly. The principle component is the thermostat (in thermostat control units) or the temperature probe (in fryers equipped with computers). Depending upon the specific configuration of the fryer, other components may include the interface board and the computer.

Improper temperature control problems can be categorized into melt cycle problems and failure to control at setpoint problems.

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### 1.9.3 Improper Temperature Control (cont.)

#### MELT CYCLE PROBLEMS

**NOTE:** In early 1999, PC board melt cycle timers replaced melt-cycle timer motors in new fryers.

**See Section 1.8.8 for retrofit information.**

In fryers equipped with thermostat controls, the melt cycle is controlled by a mechanical timer or a PC board. Three components that can fail are the melt-cycle timer, the melt-cycle timer microswitch or the control panel melt cycle On/Off switch. Isolate the defect and replace defective component.

In fryers equipped with computers, the problem may be with the computer itself, the temperature probe, or a malfunctioning heat relay on the interface board. Refer to the troubleshooting tables in this chapter.

#### FAILURE TO CONTROL AT SETPOINT

In fryers equipped with thermostat controls, the problem will be with the thermostat itself. Possible causes are that the thermostat is out of calibration, the knob or flexible shaft is loose on the thermostat shaft, a thermostat wire is disconnected or broken, or the thermostat is defective. Refer to Section 1.7 for instructions on calibrating the thermostat.

In fryers equipped with other types of controls, the problem may be with the temperature probe, the interface board, or the controller. Refer to the troubleshooting tables in this chapter.

### 1.9.4 Computer-Related Problems

#### Computer Magic III.5 Features

##### Sensitivity or "*Stretch Time*"

Sensitivity or stretch time is a programmable feature that increases the cook time countdown based on variations in the oil temperature from the setpoint.

The sensitivity for each product button has 10 settings (0 through 9). A "0" sensitivity setting will disable the feature (no change in cooking time), while a nine will provide the highest sensitivity or most change. The correct sensitivity for any product is based on the product, its density, the setpoint temperature, and the customer's own requirements.

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### 1.9.4 Computer-Related Problems (cont.)

#### Recovery Time

*Recovery time* is a method of measuring a fryer's performance. Put simply, it is the time required for the fryer to increase the oil temperature from 250°F to 300°F (121°C to 149°C). This range is used as a standard since ambient kitchen temperatures can affect the test if lower ranges are used.

The Computer Magic III.5 performs the recovery test each day as the fryer warms up. An operator can view the results of the test any time the fryer is above the 325°F (163°C) point by pressing the  button and entering the code 1652. The test results will be displayed in the computer's LED panel in minutes and seconds. An acceptable recovery time for the MJCF Series fryers is 3 minutes, 30 seconds.

#### Common Computer Complaints

Most problems concerning computers have to do with programming them. There are four common complaints. The complaints, their causes, and corrective actions are:

1. Fryer constantly displays "**HI**".

Cause: Setpoint incorrect or missing.

Corrective Action: Press  1 6 5 0, enter the correct setpoint using keypad, press  again, then press  to lock in the setpoint.

2. Temperature is displayed in Celsius.

Cause: Computer is programmed to display in Celsius.

Corrective Action: Press  1 6 5 8.

3. Temperature is constantly displayed.

Cause: Computer is programmed for constant temperature display.

Corrective Action: Press  1 6 5 L.

4. Computer times down too slowly or too quickly.

Cause: Computer is compensating for oil temperature via the sensitivity setting.

Corrective Action: Reprogram sensitivity setting for each product in accordance with programming instructions in the Frymaster Fryer Controllers User's Manual that shipped with the computer.

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### 1.9.5 Filtration Problems

The majority of filtration problems arise from operator error. One of the most common errors is placing the filter paper on the bottom of the filter pan rather than over the filter screen.

Whenever the complaint is "the pump is running, but no oil is being filtered", check the installation of the filter paper, and the paper size. While you are checking the filter paper, verify that the O-rings on the bottom of the filter pan, and on the male disconnect (at inside rear of filter cabinet) are present and in good condition. Missing or worn O-rings will allow the pump to suck air and decrease its efficiency.

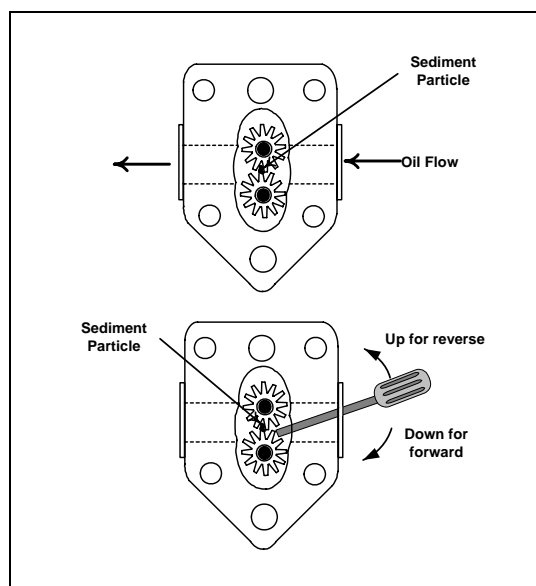
If the pump motor overheats, its thermal overload will trip and the motor will not start until it is reset. If the pump motor does not start, press the red reset switch located on the end of the motor nearest the operator. If the pump then starts, something caused the motor to overheat. It may be just that several frypots were being filtered one after the other and the pump got hot. Letting the pump cool down for at least a half-hour is all that is required in this case. More often, the pump overheated for one of the following reasons:

- Shortening has solidified in the pan or filter lines.
- Attempt to filter unheated oil or shortening. Cold oil and shortening are thicker and cause the pump motor to work harder and overheat.

If the motor tries to run but the pump does not, there is a blockage in the pump. Incorrectly sized or installed paper will allow food particles and sediment to pass through the filter pan and into the pump. When sediment enters the pump, the gears can bind up causing the motor to overload, again tripping the thermal overload. Solidified shortening in the pump will also cause it to seize, with the same result.

A pump seized by debris or hard shortening can usually be freed by manually moving the gears with a screwdriver or other instrument.

1. Disconnect power to the filter system.
2. Remove the input plumbing from the pump.
3. Use a screwdriver to manually turn the gears.
  - Turning the pump gears backwards will release a hard particle and allow its removal.
  - Turning the pump gears forward will push softer objects and solid shortening through the pump and allow free movement of the gears.



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### 1.9.5 Filtration Problems (cont.)

Incorrectly sized or installed paper will also allow food particles and sediment to pass through and clog the suction tube on the bottom of the filter carriage. Particles large enough to block the suction tube may indicate that the crumb tray is not installed in the pan during filtering.

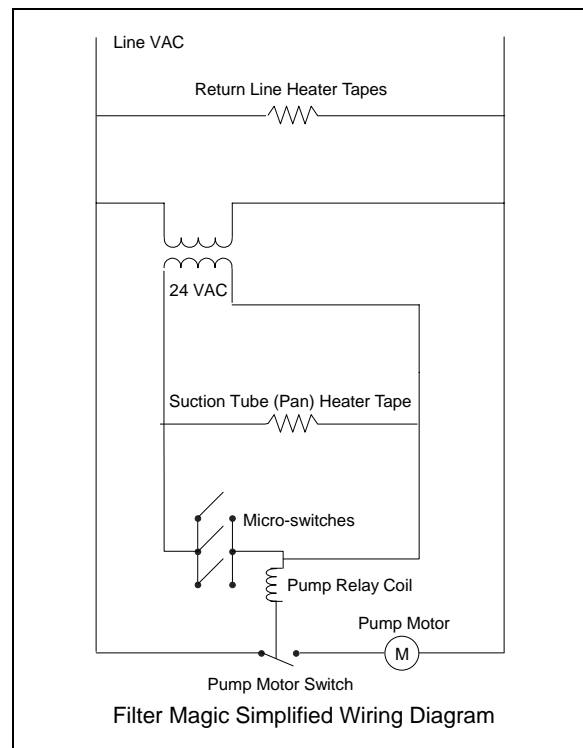
Pan blockage can also occur if shortening is left in the pan and allowed to solidify. The heater strip on the suction tube is designed to prevent solidification of residual shortening left in the tube. It will not melt or prevent solidification of shortening in the pan.

Blockage removal can be accomplished by forcing the item out with an auger or drain snake. Compressed air or other pressurized gases should not be used to force out the blockage.

Possible problems with the Power Shower include clogged openings, shortening solidified in the tubes, missing clean-out plugs, and missing or worn O-rings. Cleaning the unit and replacing missing plugs and missing or worn O-rings will correct these problems.

The electronics of the Filter Magic II are simple and straightforward. Microswitches, attached to the oil-return valve handles of each vat and wired in parallel, provide the 24 VAC needed to activate the pump relay coil when the handles are moved to the ON position. The activated coil pulls in the pump motor switch, supplying power to the motor.

The suction tube heater and flexible hose heater are wired directly into the 24VAC source. They remain energized as long as the unit is plugged in (see diagram below).





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### 1.9.6 Leakage

Leakage of the frypot is mostly due to improperly sealed high-limits, thermostats/temperature probes, and drain fittings. When installed or replaced, each of these components must be sealed with Loctite PST567 sealant or equivalent to prevent leakage. In very rare cases, a leak may develop along one of the welded edges of the frypot. When this occurs, the frypot must be replaced.

If the sides and/or ends of the frypot are coated with oil, the most likely cause is spillage over the top of the frypot rather than leakage.

The clamps, which hold the drain tube sections together, may loosen over time as the tubes expand and contract with heating and cooling during use. If the section of drain tube connected to the drain valve is removed for whatever reason, make sure that its grommet is in good condition and properly fitted around the nipple of the drain when it is reinstalled. Also, ensure that the drain tube runs downward from the drain along its whole length and has no low points where oil may accumulate.

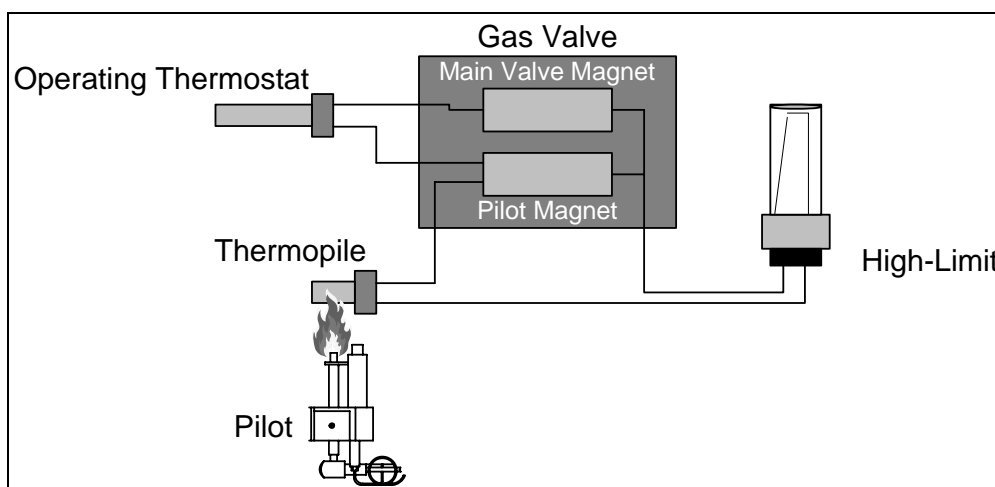
### 1.9.7 Troubleshooting, Millivolt Frying Systems

#### How the Millivolt Circuit Works

The voltage output of a thermopile powers the coil of a millivolt gas valve. This output is measured in millivolts or thousandths of one volt.

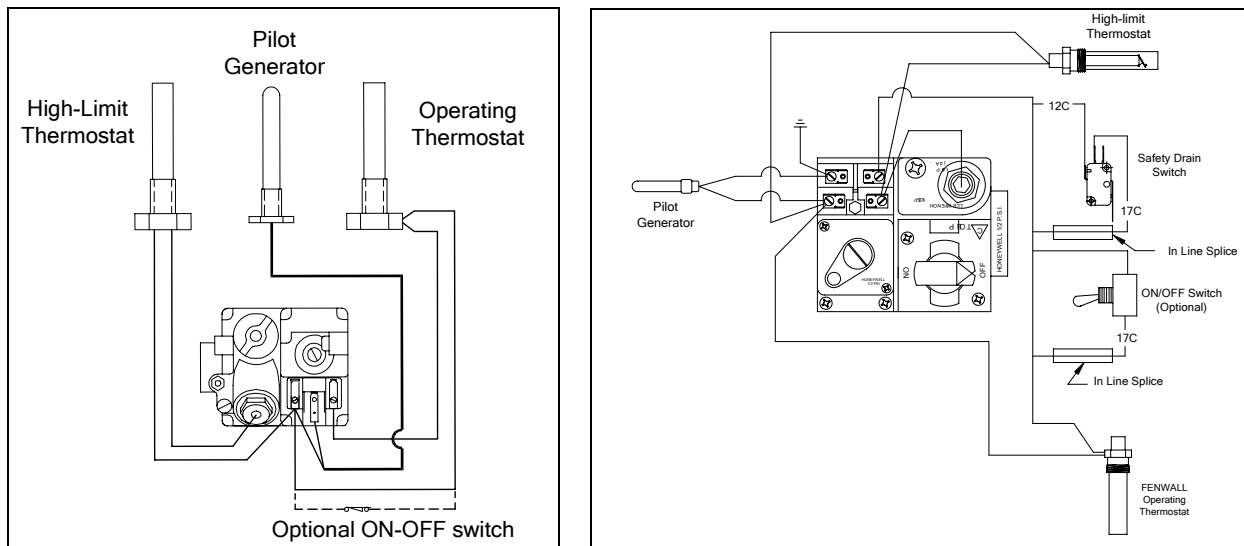
The high-limit thermostat acts as a safety switch. It will de-energize the gas valve when the oil in the fryer's frypot climbs to 425°F to 450°F.

An operating thermostat controls the main coil actuation and acts as the burner control.



# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS

## CHAPTER 1: SERVICE PROCEDURES



When troubleshooting millivolt systems, always check these areas before performing diagnostic checks on either the Robertshaw or Honeywell systems:

- A. Inspect all wires and component leads for damage (heat, oil, moisture, etc.). On capillary tube-type thermostats, check for resistance on the thermostat lead wires. Wire nuts and other connectors cannot be present in a millivolt circuit as they can cause resistance. If resistance is found, solder the connectors to the wires or replace the wires.
- B. Clean and verify that all wire connections and gas valve terminal connections are tight.
- C. Check the length of the pilot flame (it should be about 1½-inches (38mm) long) and verify that it contacts the top one third of the thermopile. Clean the pilot orifice and adjust the pilot strength if needed.
- D. Measure thermopile output with no load (i.e., with the thermopile disconnected from the gas valve). Measurements must be made with a multimeter having a 0-1000 DC millivolt (MV) range. Light the pilot and have someone hold the gas cock knob in the depressed position. If the thermopile is a single lead (coaxial) type, measure from the lead's end contact to its screw-in threads. If the thermopile has two leads, measure across the end terminals. The reading should be within the range of 500-800 millivolts. If not, replace the thermopile.

Performing diagnostic checks on Robertshaw and Honeywell Systems are described on the following page.

# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS

## CHAPTER 1: SERVICE PROCEDURES

### ROBERTSHAW-UNITROL 7000 SYSTEM CHECK

**1. Complete System Check**

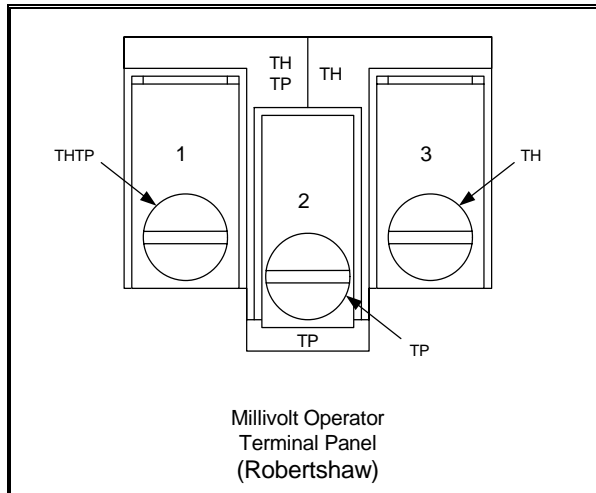
With thermostat contacts closed and gas cock dial in the "ON" position, the main burner should ignite. Measure the reading between the 2 & 3 terminals. If the reading is more than 100MV, replace the gas valve.

**2. System Resistance Check**

With thermostat contacts closed and main burner "ON", measure the millivolt reading between the 1 and 3 terminals. The reading should be less than 80MV. If not, recheck the thermostat leads and connections. Replace with new or heavier gauge wires if necessary. If the reading is still greater than 80MV, replace the thermostat.

**3. Automatic Pilot Dropout Check**

With the thermostat contacts open, hold the gas cock knob depressed with the pilot lit until the maximum millivolt output is observed between the 1 and 2 terminals. Then extinguish the pilot and observe the meter. The sound of the pilot magnet dropping should be audible. This dropout should occur between 120MV and 30MV. If it occurs outside these limits, change the gas valve.



Test	Meter Setting	Meter Leads On Terminals	Acceptable Results
1	MV	2 & 3	<100MV
2	MV	1 & 3	<80MV
3	MV	1 & 2	30-120MV

### HONEYWELL SYSTEM CHECK

**1. Complete System Check**

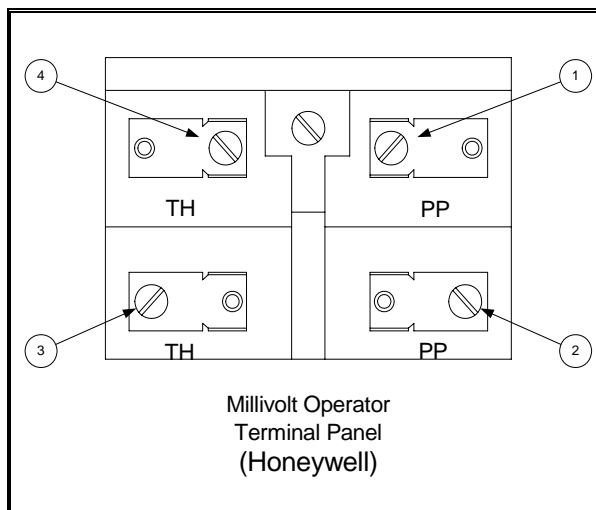
With thermostat contacts closed and gas cock dial in the "ON" position, main burner should ignite. If not, measure across terminals 2 and 3 as indicated in the diagram. If the reading is more than 180MV, replace the gas valve.

**2. System Resistance Check**

With thermostat contacts closed and main burner "ON", measure the millivolt reading between terminals 1 and 3 as indicated in the diagram. The reading should be 220MV or less. If not, recheck thermostat leads and connections. Replace with new or heavier gauge wires if necessary. If the reading is still greater than 220MV, replace the thermostat.

**3. Automatic Pilot Dropout Check**

With the thermostat contacts open, hold the gas cock knob depressed with the pilot lit until the maximum millivolt output is observed between terminals 1 and 2. Then extinguish the pilot and observe the meter. The sound of the pilot magnet dropping should be audible. This dropout should occur between 110MV and 36MV. If it occurs outside these limits, change the gas valve.



Test	Meter Setting	Meter Leads On Terminals	Acceptable Results
1	MV	2 & 3	<180MV
2	MV	1 & 3	<220MV
3	MV	1 & 2	36-110MV

# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS

## CHAPTER 1: SERVICE PROCEDURES

### 1.10 Troubleshooting Guides

The troubleshooting guides found in the pages that follow are intended to assist service technicians in quickly isolating the probable causes of equipment malfunctions by following a logical, step-by-step process.

#### 1.10.1 Initial Troubleshooting, Millivolt Frying Systems

PROBLEM	PROBABLE CAUSES	CORRECTIVE ACTION
<b>Burner won't ignite.</b>	A. Pilot is not lit.	A. Light pilot.
	B. Loose, dirty, or corroded terminals on gas valve.	B. Clean and tighten terminals on gas valve.
	C. Loose, dirty, or corroded terminals on thermostat.	C. Clean and tighten terminals on thermostat.
	D. Thermostat, gas valve, or high-limit wires broken or shorted.	D. Examine wires for signs of abrasions, cuts, kinks, etc. If the wiring is damaged, replace the affected component.
	E. Thermostat out of calibration.	E. Check calibration of thermostat in accordance with procedures in Section 1.7 of this manual.
	F. Thermostat or gas valve is suspect.	F. Inspect and replace components if necessary.
<b>Burner partially ignites.</b>	A. One or more burner orifices clogged.	A. Turn gas valve knob to OFF position. Use a thin wire to clear obstruction from burner orifices.
	B. Blocked flue outlet.	B. Clear blockage from flue outlet.
	C. Fryer flue connected directly to vent hood with a chimney-like duct.	C. Remove duct and allow for at least 18" (45.7cm) between flue outlet and vent hood filters.
	D. Broken or missing ceramic targets, or incorrect burner gas pressure.	D. Replace broken/missing ceramic targets if required. If not required, check burner gas pressure and adjust to correct pressure if required.

**MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS  
CHAPTER 1: SERVICE PROCEDURES**

**1.10.1 Initial Troubleshooting, Millivolt Frying Systems (cont.)**

<b>PROBLEM</b>	<b>PROBABLE CAUSES</b>	<b>CORRECTIVE ACTION</b>
<b>Burner ignition is delayed.</b>	A. Inadequate make-up air in cooking area.	A. Adjust ventilation system to increase make-up air.
	B. Pilot flame directed away from first orifice of burner.	B. Reposition pilot hood to direct flame toward first burner orifice.
	C. One or more burner orifices is clogged.	C. Use a thin wire to clear obstruction from orifices.
	D. Low pilot flame [less than 1" (25mm)], low incoming gas pressure, or inadequate incoming gas supply line.	D. Adjust pilot flame height to 1–1½" (25– 38.1mm), if required. If pilot flame is adequate, check incoming gas pressure and adjust to proper pressure, if required. If proper pressure cannot be achieved, check incoming-gas supply line and increase to proper size if required.
<b>Pilot won't remain lit.</b>	A. Clogged pilot orifice.	A. Use a small wire to clear obstruction from pilot orifice.
	B. Pilot flame blowing away from pilot generator (excessive draft in kitchen).	B. Eliminate draft in kitchen.
	C. Pilot generator not inserted fully into pilot burner.	C. Reinsert pilot generator into pilot burner until flame surrounds tip.
	D. Corroded connection where pilot generator connects to gas valve.	D. Clean pilot generator connection at gas valve.
	E. Low pilot flame, pilot generator, high-limit thermostat contacts, or gas valve pilot magnet is suspect.	E. Adjust pilot flame as instructed in " <b>Burner ignition is delayed</b> ", if required. If pilot flame is adequate, inspect and replace pilot generator, if required. Inspect and clean high-limit contacts, if required. Replace gas valve if pilot magnet is defective.
<b>Flames rolling out of fryer.</b>	A. Flue obstructed.	A. Remove obstruction from flue.
	B. Inadequate make-up air in cooking area.	B. Adjust ventilation system to increase make-up air.
<b>Pilot ignites, but fails to remain lit after gas valve knob/button is released.</b>	A. Loose, dirty or corroded high-limit wires.	A. Clean/tighten high-limit wires on gas valve.
	B. Gas valve, pilot generator or high-limit thermostat is suspect.	B. Inspect and replace any or all defective components, if required.
<b>Setpoint temperature cannot be attained.</b>	A. Thermostat out of calibration.	A. Check calibration of thermostat in accordance with procedures in Section 4.2 of this manual.
	B. Failed thermostat.	B. Replace defective thermostat as outlined in Section 1.8.2.

**MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS  
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**1.10.2 Initial Troubleshooting, 24VAC Frying Systems**

<b>PROBLEM</b>	<b>PROBABLE CAUSES</b>	<b>CORRECTIVE ACTION</b>
<b>Burner won't ignite. Light in ON/OFF switch is not illuminated.</b>	A. ON/OFF switch is off.	A. Turn ON/OFF switch on.
<b>ON/OFF switch is on, but the switch light is not illuminated.</b>	A. No 24 VAC output from transformer.	A. Check 24VAC circuit. Replace transformer if defective.
<b>ON/OFF switch is on and the switch light is illuminated, but there is no output to gas valve.</b>	A. Drain microswitch circuit (filter-equipped units) is open.	A. Ensure drain valve is fully closed and microswitch is functioning. Replace microswitch if defective.
	B. 24VAC is present at ON/OFF switch, but continuity of the switch in ON position is not "0".	B. On/Off switch is defective. Replace switch with a known working switch.
	C. Continuity of thermostat is not "0" (cooking oil/shortening temperature is at least 15°F below thermostat setting).	C. Thermostat is defective. Replace with a known working thermostat.
	D. Gas valve is suspect.	D. Go to " <b>No burner flame</b> ".
<b>No burner flame.</b>	A. Pilot does not stay lit (fryer is on and thermopile output is approximately 400 millivolts).	A. Check high-limit switch. Switch continuity should be "0". If not, high-limit switch is defective. Replace high-limit switch.
	B. Pilot does not stay lit (fryer is on and thermopile output is <b>not</b> approximately 400 millivolts).	B. Inspect thermopile (units without interface board) and replace if defective.
	C. Pilot stays lit, and the high-limit and thermopile are known working, but burners fail to light.	C. Inspect gas valve and replace if defective.
	D. Gas valve is known to be good, but there is not 24 VAC at the gas valve terminals.	D. Inspect thermostat body (while still in frypot) for damage. Remove and replace thermostat if bent, dented or cracked. Inspect leads for fraying, burning, breaks and/or kinks. If found, remove and replace thermostat. Remove leads from terminal block, allow oil to cool 15°F below thermostat setting and check continuity. If continuity is not "0", then thermostat has failed. Replace thermostat.
	E. Continuity from terminal block to gas valve thermostat wire is not "0".	E. Inspect wiring for breaks or shorts and repair if necessary.

**MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS  
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**1.10.2 Initial Troubleshooting, 24VAC Frying Systems (cont.)**

<b>PROBLEM</b>	<b>PROBABLE CAUSE</b>	<b>CORRECTIVE ACTION</b>
<b>Fluctuating or erratic lighting of burner flame.</b>	A. Incoming gas supply pressures are not within range [Natural- 6-14" W.C. (1.49-3.49 kPa); Propane- 11-14" W.C. (2.74-3.49 kPa)]	A. Inspect gas supply to fryer. Repair and/or replace faulty components (defective supply shut-off valves, incorrect piping size, etc.)
	B. Air in gas supply lines (new installation).	B. Allow unit to cycle on and off for approximately 30 minutes to force air from gas manifold and lines.
	C. Missing or poor target alignment.	C. Replace missing target(s) and/or ensure correct target alignment.
<b>Thermostat will not adjust to correct temperature.</b>	A. Thermostat is out of calibration.	A. Calibrate thermostat. Replace thermostat if calibration is not possible.

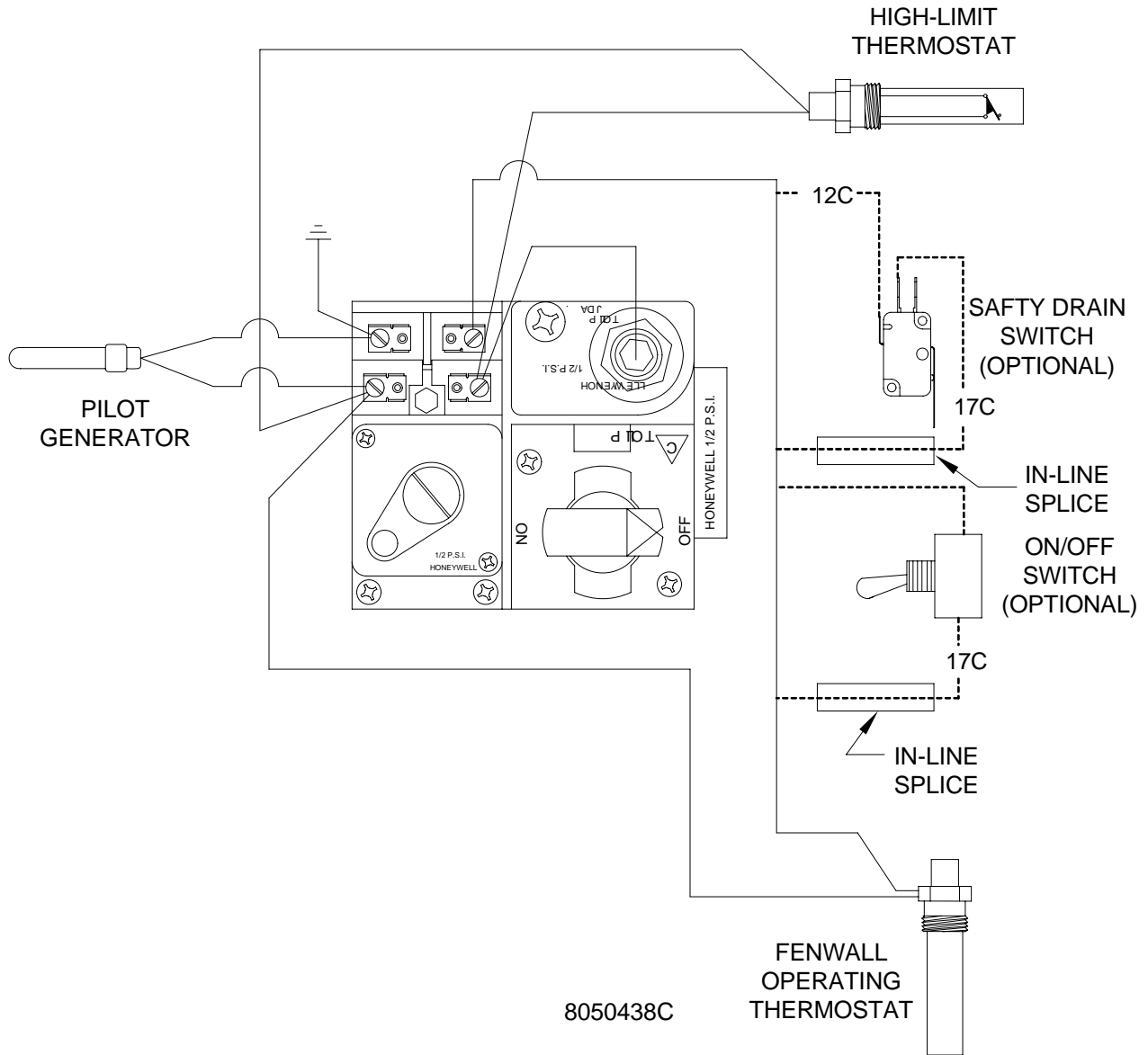
**1.11 Probe Resistance Chart**

<b>Probe Resistance Chart</b>																		
<i>For use with CF Series fryers manufactured with Minco Thermistor probes only.</i>																		
<b>F</b>	<b>OHMS</b>	<b>C</b>		<b>F</b>	<b>OHMS</b>	<b>C</b>		<b>F</b>	<b>OHMS</b>	<b>C</b>		<b>F</b>	<b>OHMS</b>	<b>C</b>		<b>F</b>	<b>OHMS</b>	<b>C</b>
60	1059	16		130	1204	54		200	1350	93		270	1493	132		340	1634	171
65	1070	18		135	1216	57		205	1361	96		275	1503	135		345	1644	174
70	1080	21		140	1226	60		210	1371	99		280	1514	138		350	1654	177
75	1091	24		145	1237	63		215	1381	102		285	1524	141		355	1664	179
80	1101	27		150	1247	66		220	1391	104		290	1534	143		360	1674	182
85	1112	29		155	1258	68		225	1402	107		295	1544	146		365	1684	185
90	1122	32		160	1268	71		230	1412	110		300	1554	149		370	1694	188
95	1133	35		165	1278	74		235	1422	113		305	1564	152		375	1704	191
100	1143	38		170	1289	77		240	1432	116		310	1574	154		380	1714	193
105	1154	41		175	1299	79		245	1442	118		315	1584	157		385	1724	196
110	1164	43		180	1309	82		250	1453	121		320	1594	160		390	1734	199
115	1174	46		185	1320	85		255	1463	124		325	1604	163		395	1744	202
120	1185	49		190	1330	88		260	1473	127		330	1614	166		400	1754	204
125	1195	52		195	1340	91		265	1483	129		335	1624	168		405	1764	207

MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS  
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1.12 Wiring Diagrams

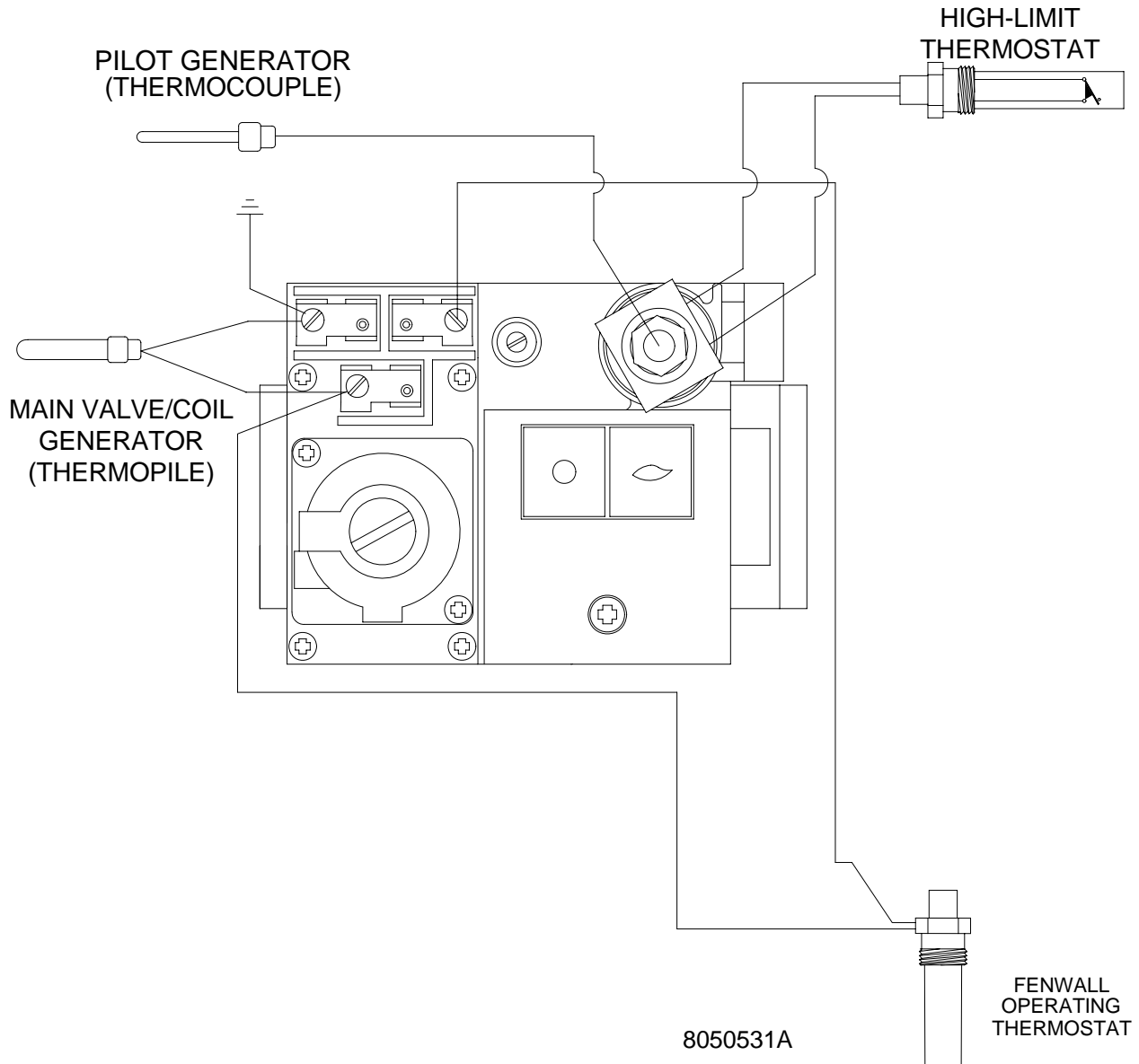
1.12.1 MJCF Millivolt Wiring Diagram, Non-CE





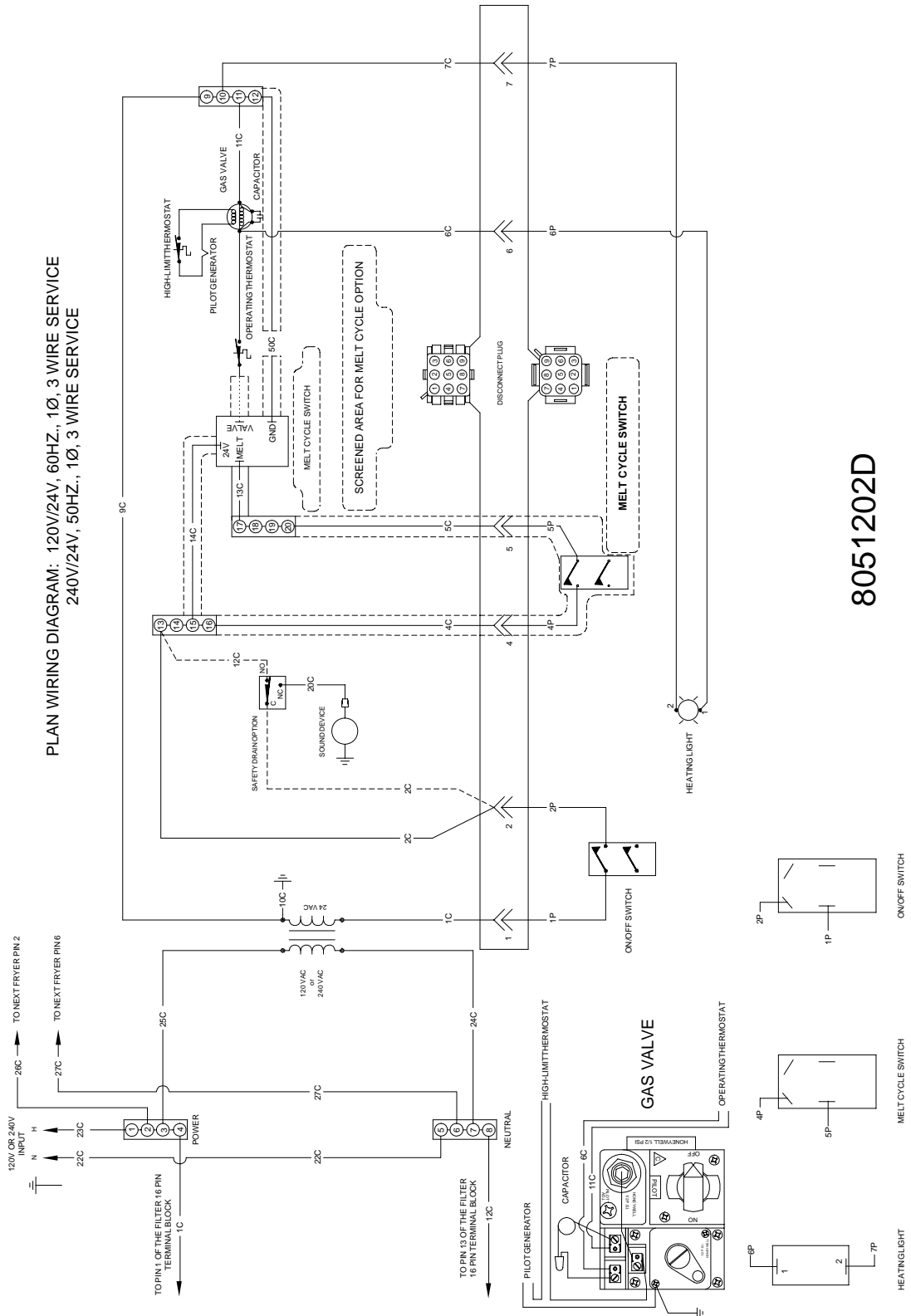
**MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS**  
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**1.12.2 MJCF Millivolt Wiring Diagram, CE**



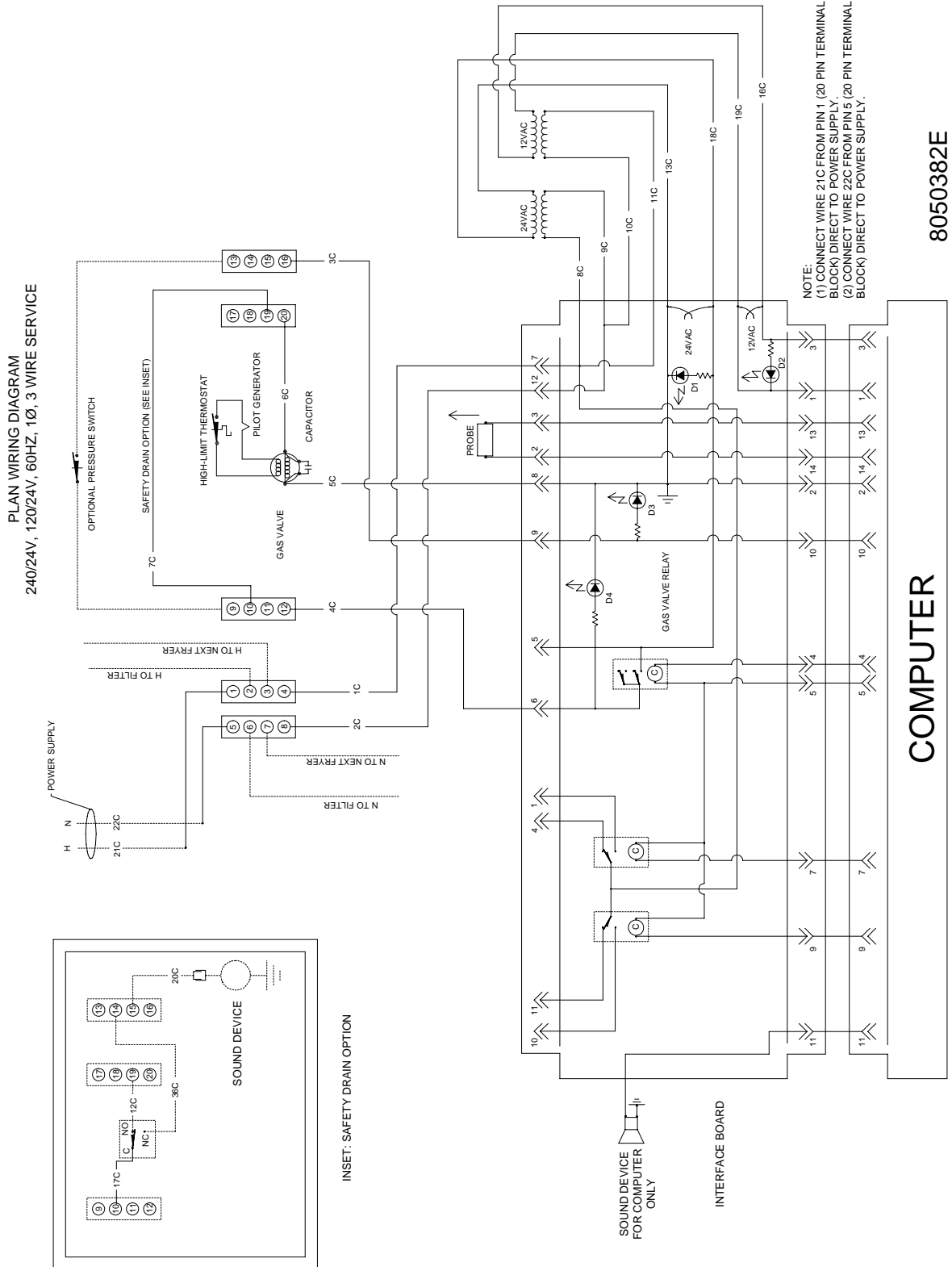
# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS CHAPTER 1: SERVICE PROCEDURES

