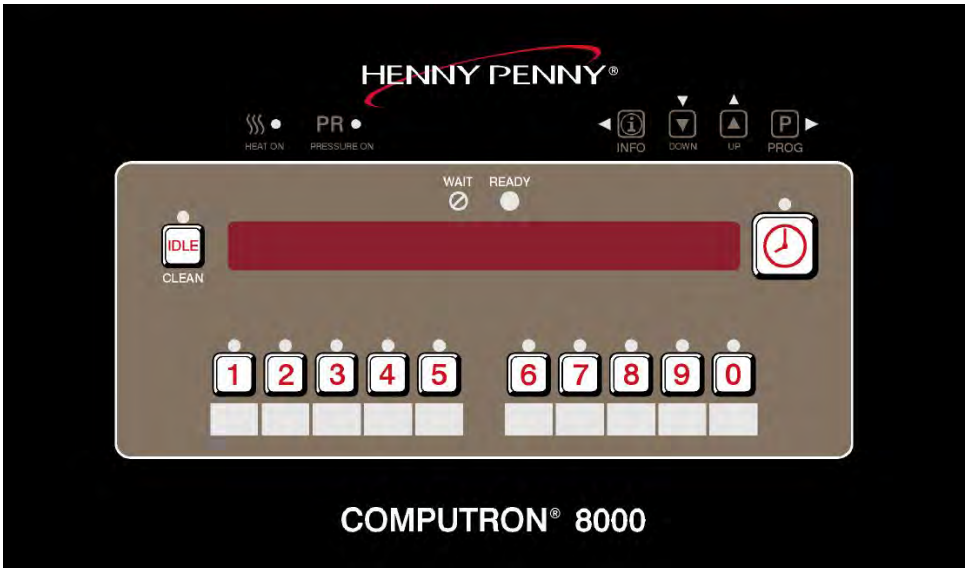
HENNY PENNY
Engineered to Last

OPERATOR MANUAL

C8000
Computron Control



MODEL C8000

FM