## 1.12.3 MJCFE 24V Wiring Diagram



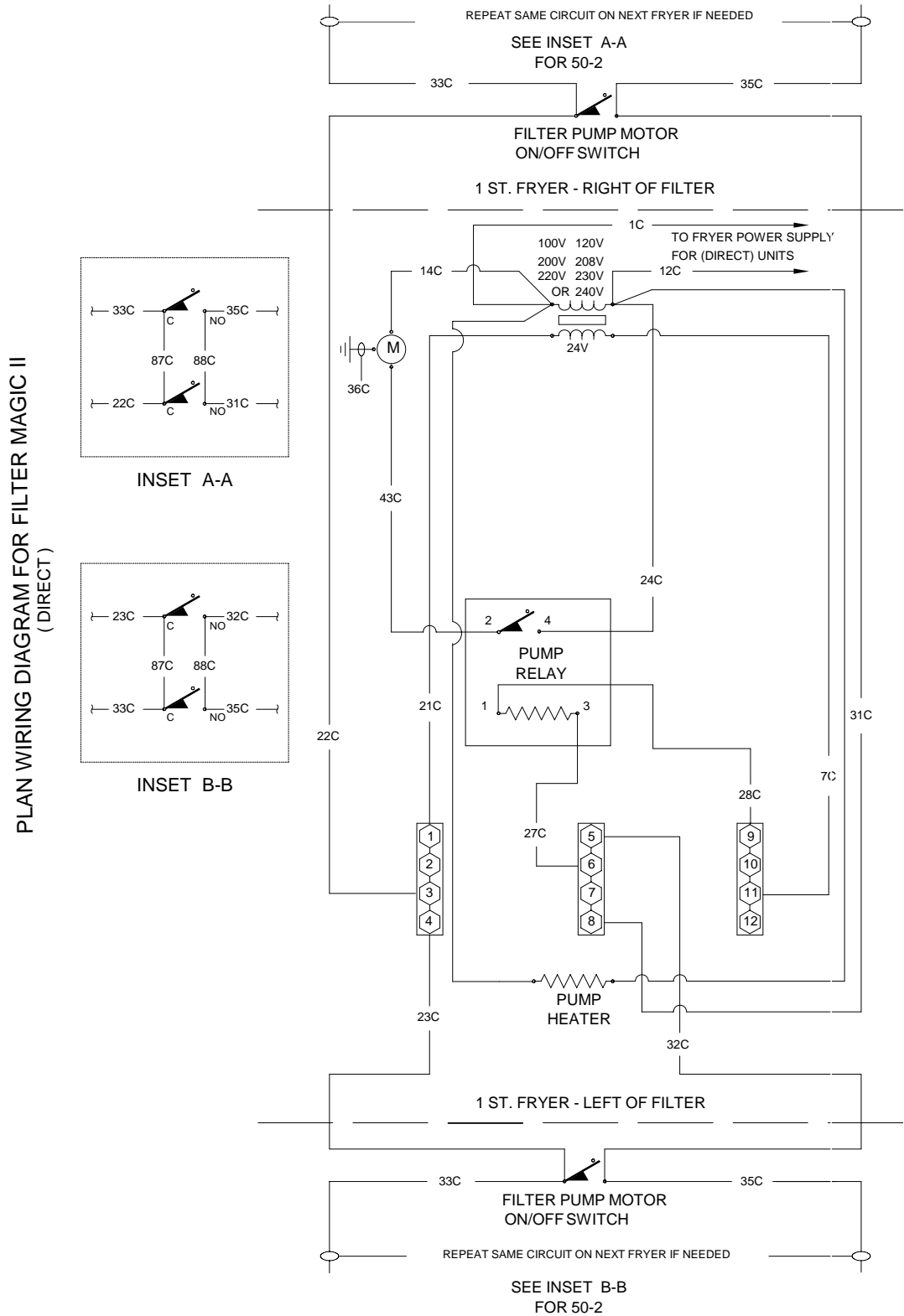
# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS CHAPTER 1: SERVICE PROCEDURES

## 1.12.4 MJCFEC 24V Wiring Diagram



# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS CHAPTER 1: SERVICE PROCEDURES

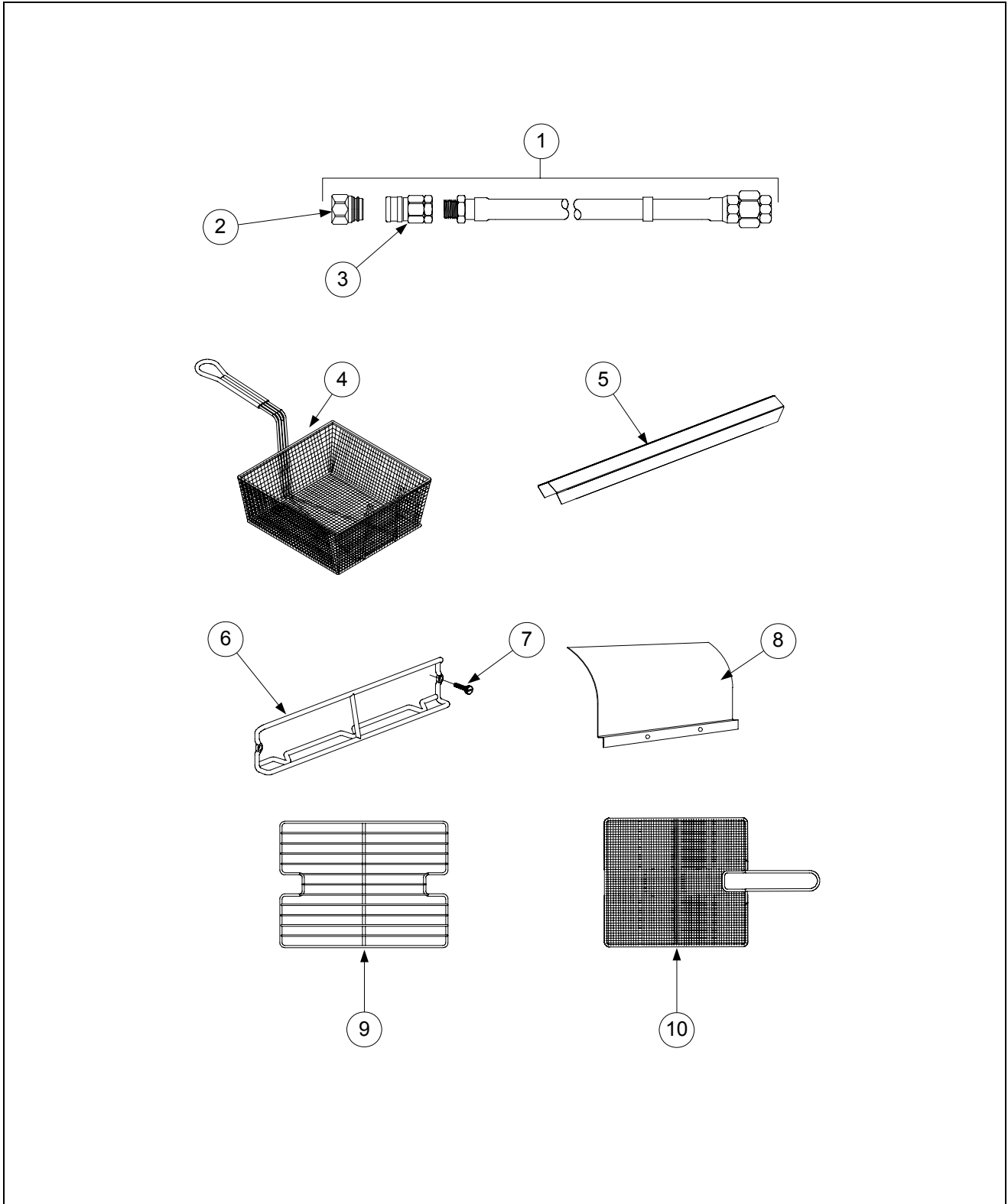
## 1.12.5 Filter Magic II Wiring Diagram



# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS

## CHAPTER 2: PARTS LIST

### 2.1 Accessories



**MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS  
CHAPTER 2: PARTS LIST**

**2.1 Accessories (cont.)**

ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
1			Gas Line, Dormont, With Quick-Disconnect
	806-1698SP		1" x 36" (2.54 cm x 91.4 cm)
	806-1699		1" x 48" (2.54 cm x 121.9 cm)
	806-1701		¾" x 36" (1.91 cm x 91.4 cm)
	806-1700		¾" x 48" (1.91 cm x 121.9 cm)
2			Quick Disconnect Fitting, Male
	810-0074		1" (2.54 cm)
	810-0072		¾" (1.91 cm)
3			Quick Disconnect Fitting, Female
	810-0073		1" (2.54 cm)
	810-0070		¾" (1.91 cm)
4	803-0017		Basket, Full
*	803-0024		Basket, Twin
*	803-0023		Basket, Triplet
5	910-2662	910-4795	Connecting Strip, Tall - for separate unit
*		910-4796	Connecting Strip, Short - for battery unit
*	806-1343		Cover, Frypot
*	806-1086		Lid Assembly, Simmer Fry
6		810-2794	Hanger, Basket- Wireform
7	809-0171		Thumbscrew, Basket Hanger
8	910-3185		Flue Deflector
9	803-0137		Rack, Basket Support (Wireform w/o Handle)
10	803-0138		Rack, Basket Support (Screen with Handle)
*	803-0187		Sediment Screen (Tray)
*	812-1226SP		Drain Extension, Drain Valve
*	803-0197		Fryer's Friend, Clean-out Rod
*	803-0209		Brush, Frypot & Filter
*	823-3660		Scoop, Crumb

\* Not illustrated.

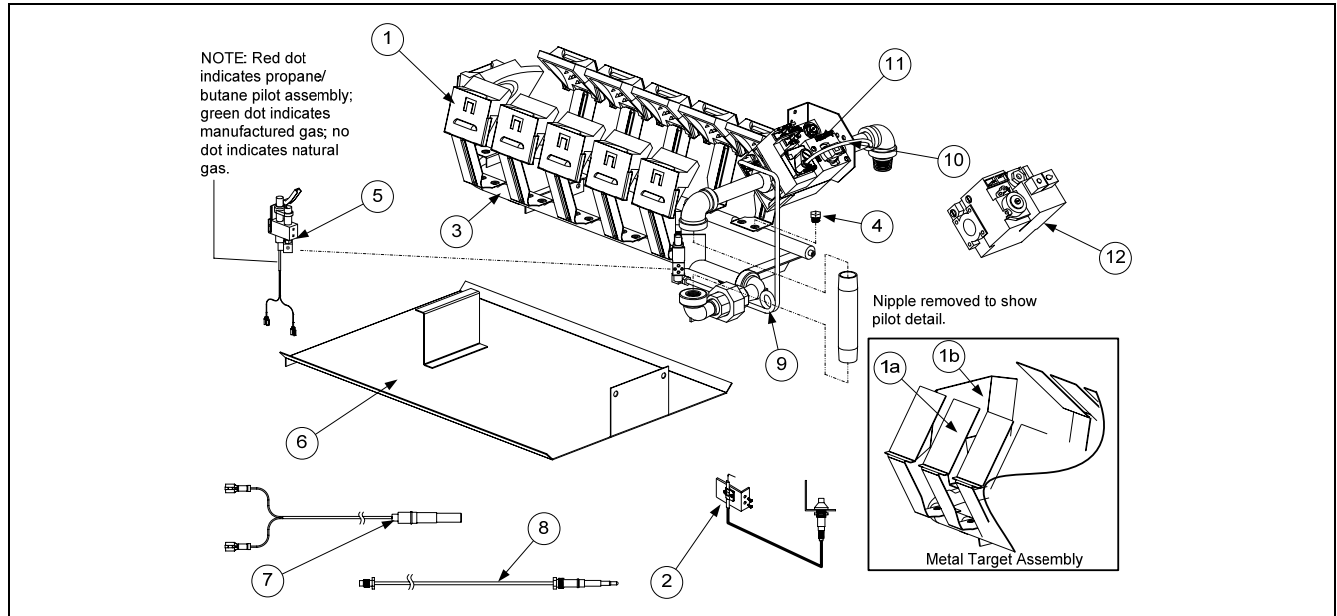
 Use standard part.

In Fall 2004 Frymaster introduced the Euro-Look fryer. This fryer has a rounded topcap instead of the traditional 90° angle topcap. Also round drains replaced square drains.

# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS

## CHAPTER 2: PARTS LIST

### 2.2 Burner Manifold Components



ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
1	806-0225SP		Deflector Assembly (Ceramic Target Assembly), Side
*	806-3605SP		Deflector Assembly (Ceramic Target Assembly), Back
*	910-0226		Bracket, Deflector- Side
*	814-0034		Target, Ceramic- Side
*	910-1465		Bracket, Deflector- Back
*	810-0424		Target, Ceramic- Back
*	806-1980SP		Burner Control Assembly, Natural (Metal Targets) <i>(use 106-0010 for Single)</i>
*	806-1981SP		Burner Control Assembly, Propane (Metal Targets) <i>(use 106-0048 for Single)</i>
1a	230-1177		Deflector, Side Metal Target
1b	230-1180		Deflector, Rear Metal Target
2	826-1155		Ignitor Kit, Optional Piezo
	807-1906		Electrode Assembly
	810-1001		Trigger
3	823-0289		Manifold, Burner
4			Orifice (Altitudes 0-1999 Feet; For Alt ≥ 2000 Feet, Contact Factory)
	826-1386		Natural Gas- 1.40 mm (Non-CE & CE; Qty: 10)
	812-0910		Propane (LP) Gas- 0.90 mm (Non-CE Only)
	812-0906		Propane (LP) Gas- 0.95 mm (CE Only)
	810-0407		Manufactured Gas- 2.15 mm [Contact factory with gas specifications (I.E. CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> , H <sub>2</sub> , etc.,) for correct orifice part #.]
	812-0916		Manufactured Gas- 2.26 mm [Contact factory with gas specifications (I.E. CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> , H <sub>2</sub> , etc.,) for correct orifice part #.]

**NOTE:** Metal targets can be co-mingled with ceramic targets.

\* Not illustrated.


Use standard part.

**MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS  
CHAPTER 2: PARTS LIST**

**2.2 Burner Manifold Components (cont.)**

ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
5			Pilot Assembly
	810-2071		Natural Gas, w/Thermopile <i>(use 810-0426 for pilot only)</i>
	806-8688SP		Natural Gas, w/Thermocouple (CE)
	810-2070		Propane (LP), w/Thermopile <i>(use 810-0427 for pilot only)</i>
	806-8689SP		Propane (LP) Gas, w/Thermocouple (CE)
	810-1831		Manufactured Gas, w/Thermocouple (CE and non-CE)
	806-6825SP		Dual Pilot, Natural Gas (CE)
	806-6827SP		Dual Pilot, Propane (LP) Gas (CE)
6	823-0330		Shield, Burner- All MJCF Series
*	930-3472		Shield, Heat, Lower Right Front
*	930-3471		Shield, Heat, Lower Left Front
7	810-1873		Thermopile with Push-on Terminals (Used in Non-CE Pilot Assemblies)
8	812-1284		Thermocouple with Threaded Terminal- 29-½" (Used in CE Pilot Assemblies)
*	807-0699		Thermocouple with Threaded Terminal- 20" (Used in England/Germany Pilot Assemblies)
9	810-0705		Gas Line, Pilot Supply- ¼ x 23"
*	810-2484		Gas Line, Pilot Supply- ¼ x 10"
*	810-1700		Gas Line, Pilot Supply- ¼ x 8-¾" <i>(Series J65X Only)</i>
10	810-0691		Vent Tube, Gas Valve
*	801-1166		Vent Tube, Gas Valve CE
11			Valve, Gas- <u>Non-CE Only</u>
	807-3294		24V Only- Natural & Manufactured Gas (Honeywell)
	807-3295		24V Only- Propane/Butane Gas (Honeywell)
	807-1603		Millivolt Only- Natural & Manufactured Gas (Honeywell)
	807-1604		Millivolt Only- Propane Gas (Honeywell)
	807-4137		Millivolt Only-Natural for Australia (Use with Kit 807-1846 for Pro)
12			Valve, Gas- <u>CE Only</u>
	806-6840SP		24V Only- Natural and Manufactured Gas (Honeywell) [¾" gas line]
	806-6841SP		24V Only- Propane Gas (Honeywell) [¾" gas line]
	806-6710SP		24V Only- Natural and Manufactured Gas (Honeywell) [½" gas line]
	806-6711SP		24V Only- Propane Gas (Honeywell) [½" gas line]
	806-6805SP		Millivolt Only- Natural Gas (Honeywell)
	806-6806SP		Millivolt Only- Propane Gas (Honeywell)
*	806-4781		Capacitor (Used on Gas Valve Terminals w/Thermostat Cont. Only)
*	810-1307		Valve, Gas Supply Turn-off (Inside Fryer Cabinet)
*			Miscellaneous Components – Older Production Units
*	810-0187		Regulator, Natural Gas (Robertshaw)
*	817-0098		Regulator, Propane Gas (Robertshaw)

\* Not illustrated.

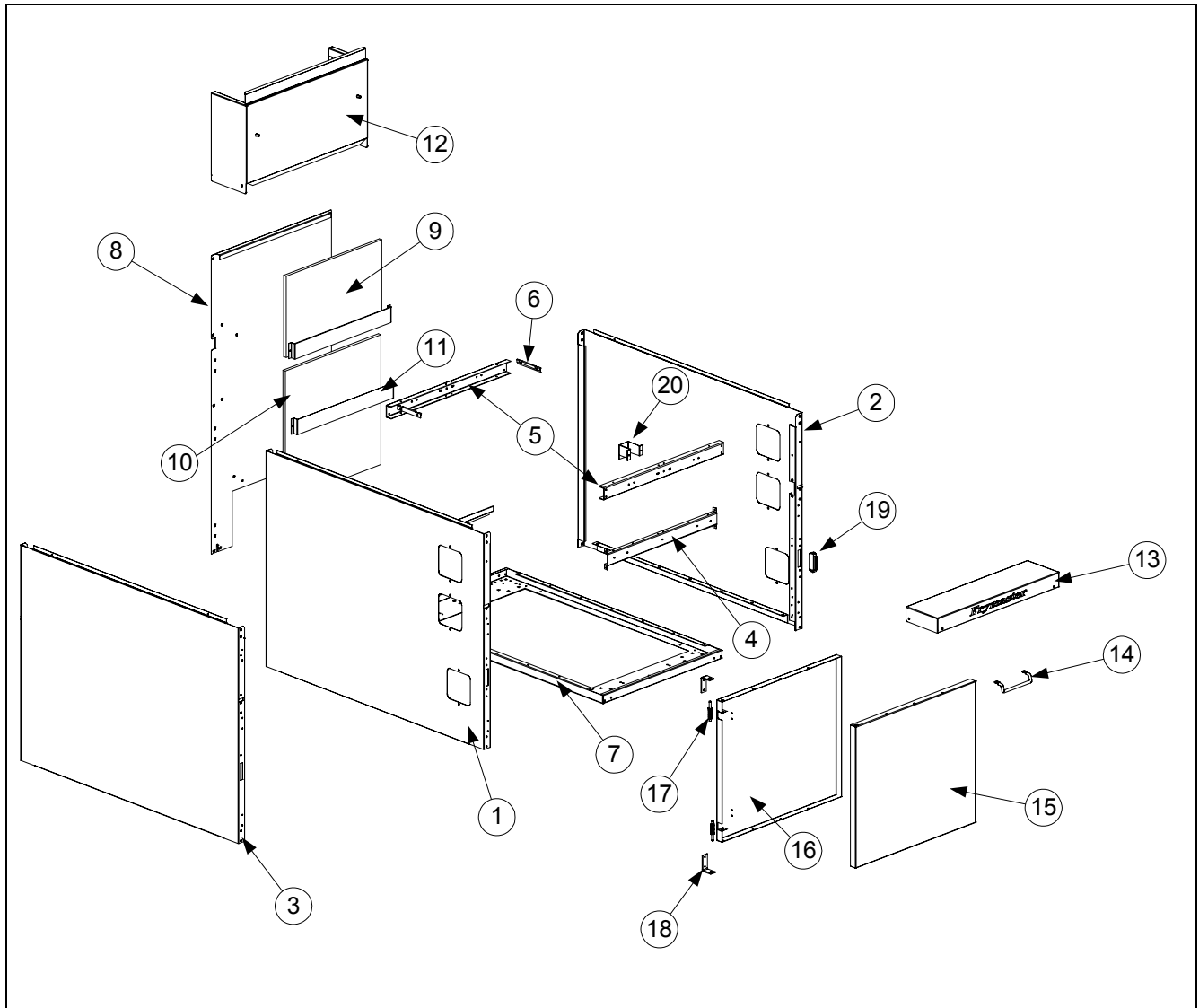
 Use standard part.



**MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS  
CHAPTER 2: PARTS LIST**

**2.3 Cabinetry Components**

**2.3.1 Fryer Cabinetry**



ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
1	201-0486SP	201-6964	Side, Left- FMCF Unitary Cabinet- CRS
*	211-0486SP	201-8444	Side, Left- FMCF Unitary Cabinet- S/S
2	202-0486SP	202-6964	Side, Right- FMCF Unitary Cabinet- CRS
*	212-0486SP	212-8444	Side, Right- FMCF Unitary Cabinet- S/S
*	900-0889		Cover, Holes- FMCF Unitary Cabinet- CRS
*	910-0889		Cover, Holes- FMCF Unitary Cabinet- S/S

\* Not illustrated.

Use standard part.

**MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS  
CHAPTER 2: PARTS LIST**

**2.3.1 Fryer Cabinetry (cont.)**

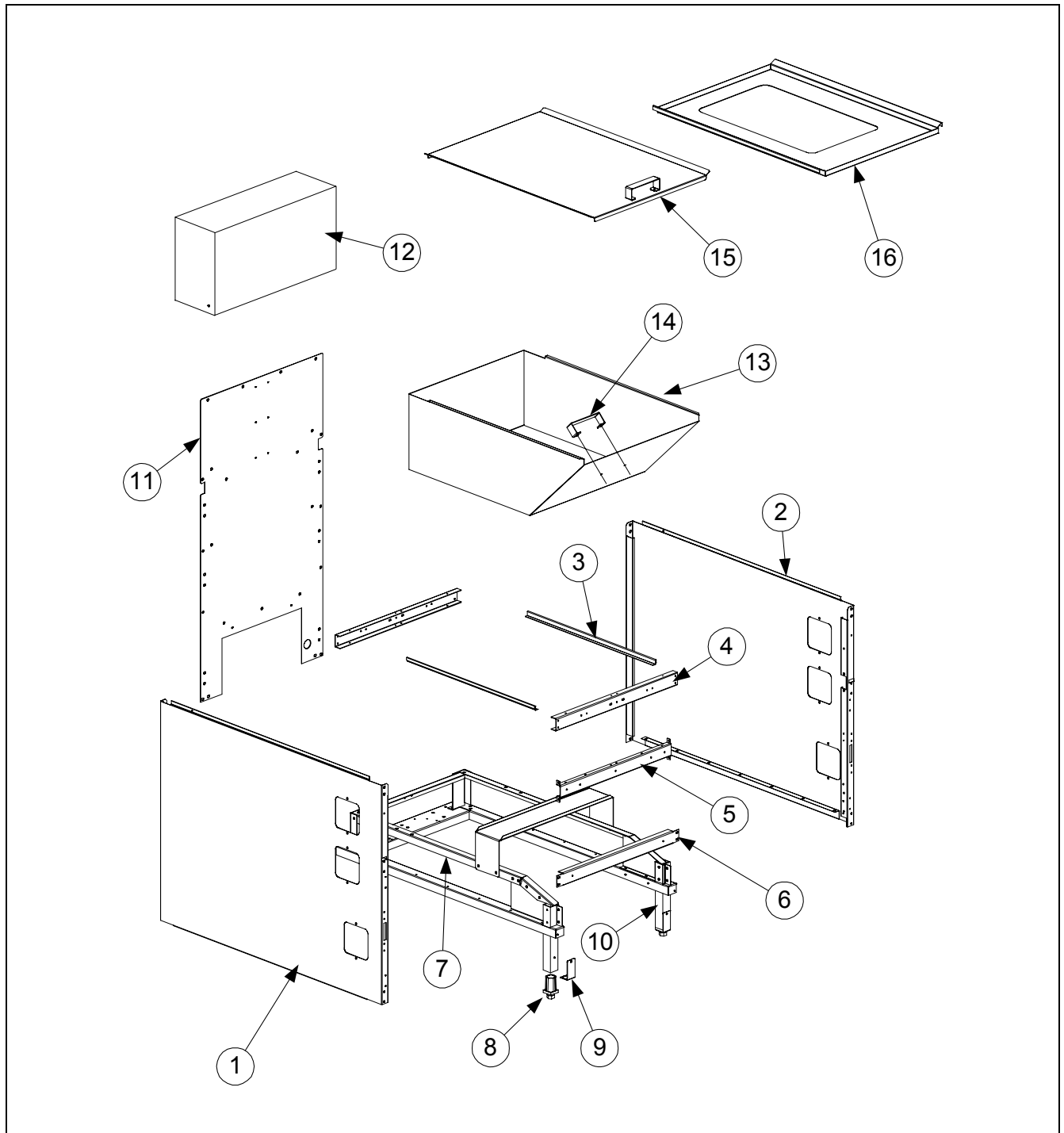
ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
3	900-7367SP	201-6916	Side, Left & Right - MJCF CRS Cabinet (Euro Left Side Only)
		202-6916	Side, Right MJCF CRS Cabinet Euro
*	910-7367SP	211-8427	Side, Left & Right - MJCF S/S Cabinet (Euro Left Side Only)
		212-8427	Side, Right - MJCF S/S Cabinet
4	900-4401	200-6758	Brace, Cabinet- Lower Front
5	900-4428SP		Brace, Cabinet- Upper Front & Rear
6	900-1714	930-0411	Spacer, Flue Cap
7	900-5541	200-6742	Base, MJCF/FMCF/Spreader Cabinet- One-Piece
8	900-9316	200-6732	Back, Cabinet- MJCF/FMCF, CRS
*	910-9316SP	210-6732	Back, Cabinet- MJCF/FMCF, S/S
9	816-0128		Insulation, Cabinet- Upper Rear
10	816-0127		Insulation, Cabinet- Lower Rear
11	900-4419		Retainer, Insulation- Upper and Lower Back
12	823-2150	823-4710	Fluecap, MJCF/FMCF
13	824-0491	824-1318	Topcap, Single – MJCF/FMCF
*	824-0492	824-1373	Topcap, Dual – MJCF/FMCF
*	824-0493	824-1434	Topcap, Triple – MJCF/FMCF
*	824-0494	824-1449	Topcap, Quad – MJCF/FMCF
14	810-1422	210-6764	Handle, Door- Wireform
15	824-0118SP		Panel, Door- MJCF/FMCF, CRS
*	824-0770SP	824-1326	Panel, Door- MJCF/FMCF, S/S
16	930-6604	200-6762	Liner, Door- All MJCF/FMCF
17	806-4487SP		Pin Assembly, Door- All MJCF/FMCF
18	810-1508		Hinge, Door- All MJCF/FMCF
*		823-4713	Hinge, Door Lower Euro-Look
*		823-4715	Hinge, Door Upper Euro-Look
*		809-0449	Screw, #10 x ½ Phip TR HD NP
19	810-1105		Magnet, Door- All MJCF/FMCF
20	900-1390		Brace, Frypot to Cabinet- MJCF/FMCF
*		106-3931	Door Assembly, CF Euro-Look
*		106-4035	Cabinet Assembly MJCF Single Euro-Look CRS
*		106-4029	Cabinet Assembly MJCF Single Euro-Look S/S
*	809-0535		T-Nut, Fluecap (round hole)
*	809-0015		Cagenut, Fluecap (square hole)

\* Not illustrated.

 Use standard part.

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**2.3.2 Filter Magic II & Spreader Cabinet Cabinetry**



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**2.3.2 Filter Magic & Spreader Cabinet Cabinetry (cont.)**

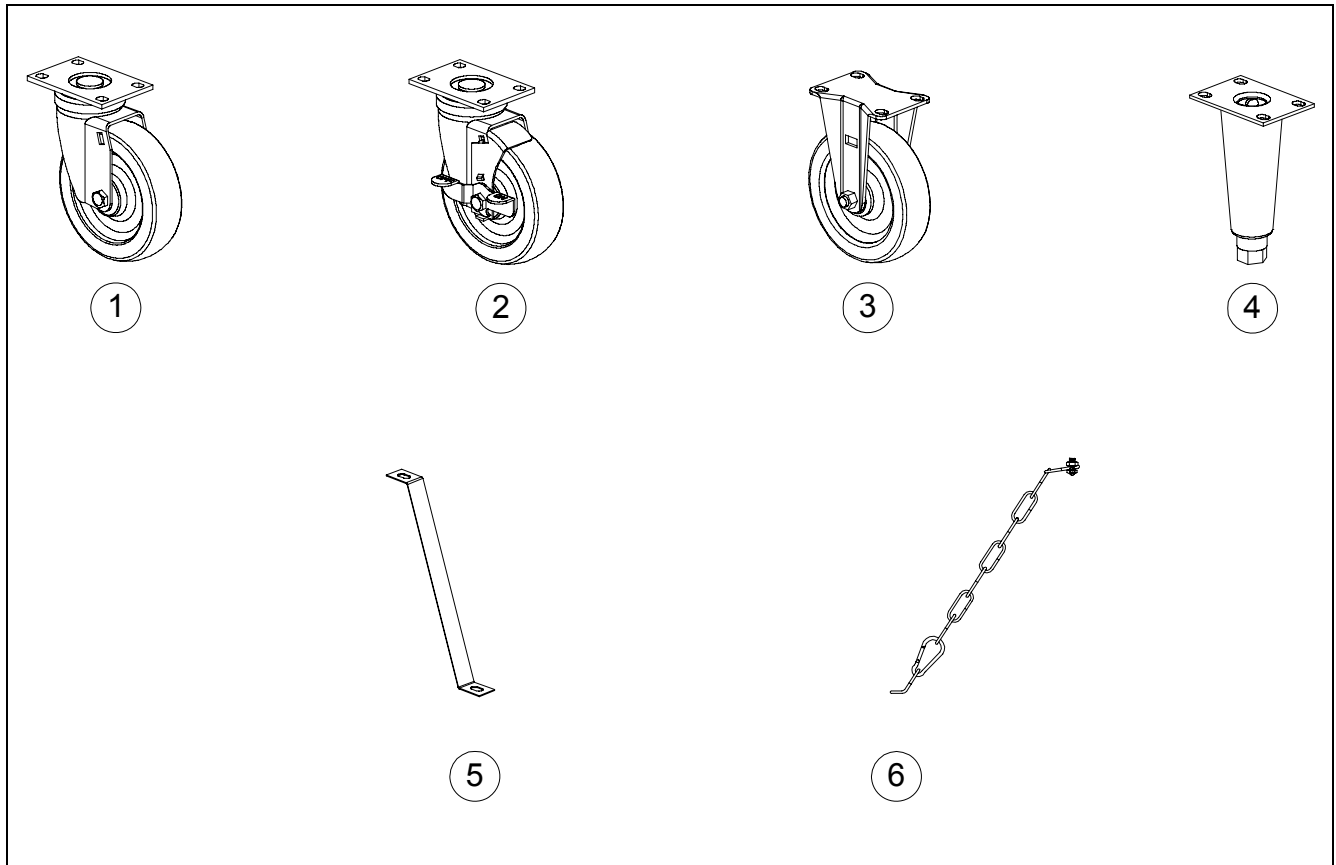
ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
1	201-0486SP	201-6964	Side, Left- Filter Magic/Spreader Cabinet- CRS
*	211-0486SP	211-8444	Side, Left- Filter Magic/Spreader Cabinet- S/S
2	202-0486SP	202-6964	Side, Right- Filter Magic/Spreader Cabinet- CRS
*	212-0486SP	212-8444	Side, Right- Filter Magic/Spreader Cabinet- S/S
3	900-7277		Support, Drain Pan (Side Stiffener)
4	900-4428SP		Brace, Upper Front & Rear, Filter Magic/Spreader Cabinet
5	900-4401	200-6758	Brace, Middle- Front, Filter Magic/Spreader Cabinet
6	900-2877SP		Brace, Lower- Front, Filter Magic Cabinet
7	106-0414SP		Rail Assembly, Filter Magic (See Item #7, Section 2.3.1 for Spreader Base Assembly)
8	810-0007		Leg, Adjustable- 1-1/4" Square Tubing
9	910-1832		Retainer, Leg
10	910-2620		Leg, Front- Filter Magic Cabinet
11	900-9330SP	200-8522	Back, Cabinet- Filter Magic/Spreader Cabinet CRS
		210-8522	Back, Cabinet- Filter Magic/Spreader Cabinet S/S
12	824-0253	824-1366	Fluecap, Filter Magic/Spreader Cabinet, without Foodwarmer
*	823-1453	823-4802	Fluecap, Filter Magic/Spreader Cabinet, with Foodwarmer
13	823-0313		Box, Storage- Power Shower
14	826-0993SP		Handle, Storage Box and Frypot Cover
15	806-1343		Cover- Frypot, Filter Magic/Spreader Cabinet
16	910-7704		Cover, With Hole- Filter Magic/Spreader Cabinet- S/S
*	910-7705		Cover, With Hole- Filter Magic/Spreader Cabinet- M/S
*		806-6989	Café Pan Kit
*		106-4109	Cabinet Assembly, Filter Magic Filter Ready Euro-Look CRS
*		106-4110	Cabinet Assembly, Filter Magic Filter Ready Euro-Look S/S

\* Not illustrated.

■ Use standard part.

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**2.4 Casters, Legs and Associated Hardware**



ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
1	810-0356		Caster, Swivel, 5", w/o Brake
2	810-0357		Caster, Swivel, 5", w/Brake
3	810-0378		Caster, Rigid, 5", w/o Brake
*		810-0750	Caster, Rigid, 5", w/o Brake
*	810-1551		Caster, 6 to 6.5-inch Adjustable, w/Brake
4	806-5043		Leg, 6" Nickel Plated (Not Used on Filter Magic Filter Cabinet)
*	810-1205		Leg, 6" S/S (Not Used on Filter Magic Filter Cabinet)
*	806-3811		Leg Assembly, Set of 4, 6"- Nickel Plated
5	826-1095		Anchor Strap Kit (For Use on Single Fryers w/Legs)
6	826-0900		Chain Restraint Kit (For Use on Fryers w/Casters)
*	826-1113		Kit, Mounting Hardware, 1 Caster/Leg
*	826-1043		Kit, Mounting Hardware, 4 Casters/Legs
*		826-1716	Kit, Mounting Hardware, 1 Caster/Leg
*		826-1717	Kit, Mounting Hardware, 4 Casters/ Legs

\* Not illustrated.

Use standard part.



## MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS CHAPTER 2: PARTS LIST

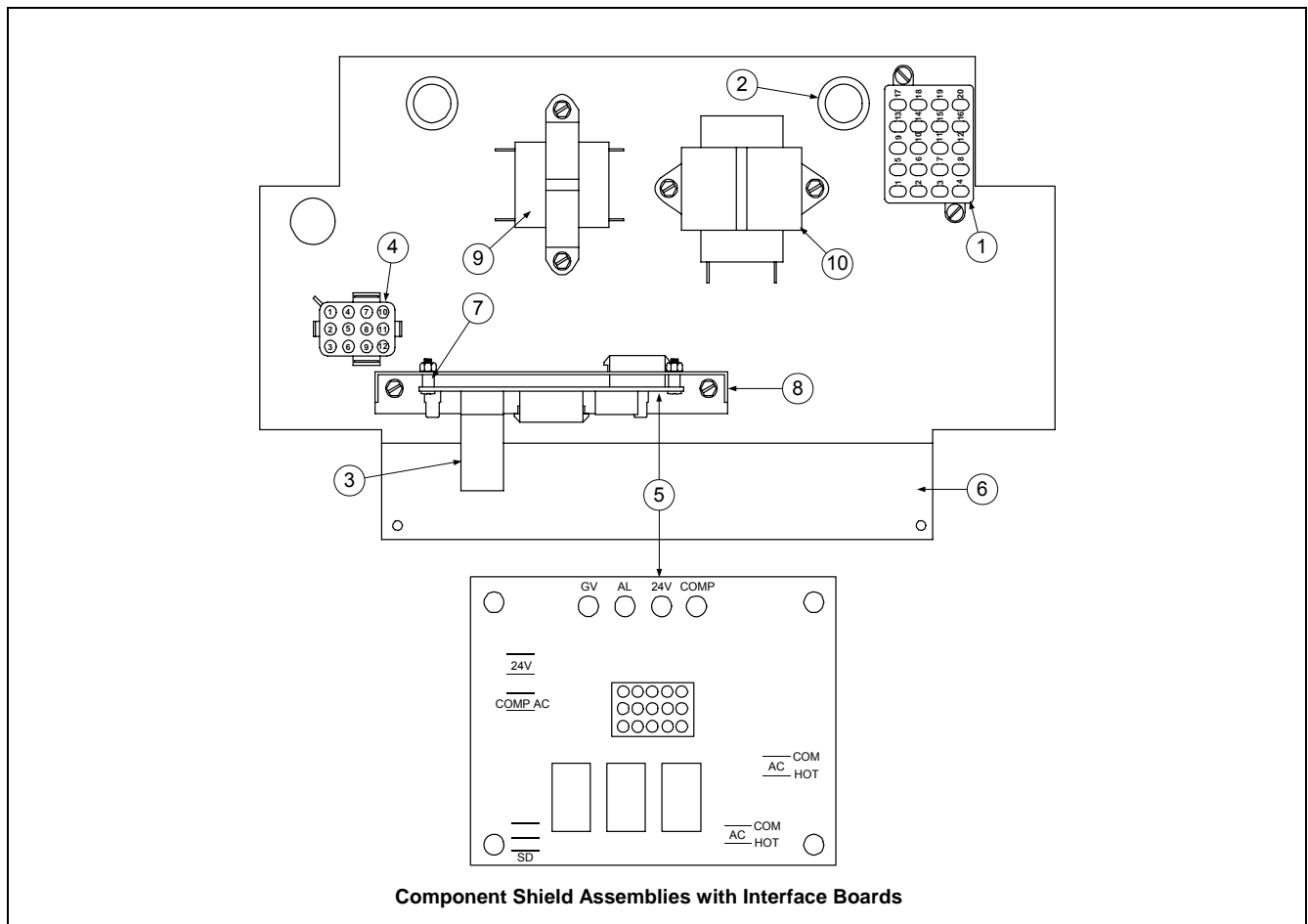
### 2.5.1 Component Shield Assemblies – No Interface Board (cont.)

ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
	826-1546	806-9622	Kit, Melt Cycle Timer (Replaces for Melt Cycle Timer Motor) [Items 5, 6 & 7]
5	900-8741		Bracket, Melt Cycle Timer
6	806-9613		PC Board Assembly, Melt Cycle Timer (50 and 60 Hz)
7	809-0580		Standoff, PC Board
8			Transformer, 24V
	807-0800		120V 50/60 Hz
	807-0680		240V 50/60 Hz
9	826-1374		Screw, #10 x 1/2" Hex Washer Head (Qty: 25)
10	809-0097		Screw, 6-32 x 1" Slotted Head
*	807-0670		Relay, Lockout Older Units
*	826-1358		Nut, 6-32 Hex (Qty: 25)

\* Not illustrated.

 Use standard part.

### 2.5.2 Component Shield Assemblies – With Interface Board



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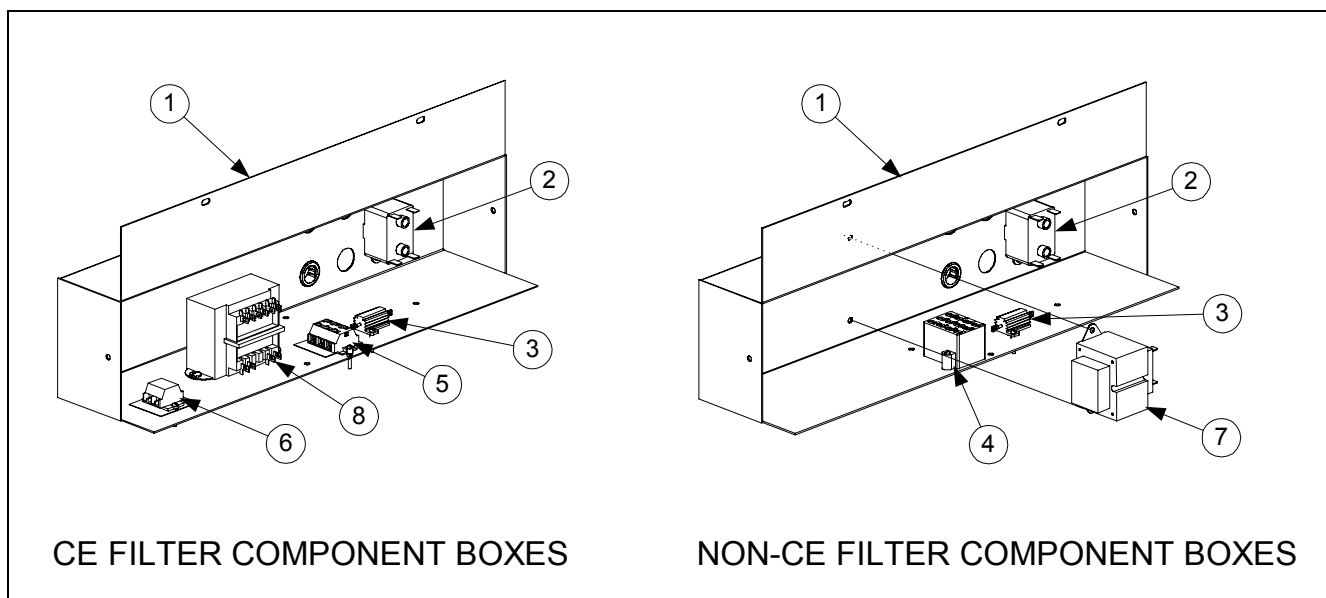
**2.5.2 Component Shield Assemblies – With Interface Board (cont.)**

ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
			Complete Shield Assemblies
	806-4773SP		120V, 50/60 Hz, With Interface Board
	806-4775SP		240V, 50/60 Hz, With Interface Board
			Shield Components
1	807-0066		Block, Terminal, 20-Pin
2	807-2469		Bushing, Heyco, 1" ID
3	810-2243		Clip, Relay Retaining
4	807-0160		Connector, 12-Pin
5	806-3548		Interface Board, Universal Replacement
6	900-4340		Shield, Component
7	809-0349		Spacer, 4 x 6 mm, Interface Board Standoff
8	824-0161		Support, Interface Board
9			Transformer, 12V
	807-0855		120V 50/60 Hz 20VA
	807-0979		240V 50/60 Hz 20 VA
10			Transformer, 24V
	807-0800		120V 50/60 Hz 50 VA
	807-0680		240V 50/60 Hz 43 VA

\* Not illustrated.

Use standard part.

**2.5.3 Filter Box Assemblies**





## MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS CHAPTER 2: PARTS LIST

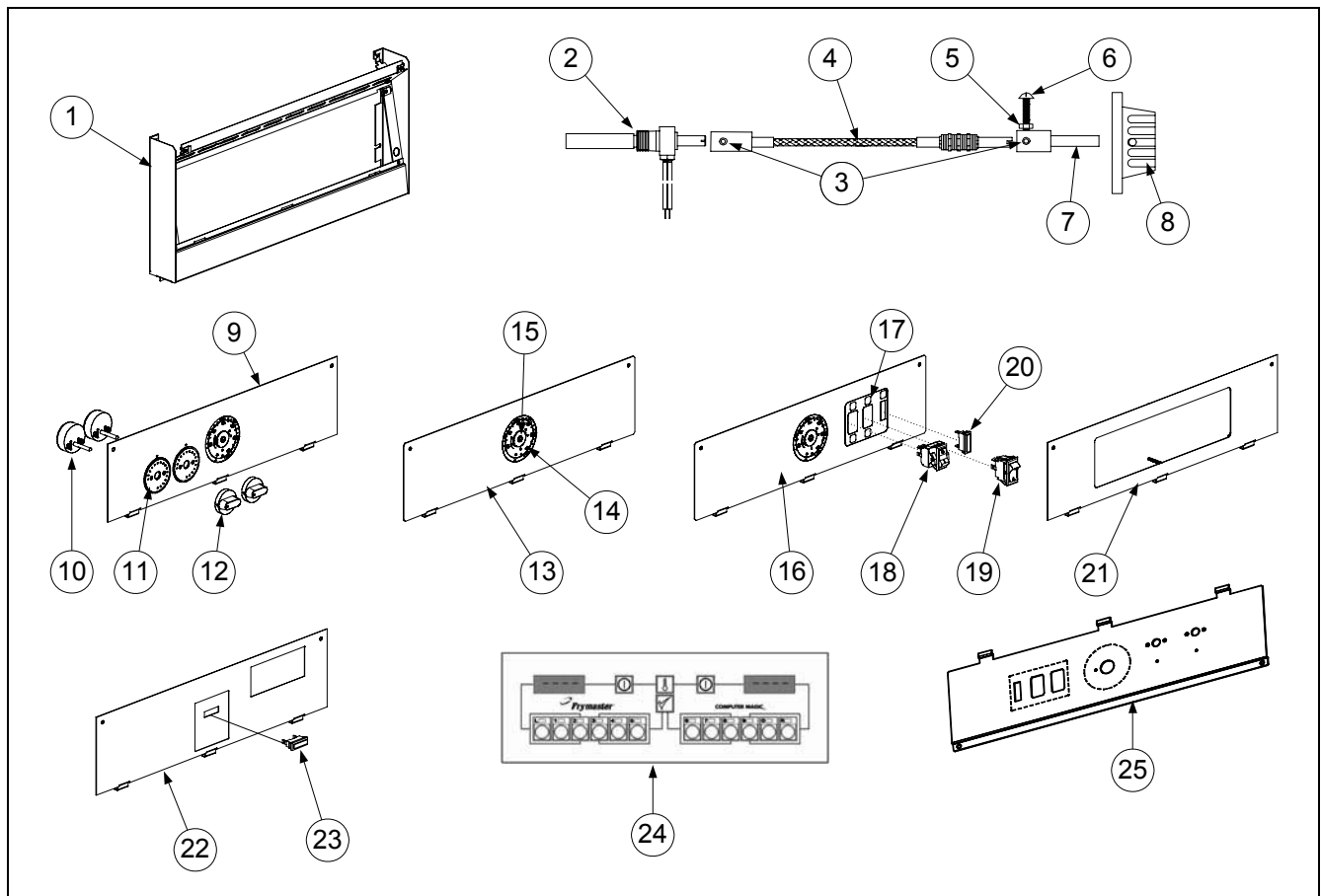
### 2.5.3 Filter Box Assemblies (cont.)

ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
1	823-1584		Box, Control- FMCF Filter
*	823-1585		Box, Control- Under-Counter CF-Filter
*	807-0124		Bushing, Heyco (Control Box Back)
2	807-0012		Relay, 18 Amp- 1/3 HP 24V Coil (4-terminal)
*	807-2434		Relay, 18 Amp- 1/3 HP 24V Coil (5-terminal)
3	806-4358		Resistor, Pan Heater Light
4	807-0276		Terminal Block, 12-Pin
5	810-1168		Terminal Block (CE)
6	810-1164		Terminal Block (CE)
7	807-0800		Transformer, 24V – 120V 50/60 Hz 50 VA
*	807-0680		Transformer, 24V – 240V 50/60 Hz 43 VA
8	807-1999		Transformer, 24V – 240V 50/60 Hz 50 VA (CE Only)

\* Not illustrated.

Use standard part.

### 2.6 Control Panel Assemblies and Related Components




**MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS  
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**2.6 Control Panel Assemblies and Related Components (cont.)**

ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
1	806-4992SP	106-4055	Frame Assembly, Control Panel
*	809-0448		Clip, Tinnerman (Control Panel Screw)
2	806-0183	106-0771	Thermostat, Operating (Non-CE)
*	806-9617	806-9708	Thermostat, Operating (CE Only)
3	809-0157		Screw, Set- 8-32 x 3/8"
4	810-1000	810-2954	Shaft, Flex- Thermostat Control
5	809-0050		Nut, Hex
6	826-1361		Screw, Stop (Qty: 25)
7	810-0624	810-2862	Adapter, Shaft End
*	900-2071		Bracket, Shaft Guide- Thermostat Shaft
*	900-2241	200-8536	Bracket, Thermostat
8	810-0334		Knob, Thermostat
9	910-7287	210-8702	Panel, Control- MJCF With Timers- Millivolt Only
*	910-7280	210-8699	Panel, Control- MJCFE With Timers
10	810-0585		Timer, 15-Minute Mechanical
11	802-1473		Label, Dial- 15-Minute Mechanical Timer
*	910-1551		Bezel, 15-Minute Mechanical Timer
12	810-1287		Knob, 15-Minute Timer
13	910-7288	210-8698	Panel, Control- MJCF, Millivolt Only (Older units use 910-7282)
*	806-0831SP		Switch, Toggle- MJCF, Millivolt Only (Older Production Units)
14	802-1470		Label, Dial Plate- Thermostat Knob
15	826-1395		Button, Plug- Thermostat Knob Shaft (Qty: 10)
*	826-1338		Bushing, Heyco- Shaft Button Plug (Qty: 25)
16	910-7281	210-8701	Panel, Control- MJCFE, With Timers
17	802-0765		Label, On/Off, Light, Melt Cycle Option- MJCFE
18	807-3498		Switch, Rocker, Melt Cycle I/O, w/24V Lamp, Amber
*	807-0496		Switch, Rocker Momentary on/off switch
*	807-3575		Hole Plug, Switch (MJCFE Without Melt Cycle Option)
19	807-3498		Switch, On/Off (Power)
*	826-1792		Switch Kit, On/Off (Power)/Melt-Cycle (To Replace Old Switches)
20	807-1525		Light, 24V (White Lens)
21	823-1800	210-6777	Panel, Control- MJCFEC (For Computers)
*		210-6766	Panel, Control Euro-Look Single Non-Computer
22	910-7289		Panel, Filter- FMC Filter Magic II Cabinet
23	807-1275		Light, Ready Indicator- 2V
24	106-1177	106-4168	Computer, CMIII.5- MJCFEC (Non-CE)
*	106-1202	106-4169	Computer, CMIII.5- MJCFEC (CE)
*	106-6572		Controller, Digital - MJCFE

\* Not illustrated.

 Use standard part.

# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS

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### 2.6 Control Panel Assemblies and Related Components (cont.)

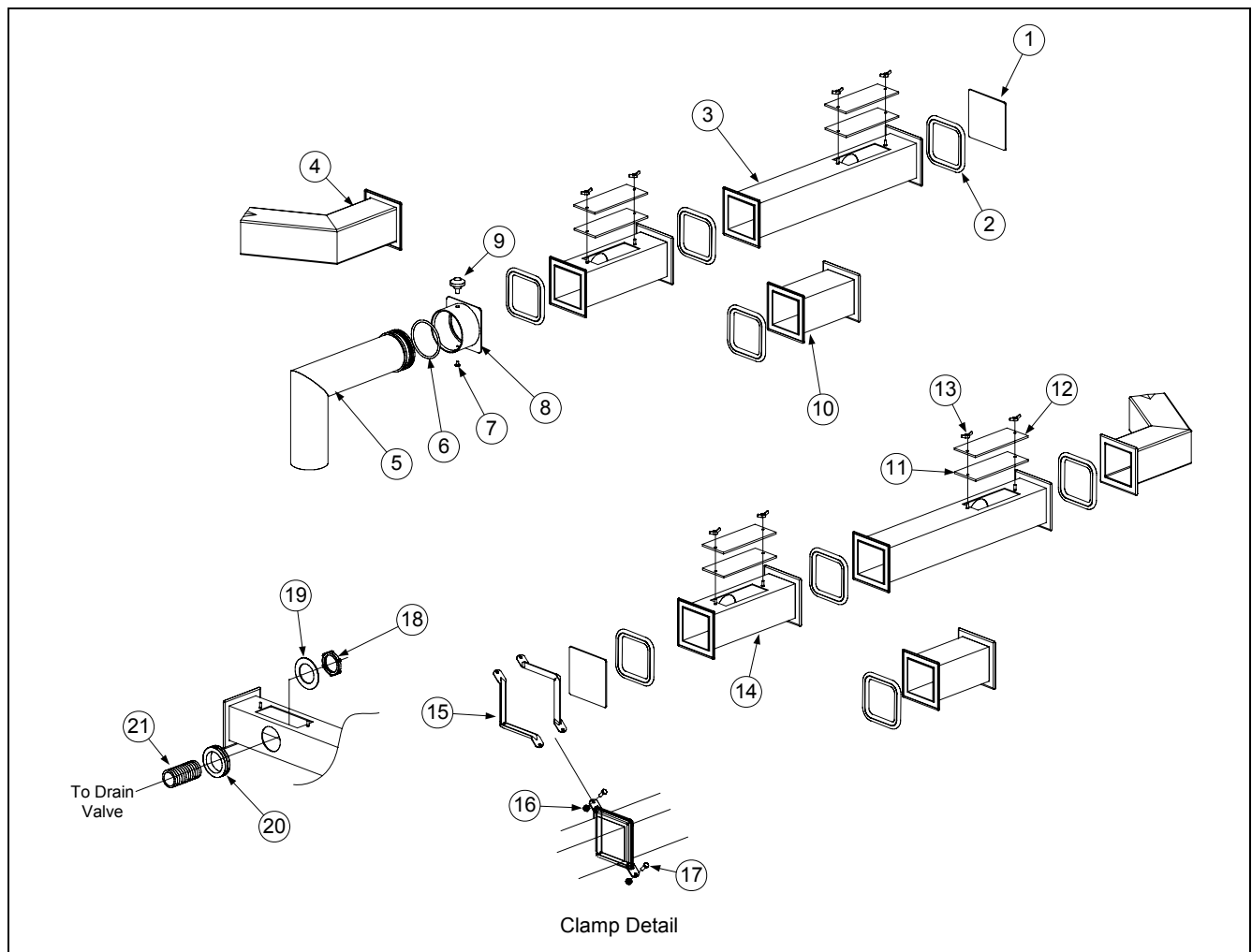
ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
*	806-2071		Harness, Computer (Computer To Interface Board)
25		210-8702	Panel, Control w/ Timers CF Euro-Look
*		106-3373	Controller Assembly, Basket Lift w/ Timers
*		806-3660	Sound Device, High Output
*		806-4797	Buzzer Assembly
*		910-7315	Panel, Spreader Control CF Blank Panel Euro-Look

\* Not illustrated.

Use standard part.

### 2.7 Filtration System Components

#### 2.7.1.1 Filter Magic II Drain Manifold Components



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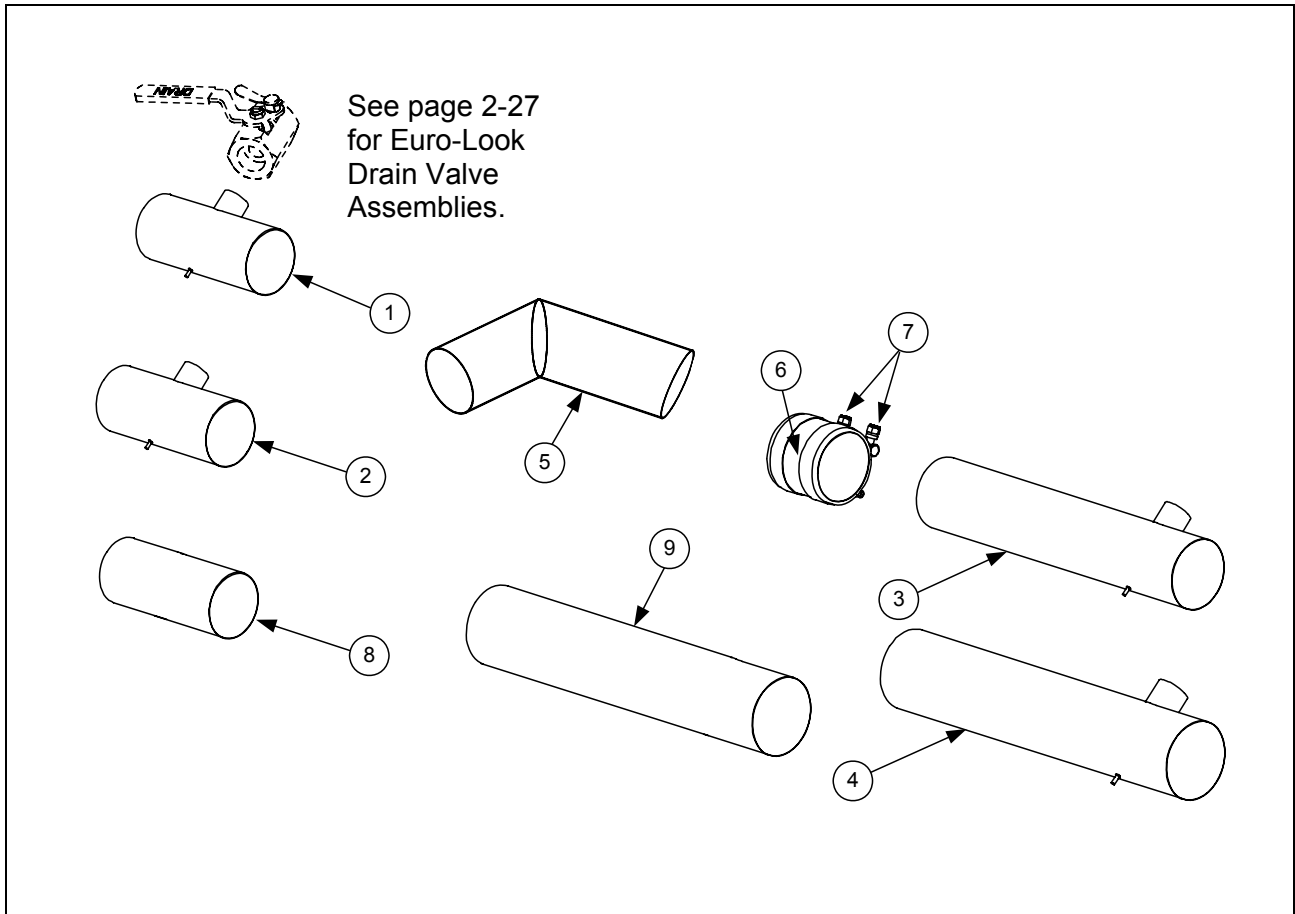
**2.7.1.1 Filter Magic Drain Manifold Components (cont.)**

ITEM	STANDARD PART # **	COMPONENT
1	900-0757	Cover, Drain End, Square Drain- FMCF
2	816-0032	Gasket, Flange, Square Drain- FMCF
3	823-0717	Tube, Square Drain- 2-½ x 15.38"- FMCF
*	826-0715SP	Drain Tube Kit ( <i>Gaskets, Clamps, Connecting Hardware, Clean-Out Cover</i> )
4	823-0719	Elbow, Square Drain- FMCF
*	826-0716SP	Sq Drain Elbow Kit ( <i>Elbow, Gaskets, Clamps, Connecting Hardware</i> )
	806-4068SP	Elbow, Swivel, Complete Assembly (Items 5-9)- FMCF
5	823-1091	Tube Assembly
6	816-0083	O-Ring, Swivel Collar
7	809-0115	Screw, Retainer- 10-32 x ¼" Slotted Head
8	823-1092	Collar, Swivel Drain
9	810-0388	Knob, Clamping- Swivel Drain Collar
10	823-0714	Tube, Square Drain- 2-½ x 5.22"- FMCF Spreader Cabinet Option
11	816-0021	Gasket, Drain Cleanout – FMCF
12	826-1348	Cover, Drain Cleanout – FMCF (Qty: 5)
13	826-1382	Nut, Wing- 8-32 (Qty: 10)
14	823-0718	Tube, Square Drain- 2-½ x 8" – FMCF
15	810-0396	Clamp, Square Drain Flange – FMCF
*	826-0877	Clamp Kit – FMCF
16	826-1376	Nut, Keps- 10-32 (Drain Flange Clamp – Qty: 10)
17	826-1369	Screw, 10-32 x ½" Hex Head (Qty: 10)
18	809-0347	Nut, Drain Retainer (Conduit Nut)
19	826-1345	Washer Retainer, Drain Retainer Nut (Qty: 25)
20	816-0092	Grommet, Drain Retainer- 1"
21	813-0284	Nipple, Straight With Taper- 1 x ¾" NPT BM

\* Not illustrated. \*\* See page 2-17 for a *Euro-Look* parts list.

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**2.7.1.2 Euro-Look Drain Manifold Components**



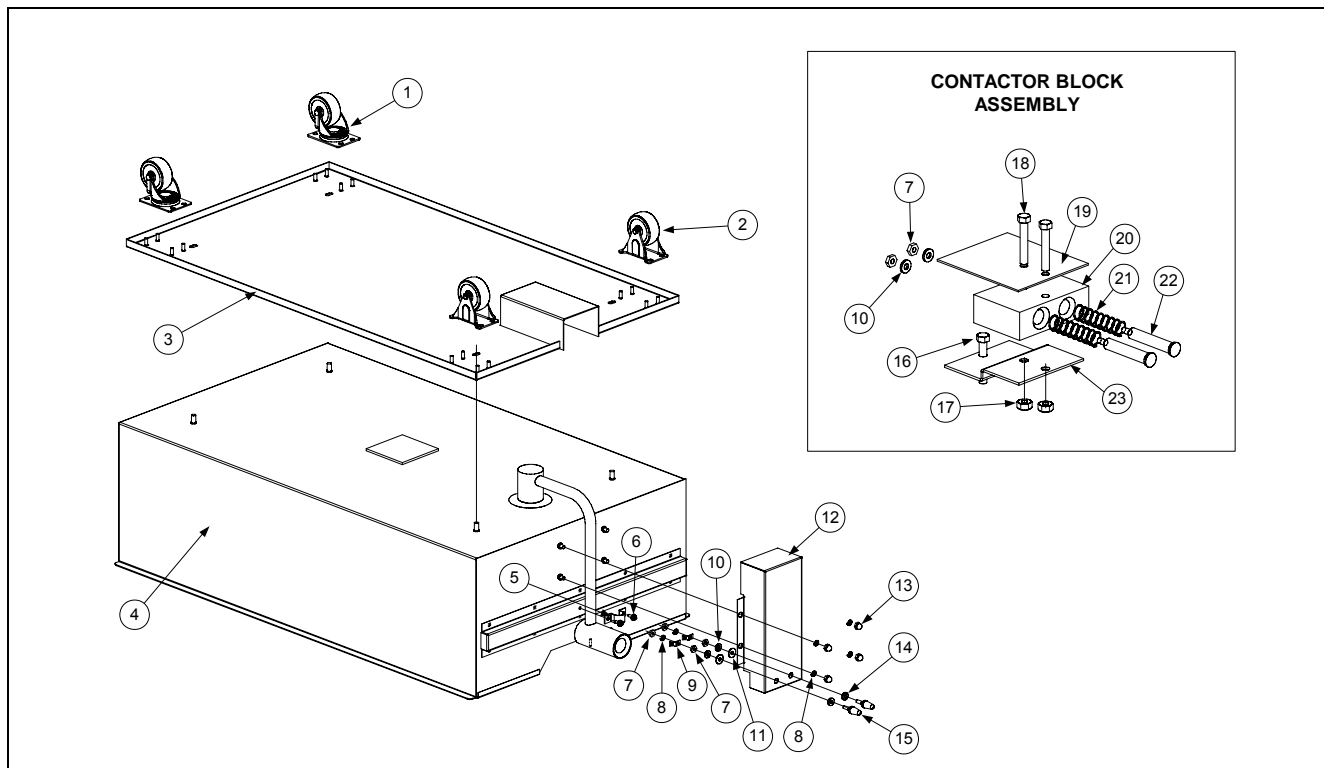
ITEM	EURO-LOOK PART # **	COMPONENT
1	823-4764	Drain Tube, Left End Open /Right End Closed, Short
2	823-4763	Drain Tube, Left and Right Ends Open, Short
3	823-5031	Drain Tube, Left End Open /Right End Closed, Long
4	823-5030	Drain Tube, Left and Right Ends Open, Long
5	823-4765	Drain W/A, Elbow CF
6	816-0625	Sleeve
7	809-0969	Clamp
8	200-6974	Tube, Drain SPR CF Short
9	200-6973	Tube, Drain SPR CF Long
*	KIT6033	Kit, Round Drain Clamp (2 or Item 7 and 1 of Item 6)
*	816-0630	Screw Covers

\* Not illustrated. \*\* See page 2-16 for a standard parts list.

# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS

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### 2.7.2 Filter Magic II Filter Pan Components – Outer Pan Components



ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
*	806-6095SP		FMCF Complete Filter Pan Assembly – <u>Inner &amp; Outer Pan Assembly</u> ( <i>Crumb Screen Not Included – Order Separately, Page 2-18</i> )
	806-4470SP		FMCF Filter Pan- Outer Pan Assembly, Complete
*	806-4373		Heater, Pan- 24V 25W FMCF
1	810-0006		Caster, Swivel- 2" (Front Only)
2	810-0005		Caster, Rigid- 2" (Rear Only)
*	809-0189		Washer, Flat- ¼"
*	826-1362		Nut, ¼-20 Hex (Qty: 10)
3	823-1421		Base, Outer Filter Pan
4	823-1452SP		Pan, Filter- Outer Pan (Pan Only)
5	910-1350		Clamp, Suction Tube
6	826-1371		Screw, #8 x ½" Hex Head (Qty: 25)
7	809-0053		Nut, 10-32 Hex (Also Used With Contactor Block Assembly)
8	809-0184		Washer, Lock- #10
9	826-1337		Tab, Terminal (Qty: 5)
10	809-0185		Washer, Flat- #10 SAE (Also Used With Contactor Block Assembly)
11	807-1367		Insulator, Flat Washer

\* Not illustrated.

Use standard part.

**MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS  
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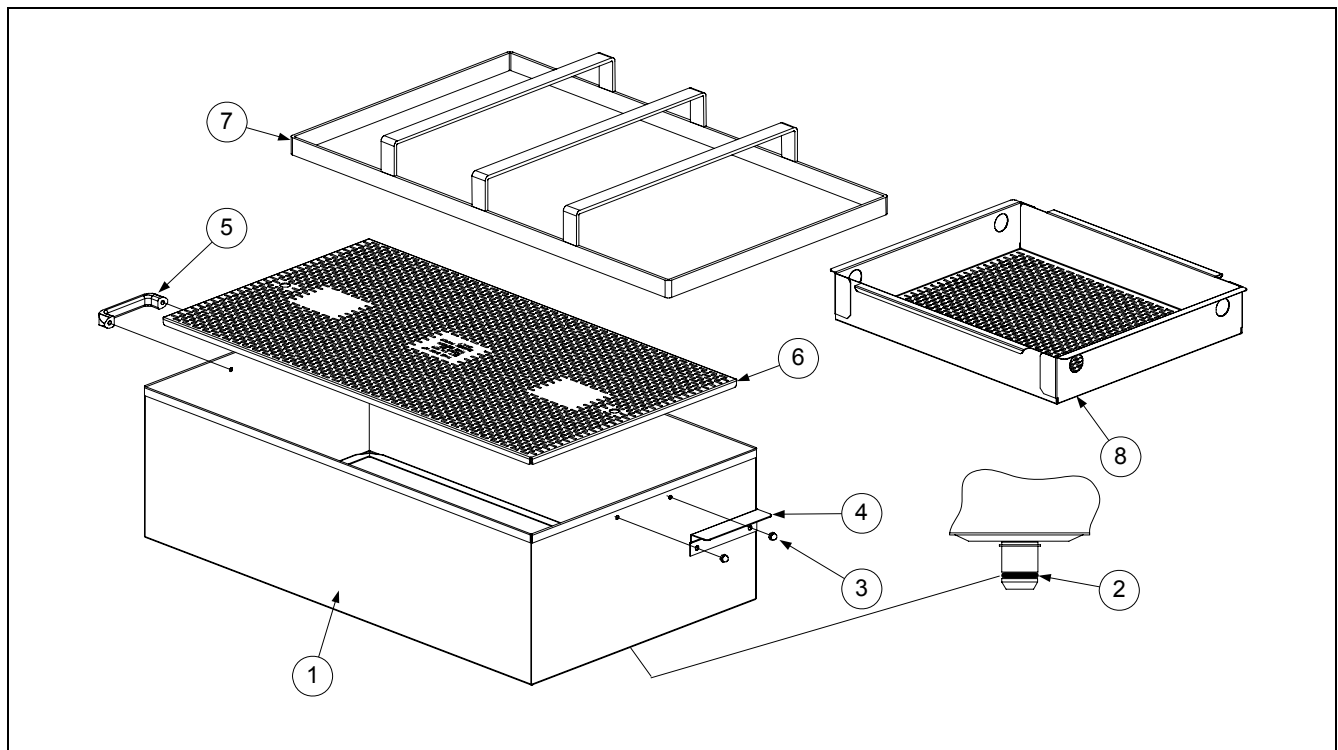
**2.7.2 Filter Magic II Filter Pan Components – Outer Pan Components (cont.)**

ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
12	824-0292		Cover, Suction Tube
13	809-0020		Nut, Cap- 10-24 NP
14	807-1270		Insulator, Nylon Shoulder
15	810-0695		Pin, Contact- Suction Tube Cover
	806-4694SP		Contactora Block Assembly
16	826-1389		Bolt, 1/4-20 x 3/4" Hex Head (Qty: 10)
17	826-1372		Nut, Grip- 1/4-20 Hex (Qty: 10)
18	809-0291		Bolt, 1/4-20 x 1-1/2" Hex Head
19	816-0126		Insulation, Contactora Block Terminals
20	810-0694		Block, Contactora
21	810-0696		Spring, Contactora Contacts
22	810-0693		Contact Pin, Contactora Block
23	900-1521		Bracket, Contactora Block

\* Not illustrated.

Use standard part.

**2.7.3 Filter Magic Filter Pan Components – Inner Pan Components**



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**2.7.3 Filter Magic Filter Pan Components – Inner Pan Components (cont.)**

ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
*	806-6095SP		FMCF Complete Filter Pan Assembly – <u>Inner &amp; Outer Pan Assembly</u> ( <i>Crumb Screen Not Included – Order Item #8 Below</i> )
1	823-1745SP		Pan, Inner- FMCF
*	806-4866SP		Pan Assembly, Inner- FMCF (Crumb Screen Not Included)
2	816-0117		O-ring, Inner Pan Connection
3	809-0045		Nut, Cap- 10-32
4	910-1366		Handle, Filter Pan, Back (Nearest End With Hole In Pan Bottom)
5	810-0180		Handle, Filter Pan, Front (Nearest Door On Filter Cabinet)
6	823-2010		Screen, Filter Paper Support
7	810-1409		Ring, Hold-Down- FMCF
*	803-0171		Paper, Filter (100 Sheets) 33-¼ x 21"
*	803-0002		Powder, Filter (100 1-Cup Applications)
8	824-0417		Screen Assembly, Crumb- FMCF

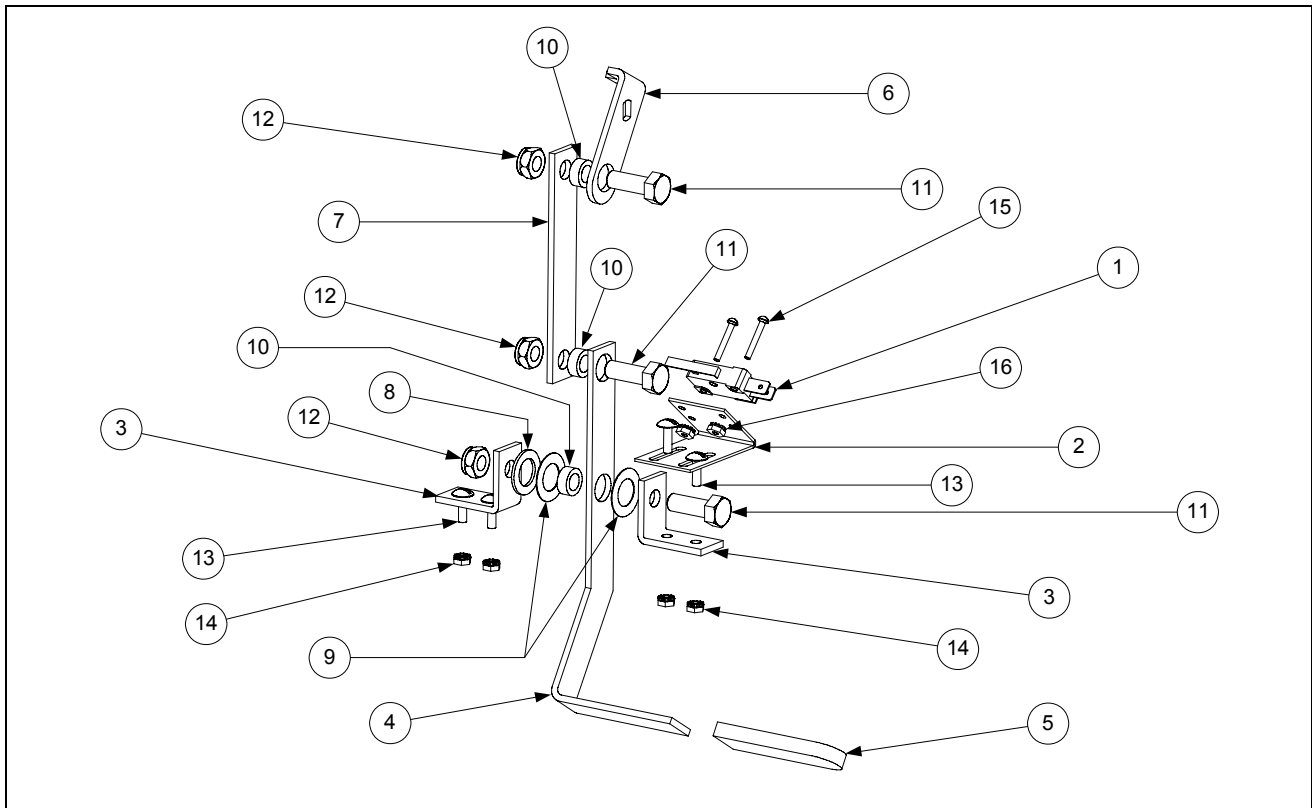
\* Not illustrated.

 Use standard part.



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**2.7.4 Oil Return Handle Components – Units Built Prior To April 2001**

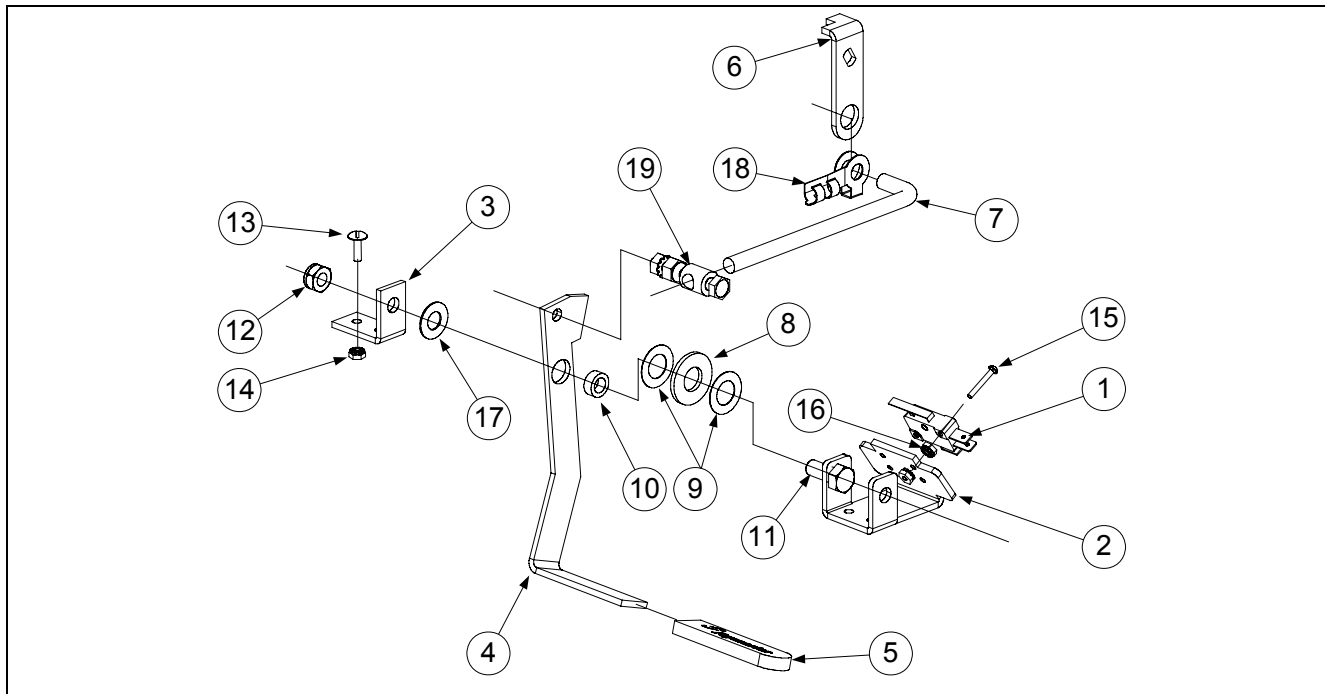


ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
1	807-2103		Microswitch
2	930-0839		Bracket, Microswitch
3	810-1999		Bracket, Valve Handle
4	900-1853		Handle, Oil Return
5	814-0047		Sleeve, Handle
6	900-0239		Arm, Oil Return Valve
7	920-0220		Linkage, Oil Return Valve
8	809-0200		Washer, Flat 1/2"
9	826-1381		Washer, 1/2 I.D. x 7/8 O.D.- Nylatron (Qty: 10)
10	810-0220		Spacer, Tubular, .493 O.D.
11	809-0142		Screw, 5/16-24 x 3/4" Hex Head
12	809-0056		Nut, 5/1624, Hex Head, Nylon Lock
13	809-0104		Screw, 4-32 x 1/2" Slotted Head
14	809-0247		Nut, Keps Hex, 8-32
15	826-1359		Screw, 4-40 x 3/4" Slotted Head (Qty: 25)
16	826-1366		Nut, Keps Hex, 4-40 (Qty: 25)

Use standard part.

**MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS  
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**2.7.5 Oil Return Handle Components –Units Built April 2001 and After**

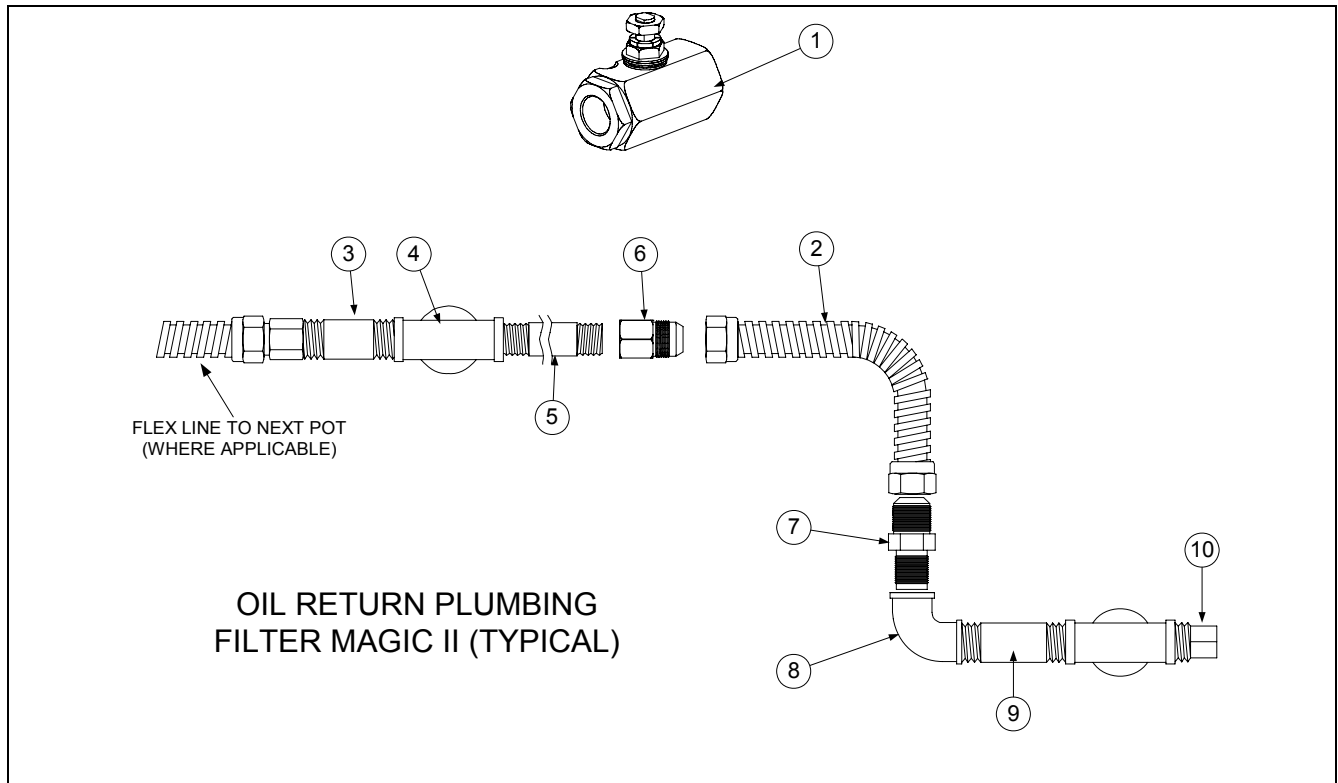


ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
1	807-2103		Microswitch
2	200-0821		Bracket, Microswitch
3	810-1999		Bracket, Valve Handle
4	200-0938		Handle, Oil Return
5	814-0047		Sleeve, Handle
6	900-0239		Actuator Arm, Oil Return Valve
7	200-1059		Rod, Oil Return Linkage
8	809-0200		Washer, Flat ½"
9	826-1381		Washer, ½ I.D. x 7/8 O.D.- Nylatron (Qty: 10)
10	810-0220		Spacer, Tubular- 0.493 O.D.
11	809-0142		Bolt, 5/16-24 x ¾" Hex Head
12	809-0056		Nut, 5/16-24, Hex Head, Nylon Lock
13	809-0104		Screw, 4-32 x ½" Slotted Head
14	809-0247		Nut, Keps Hex- 8-32
15	826-1359		Screw, 4-40 x ¾" Slotted Head (Qty: 25)
16	826-1366		Nut, Keps Hex, 4-40 (Qty: 25)
17	810-1165		Washer, Teflon- 0.372 I.D. x 0.753 O.D.
18	809-0601		Clip, Clevis- Oil-Return Linkage Rod
19	810-0285		Swivel Control, Oil-Return Linkage Rod

Use standard part.

## MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS CHAPTER 2: PARTS LIST

### 2.7.6 Oil Return Plumbing



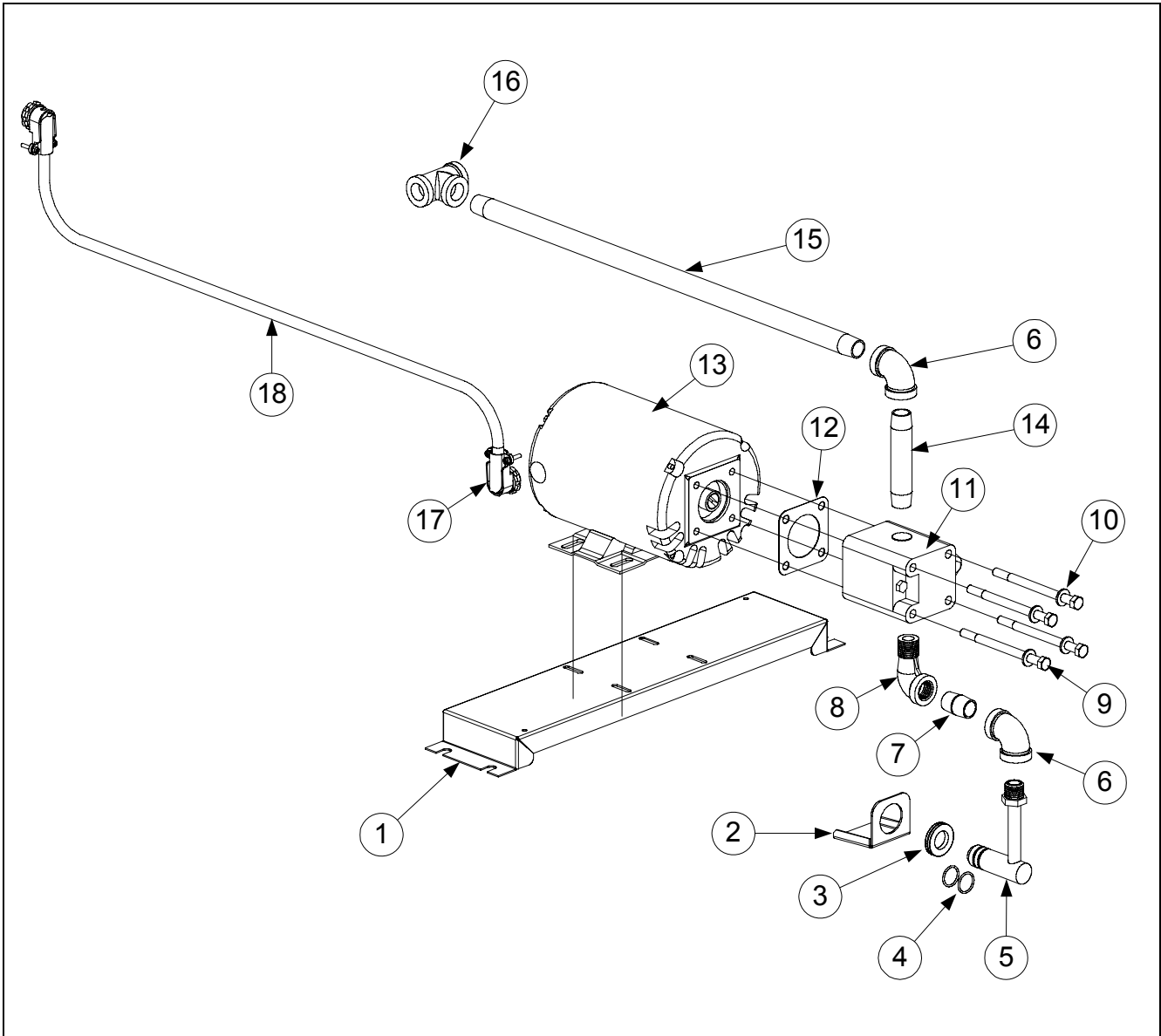
ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
1	810-0278		Valve, Oil-Return- ½"
*	900-2935		Retainer, Oil-Return Valve Nut
2			Flexline, Oil-Return – Measure Flexline to Determine Length Needed
*	810-1043		Flexline, Oil-Return- 9-½"
*	810-1055		Flexline, Oil-Return- 11-½"
*	810-1057		Flexline, Oil-Return- 13"
*		806-9438SP	Flexline, Oil-Return- 14" with Male Ends
*	810-1369		Flexline, Oil-Return- 17-½"
*	810-1068		Flexline, Oil-Return- 21-½"
3	813-0087		Nipple, ½ x 1-½" NPT BM
4	813-0003		Tee, ½" NPT BM
5	813-0362		Nipple, ½ x 7-½" NPT BM
6	810-1669		Adapter, Female- 5/8 O.D. x ½" NPT
7	810-1668		Adapter, Male- 5/8 O.D. x ½" NPT
8	813-0062		Elbow, 90° ½" NPT BM
9	813-0265		Nipple, ½ x 2-½" NPT BM
10	813-0156		Plug, ½" NPT BM

\* Not illustrated.

Use standard part.

**MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS  
CHAPTER 2: PARTS LIST**

**2.7.7 Filter Pump and Motor Components**



ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
1	900-7026		Base, Motor- Adjustable
*	810-0665		Nut, Leveling- Adjustable Motor Base
2	900-1472		Diverter, Oil (To Protect Contactor Block)
3	816-0102		Grommet, Oil Diverter
4	826-1392		O-ring, Filter Pan Connection (Qty: 5)
5	823-1356		Disconnect, Filter Pan Connection (Male)

\* Not illustrated.


 Use standard part.

**MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS  
CHAPTER 2: PARTS LIST**

**2.7.7 Filter Pump and Motor Components (cont.)**

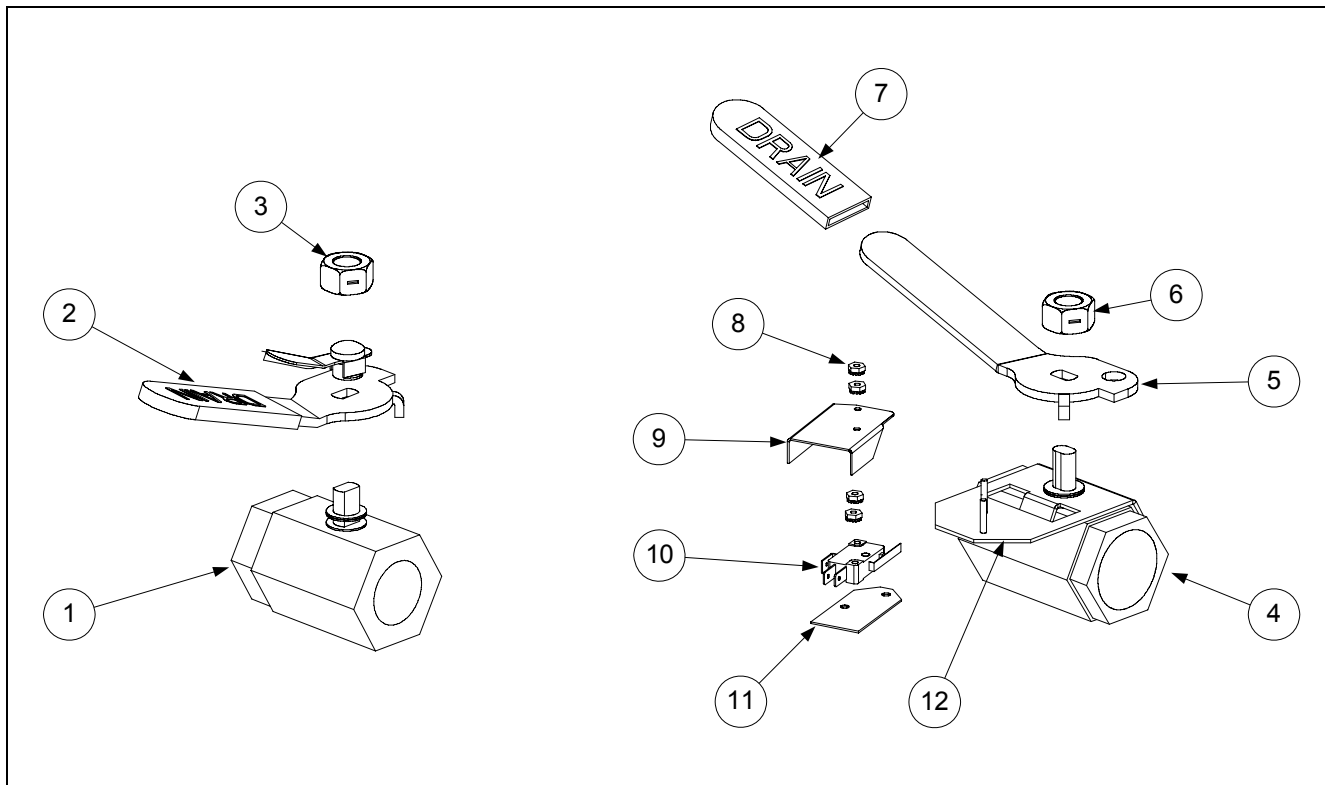
ITEM	STANDARD PART #	EURO-LOOK PART#	COMPONENT
6	813-0062		Elbow, ½" 90° NPT BM
7	813-0022		Nipple, ½" x Close NPT BM
8	813-0165		Elbow, Street- ½" 90° NPT BM
9	809-0514		Bolt, 5/16-18 x 4-½" Grade 5 Hex Head
10	809-0194		Washer, 5/16" SAE Flat
11	826-1264		Pump, Filter-4 GPM (Includes Items #9, #10 & #12)
12	816-0093		Gasket, Pump to Motor
13	826-1712		Motor, Filter- 115VAC 60HZ (Includes Item #12)
*	826-1270		Motor, Filter- 230VAC 50/60HZ (Includes Item #12)
*	826-1755		Motor, Filter- 250VAC 50/60HZ (Includes Item #12)
14	813-0093		Nipple, ½ x 4" NPT BM
15	813-0352		Nipple, ½ x 21-½" NPT BM
16	813-0003		Tee, ½" NPT BM
17	807-0141		Connector, 90° Clamp-Type
18	811-0199		Conduit, 3/8" Flexible (Order By Foot- 2.4 Feet Required)
*	807-1408		Heater, Oil-Return Plumbing- 120V 50W, 70" Length
*	807-2348		Heater, Oil-Return Plumbing- 240V 100W, 70" Length
*	807-2050		Heater, Oil-Return Plumbing- 250V 90W, 70" Length
*	811-0746		Tape, Foil- 1 Roll (Required For Heater Strip Installation)
*	811-0861		Insulation, Foam (Order Per Foot)

\* Not illustrated.

 Use standard part.

## MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS CHAPTER 2: PARTS LIST

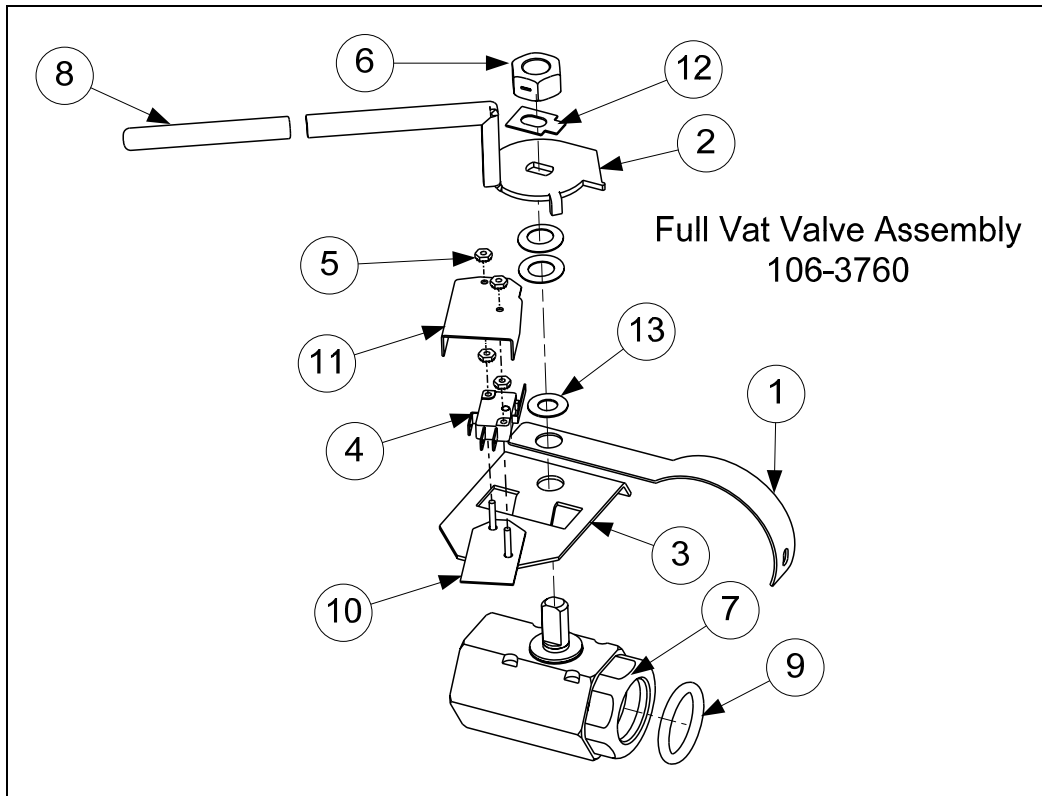
### 2.7.8.1 Drain Valves and Related Components



ITEM	STANDARD PART # **	COMPONENT
1	806-4145	Valve, Drain- 1-¼" (Includes Handle With Lock Pin) For non-filter fryers
*	810-1017	Valve, Drain- 1-¼" (Without Handle)
2	810-1427	Handle, Drain Valve, With Lock Pin
3	809-0540	Nut, Drain Valve (MJ & FMCF)
4	810-1020	Valve, Drain- 1-¼ x 1" (FMCF Units)
5	810-0820	Handle, Drain Valve
6	809-0540	Nut, Drain Valve (MJ & FMCF)
*	900-2936	Retainer, Drain Valve Nut
7	816-0211	Sleeve, Drain Valve Handle
8	826-1366	Nut, 4-40 Keps With External Teeth (Qty: 25)
9	901-2348	Cover, Microswitch
10	807-2103	Microswitch (CE & Non-CE)
11	816-0220	Insulation, Microswitch
12	806-8137	Bracket, Microswitch
* Not illustrated.    ** See page 2-27 for a <i>Euro-Look</i> parts list.		

**MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS  
CHAPTER 2: PARTS LIST**

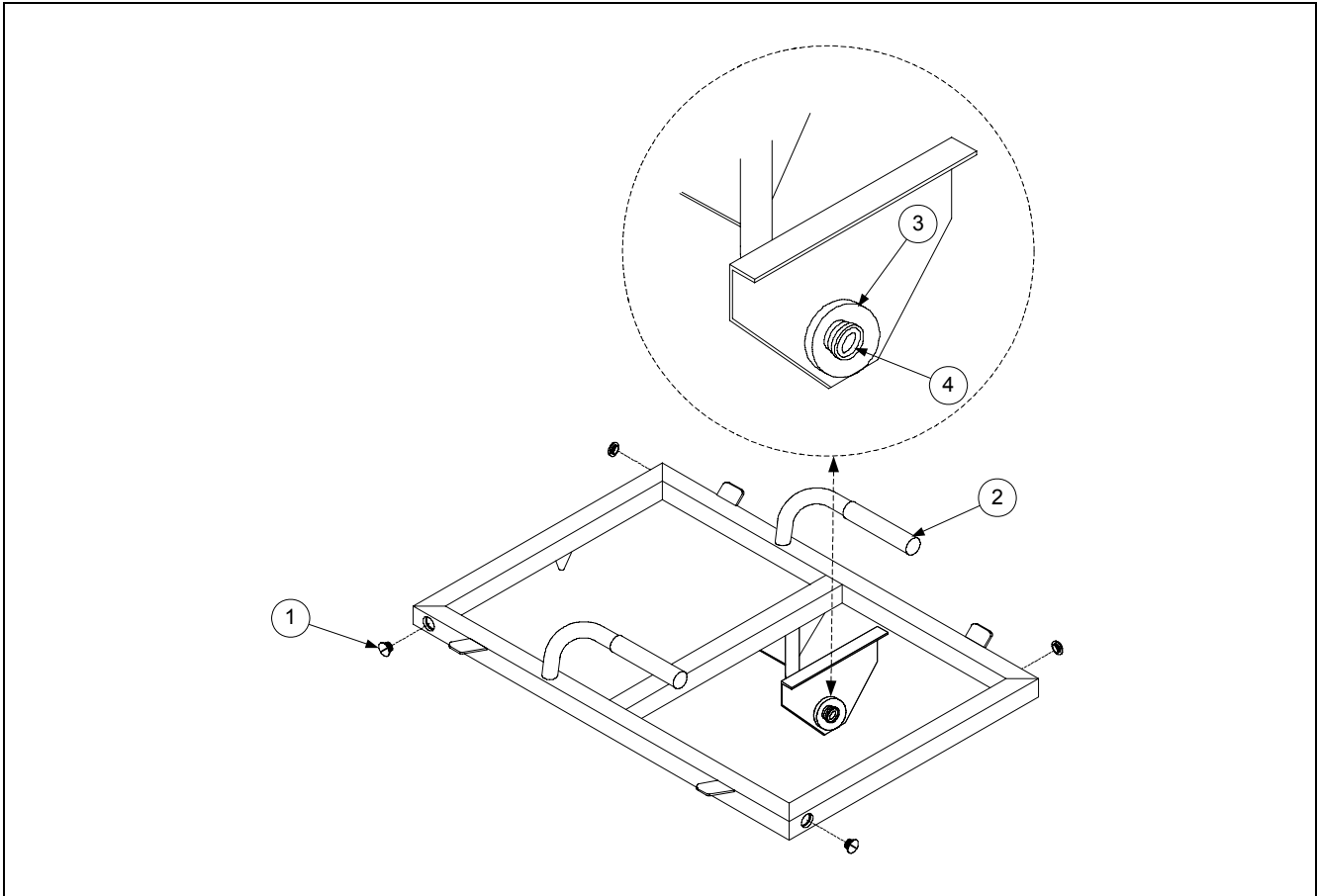
**2.7.8.2 Euro-Look Drain Valves and Related Components-Round Drains**



ITEM	EURO-LOOK PART # **	COMPONENT
	106-3760	Valve, Drain Assembly Full Vat
1	200-6496	Support, Drain 3" Tube
2	824-1602	Handle, Drain Valve FV
3	806-8137	Bracket, Switch, Drain, Assembly
4	807-2103	Switch, CE Micro Straight Lever
5	809-0237	Nut, 4-40 KEPS Hex w/ Ext Tooth
6	809-0540	Nut, 2-Way Lock 1/2"-13 ZN PL
7	810-1018	Valve, 1-1/4" FPD – TCF w/out Handle
8	816-0639	Sleeve, Handle Valve Red w/ Logo
9	816-0135	O-Ring, Round Drain
10	816-0220	Insulation, RF Switch
11	901-2348	Cover, DV Safety Switch
12	900-2936	Retainer, Nut Drain Valve
13	810-1165	Washer, Teflon Drain Valve
** See page 2-26 for a Standard parts list.		

**MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS  
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**2.7.9 Power Shower Components**



ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
	806-4529SP		Power Shower Assembly, Full Vat, Complete
1	809-0415		Screw, Cleanout
2	814-0001		Grip, Handle
3	826-1390		Seal (Gasket) (Qty: 5)
4	826-1344		O-Ring (Qty: 5)

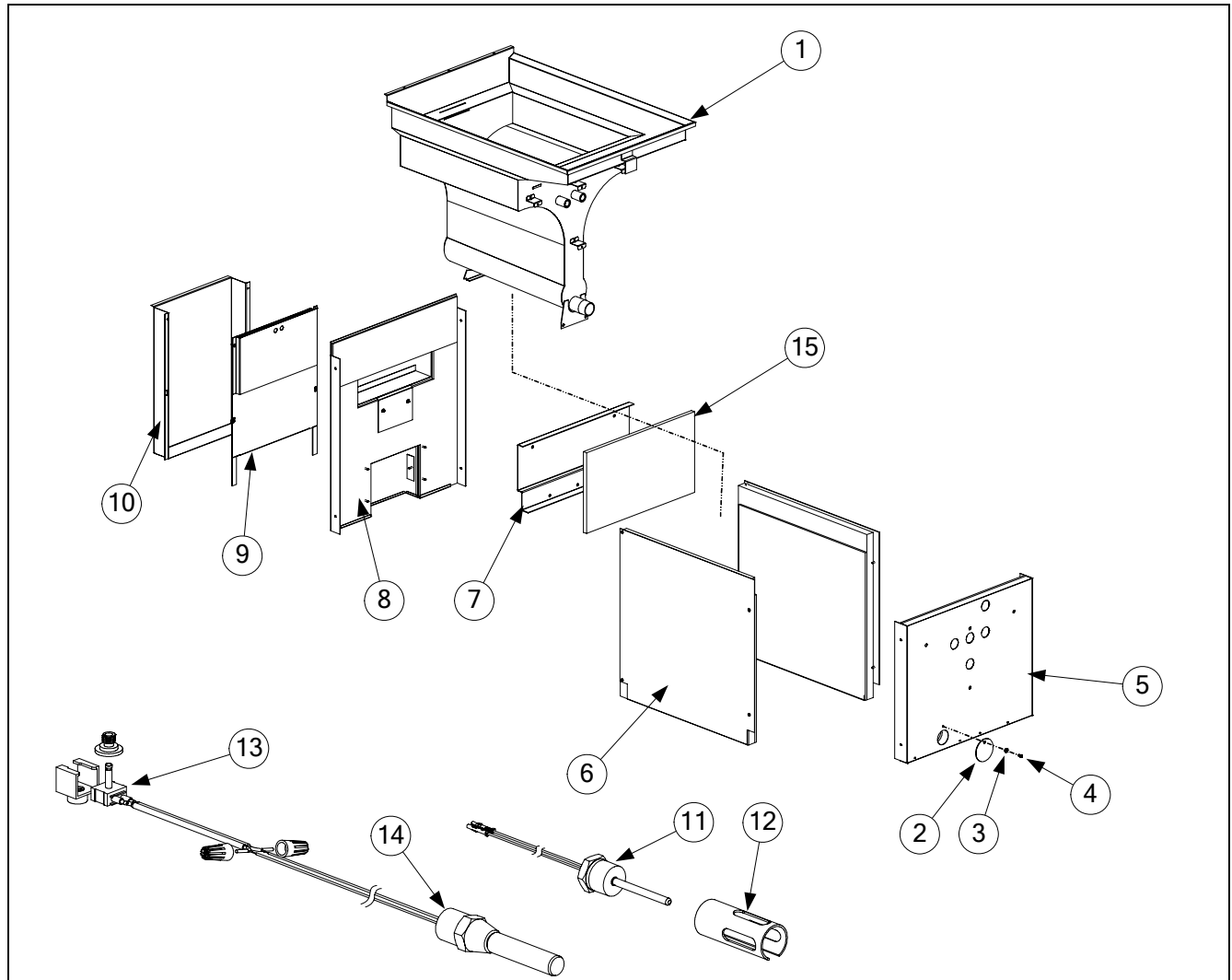
\* Not illustrated.

Use standard part.



**MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS  
CHAPTER 2: PARTS LIST**

**2.8 Frypot, High-Limit and Probe Components**



ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
1	823-3893SP		Frypot, Bare- FMCF & MJCF
*	106-2553SP		Frypot, Complete (Include Combustion Chamber & Insulation)
		823-3881	Frypot, Bare- MJCF (CE and Non-CE)
*		106-2550	Frypot, Complete MJCF (CE)
*		106-2539	Frypot, Complete MJCF (Non-CE)
		823-3892	Frypot, Bare- FMCF
*		106-2551	Frypot, Complete FMCF
*	826-0861		Insulation Kit, Complete Fryer/Frypot

\* Not illustrated.


Use standard part.

**MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS  
CHAPTER 2: PARTS LIST**

**2.8 Frypot, High-Limit and Probe Components (cont.)**

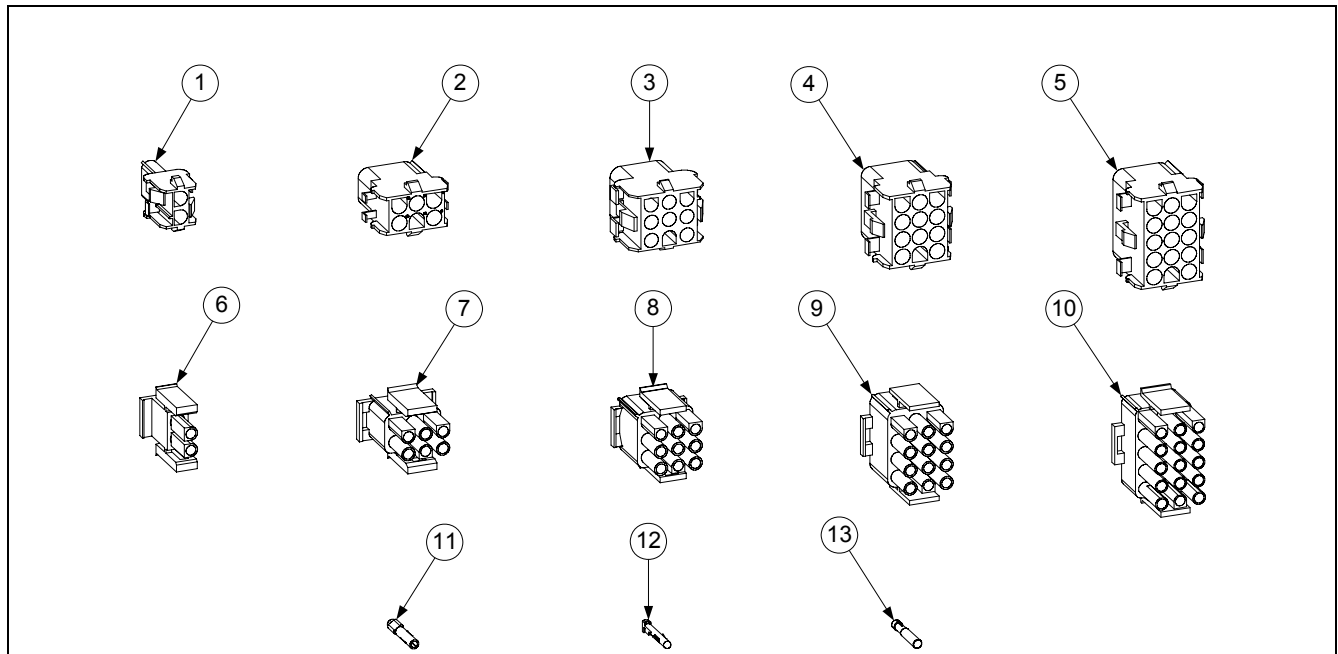
ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
*	813-0408		Plug, Frypot – ¼" NPT BM
*	813-0156		Plug, Frypot – ½" NPT BM
*	813-0684		Plug, Frypot – 3/8" NPT BM
2	900-1090		Cover, Pilot
	823-5302		Cover/Door, Pilot for Piezo Ignitor
3	810-0647		Holder, Pilot Cover Screw
4	809-0409		Screw, #10 x ½" Round-Head, One-Way
5	930-6401	806-0832	Chamber, Front Combustion (Order Insulation Kit Separately)
6	900-6412		Chamber, Side Combustion (Order Insulation Kit Separately)
7	823-0290		Channel, Frypot Rear (Order Insulation Kit Separately)
8	806-0833		Chamber, Rear Combustion (Includes Insulation)
9	806-0489		Flue, Front FMCF, MJCF with ¼ x12 x14½ Kaowool insulation
*		806-6978	Flue, Front MJCF CE
10	930-6386		Flue, Rear
11	806-4206		Probe, Assembly- Minco
12	210-0681		Guard, Probe
13	806-7550		Thermostat Assembly, High-Limit/ECO Connector (CE Only)
*	812-1256SP		ECO Connector Only [Requires soldering to high-limit wires and the installation of wire nuts (14 AWG)]
14	826-1177	806-9708	Thermostat Assembly, High-Limit- 425°F
15	812-0211		Kaowool Blanket ½ x 7½ x 17½

\* Not illustrated.

 Use standard part.

**MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS  
CHAPTER 2: PARTS LIST**

**2.9 Wiring Connectors, Pin Terminals and Power Cords**



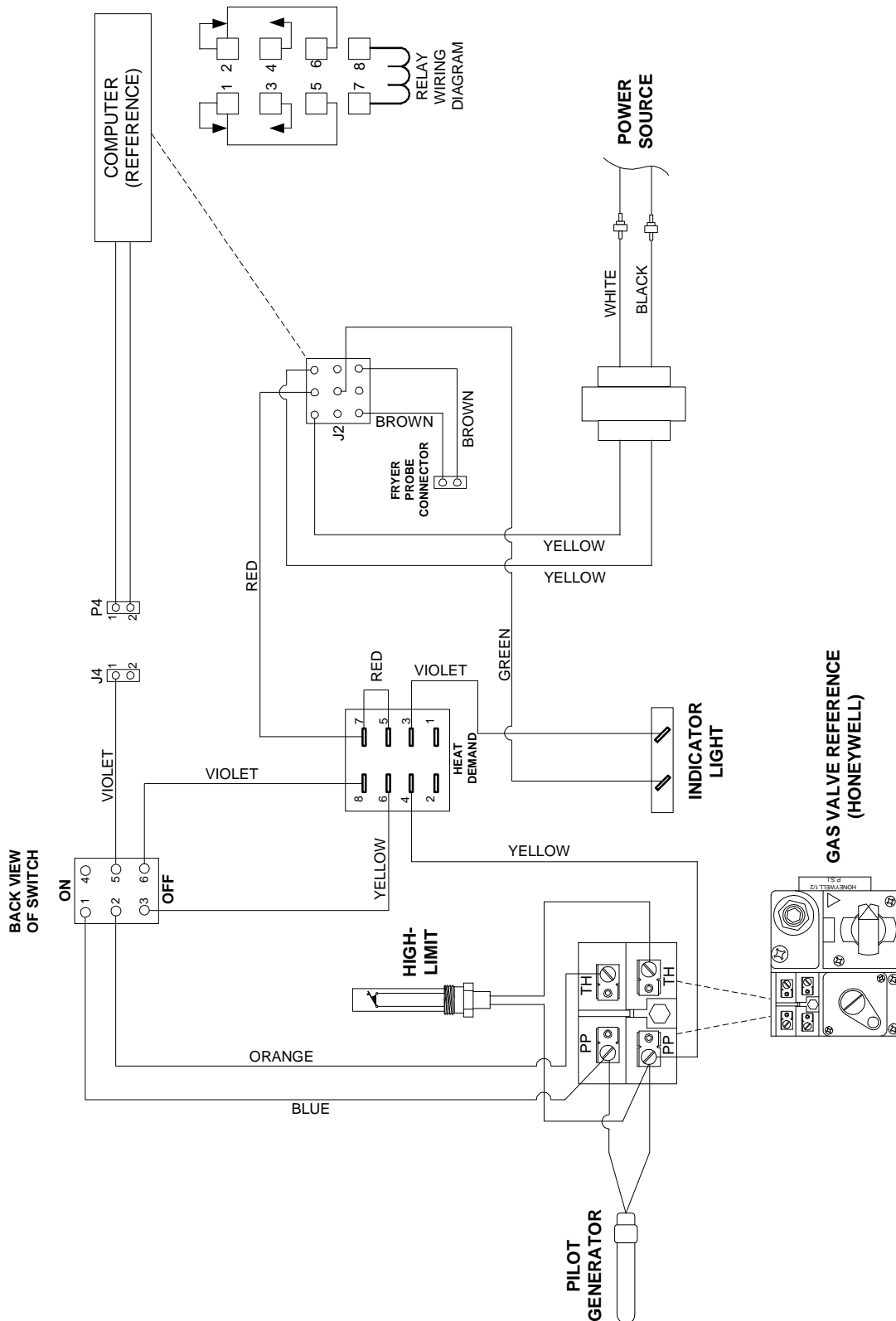
ITEM	PART #	COMPONENT
		Power Cords
*	807-0154	100/120V–15A w/grounded plug
*	806-6229SP	100/208/240V–15A, w/o plug
*	807-1685	100/208/240V–18A, w/o plug
		Connectors
1	807-1068	2-Pin Female
2	807-0158	6-Pin Female
3	807-0156	9-Pin Female
5	807-0159	12-Pin Female
5	807-0875	15-Pin Female
6	807-1067	2-Pin Male
7	807-0157	6-Pin Male
8	807-0155	9-Pin Male
9	807-0160	12-Pin Male
10	807-0804	15-Pin Male
11	826-1341	Terminal, Female Split Pin (Qty: 25)
12	826-1342	Terminal, Male Split Pin (Qty: 25)
13	807-2518	Plug, Mate-N-Lock (Dummy Pin)

\* Not illustrated.



# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS APPENDIX

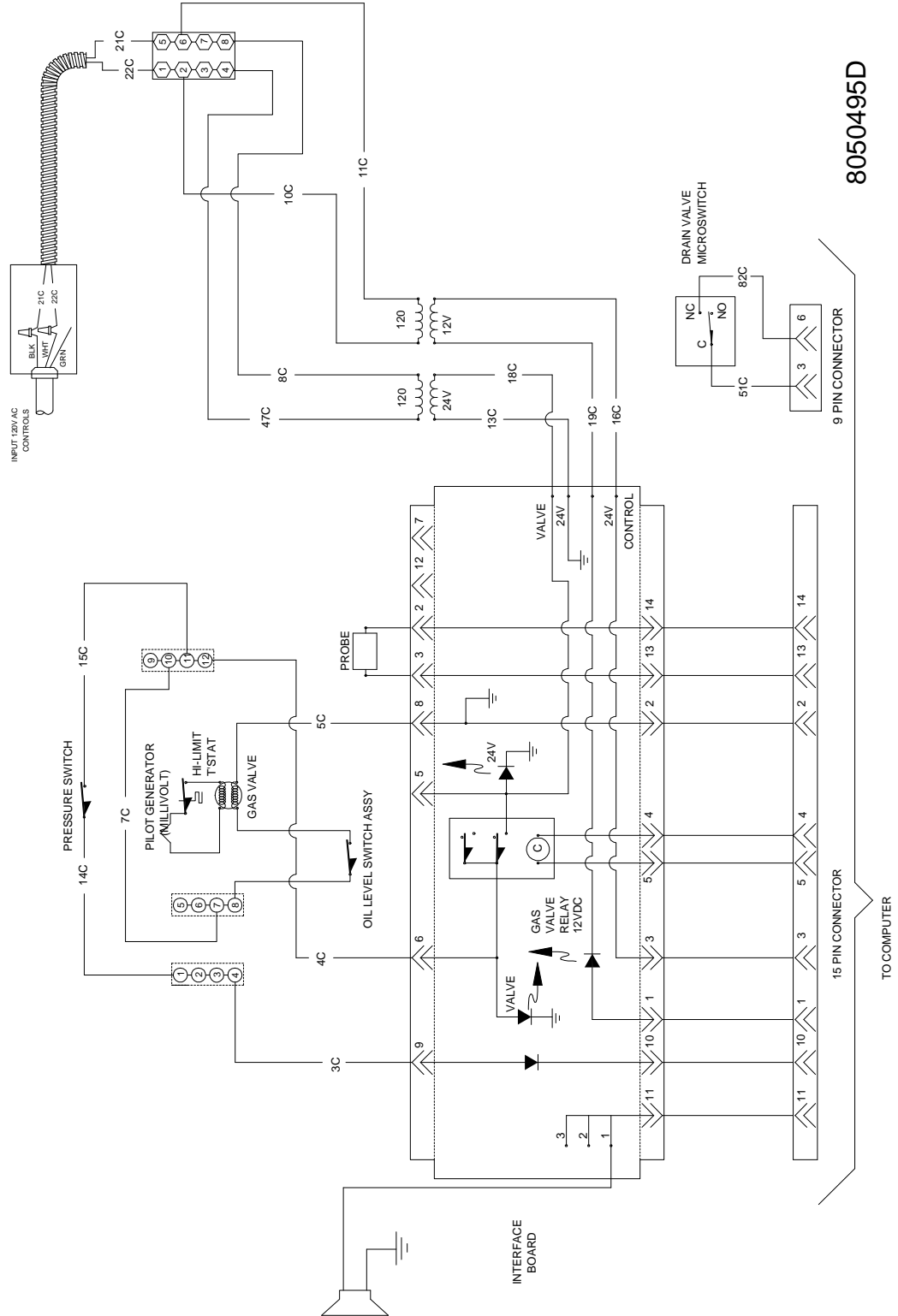
## A.1.2 J3F Wiring Diagram – (Fast /Fast Computer Modified; For Reference Only)



# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS APPENDIX

## A.1.3 KFC-1 Computer Wiring Diagram – 120V

PLAN WIRING DIAGRAM  
120V / 24V - 60 Hz, 1 Ø 3 WIRE SERVICE

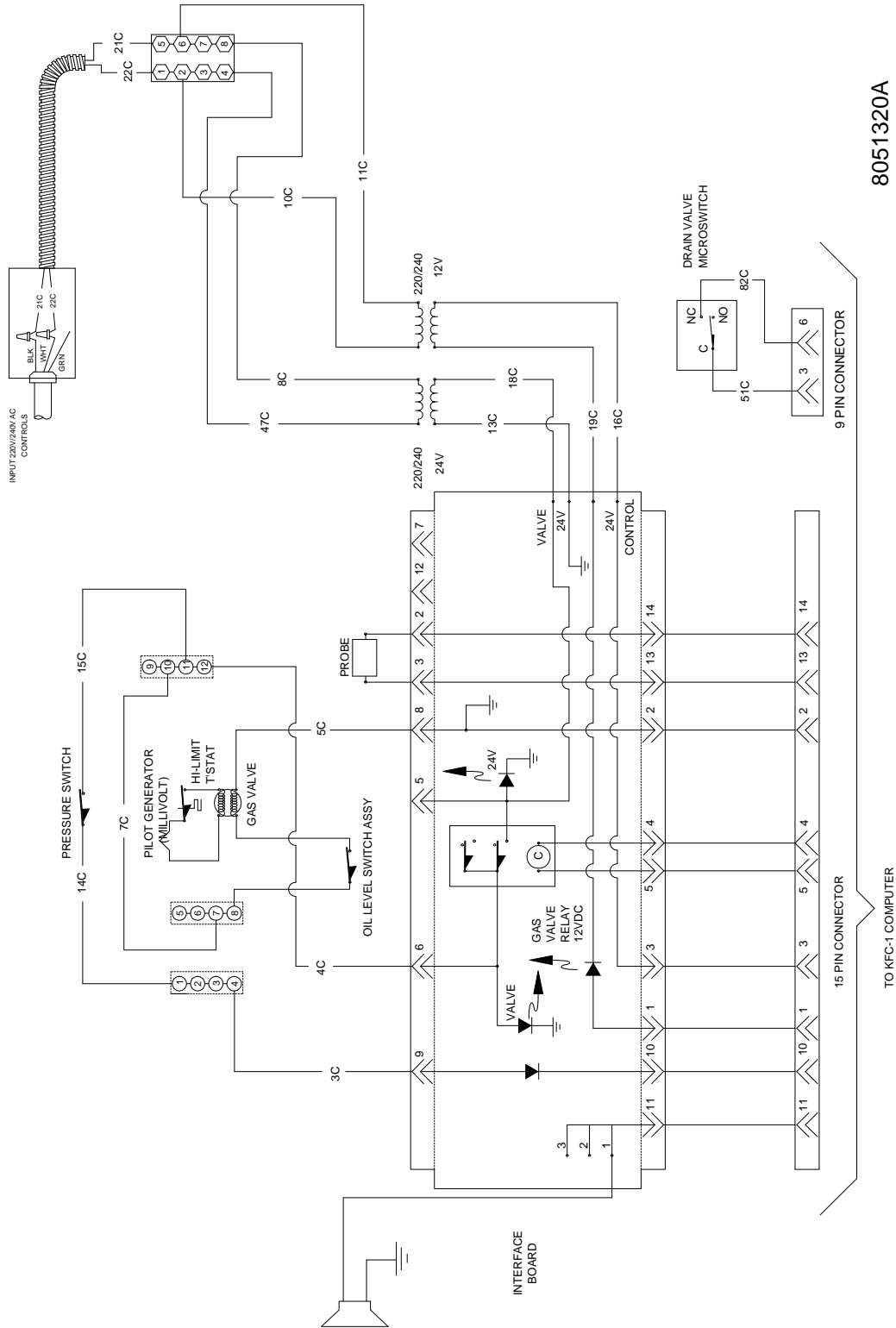


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# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS APPENDIX

## A.1.4 KFC-1 Computer Wiring Diagram – 220V

PLAN WIRING DIAGRAM  
220V/240V/24V - 60 Hz, 1 Ø 3 WIRE SERVICE

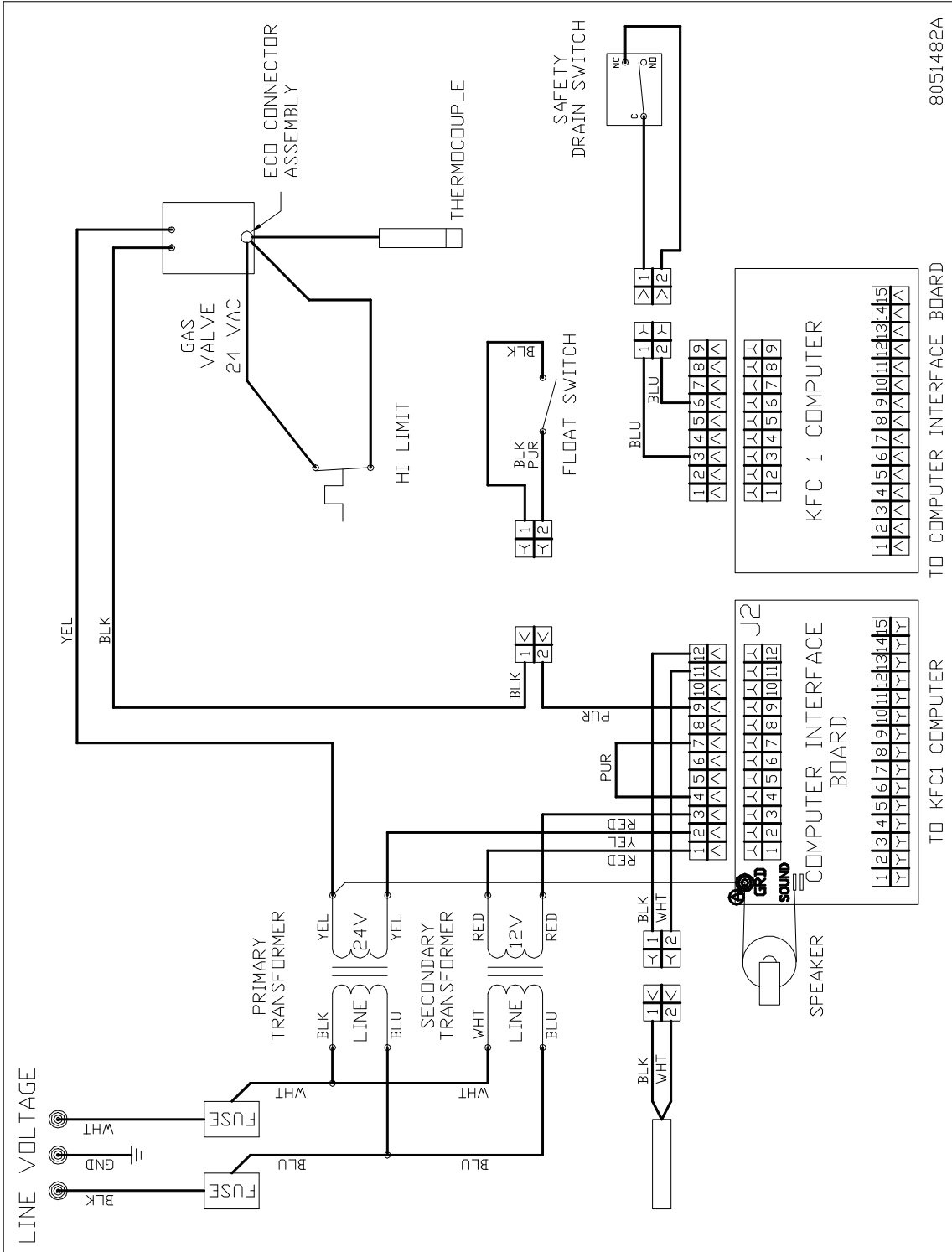


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TO KFC-1 COMPUTER

# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS APPENDIX

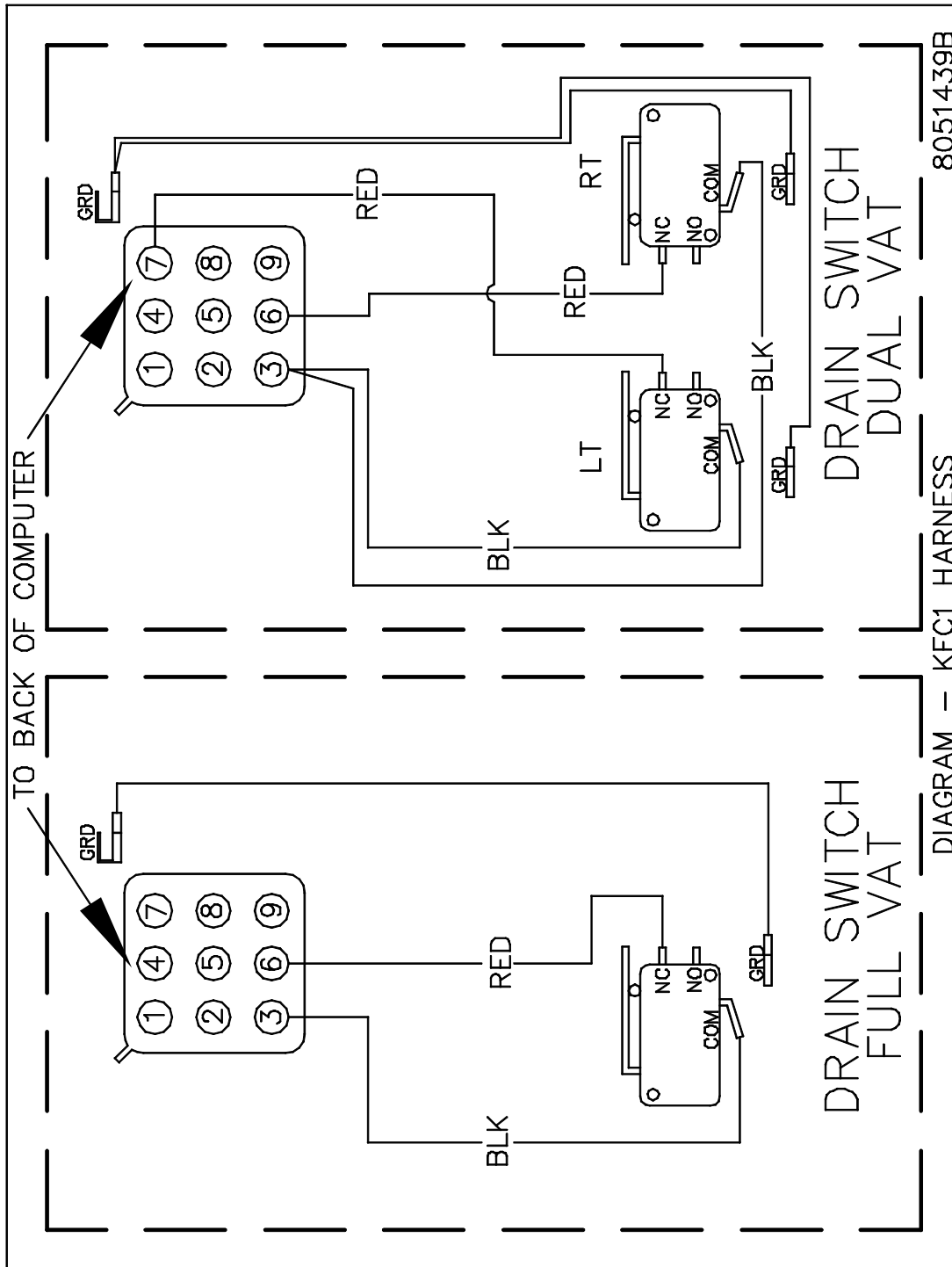
## A.1.5 KSCF Wiring Diagram w/ Float (CE)





MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS  
APPENDIX

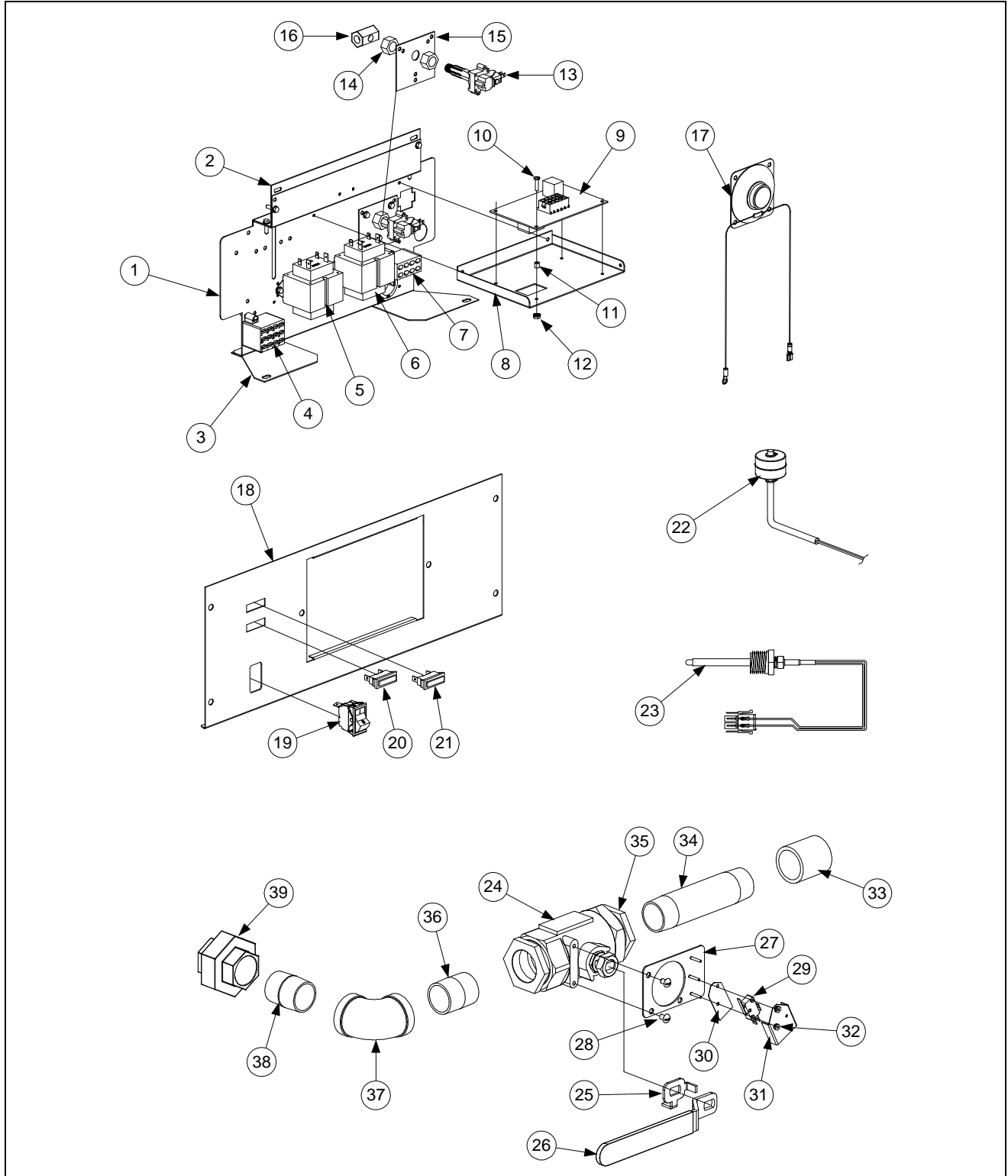
A.1.6 KFC-1 Harness Diagram



# MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS APPENDIX

## A.2 Parts List – KJ3FC Variant

Parts specific to KJ3FC variants are listed here. All other parts can be found in Chapter 2.



**MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS  
APPENDIX**

**A.2 KJ3FC Variant – Parts List (cont.)**

ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
1	900-4340		Shield, Component
2	900-1739		Brace, Component Shield
3	900-1635		Bracket, Component Shield
4	807-0276		Block, Terminal – 12-Pin
5	807-0800		Transformer- 120V/24V 50/60 Hz 50VA
*	807-0680		Transformer- 208/240V/24V 50/60 Hz 43VA
6	807-0855		Transformer- 120V/12V 50/60 Hz 20VA (KFC-1 Computers Only)
*	807-0979		Transformer- 208/240V/12V 50/60 Hz 20VA (KFC-1 Computers Only)
7	807-0067		Block, Terminal – 8-Pin
8	824-0161		Support, Interface Board
9	806-5517		Board, Interface – Fast-Ready Computers Only
*	806-3548		Board, Interface – KFC-1 Computers Only
10	809-0096		Screw, 6-32 x 5/8" Slotted
11	809-0349		Spacer, 4 x 6 mm Aluminum
12	809-0250		Nut, Keps – 6-32
13	806-1076SP	806-5320	Switch Assembly, Pressure (Includes Items #14, 15 & 16)
14	809-0476		Nut, Jam – ½-20 (Two Required)
15	900-1749		Plate, Adapter – Pressure Switch
16	813-0389		Tee, Hex- ¾" (7/16 x 1/8 x 7/16)
17	807-3520		Speaker, Computer Sound – 4-Watt
18	910-7284	210-9552	Panel, Control – Fast-Ready Computer
*	823-1856	106-4082	Panel, Control – KFC-1 Computer
*	806-5162	106-4995	Frame, Control Panel – KFC-1 Computer
*	806-5300		Computer, KFC-1 – Gas
*	826-1507		Kit, Computer Conversion (Fast to KFC-1)
19	807-2196	807-3498	Switch, On/Off – Lighted Green
20	807-1547		Light, Indicator (Trouble) Red, 24V
21	807-1502		Light, Indicator (Heating) Amber, 24V
22	806-5045SP		Switch, Float Safety – Frypot Oil-Level
23	807-1524		Probe, Temperature – Fast-Ready Computer Only
	806-6353SP		Valve, Drain Assembly KJ3FC with KFC-1
24	810-2006		Valve, Ball – 2" [Nut (Handle Retainer) Included]
*	200-0487		Bracket, Support – Drain Valve
25	200-0512		Activator, Drain Valve Microswitch
26	812-1462		Handle, Drain Valve – Universal

\* Not Illustrated

Use standard part.

**MASTER JET CF SERIES ATMOSPHERIC GAS FRYERS  
APPENDIX**

**A.2 KJ3FC Variant – Parts List (cont.)**

ITEM	STANDARD PART #	EURO-LOOK PART #	COMPONENT
27	806-9325		Bracket, Support – Microswitch
28	809-0126		¼-20 x 3/8" Slotted Head
29	807-2103		Microswitch, Drain Valve
30	816-0220		Insulation, Microswitch
31	200-0513		Cover, Microswitch
32	826-1366		Nut, Keps – 4-40 External Teeth (Qty: 25)
33	813-0406		Coupling – 1-¼ x 2" NPSC
34	813-0148		Nipple, 1-¼ x 6-¼" NPT BM
35	813-0407		Bushing, Drain Valve - 1-¼ x 2" NPT Hex
36	813-0400		Nipple, 1-¼ x 2" NPT BM
37	813-0070		Elbow, 90° NPT BM
38	813-0391		Nipple, 1-¼ x Close NPT BM
39	813-0395		Union, 1-¼" NPT BM

\* Not Illustrated

 Use standard part.

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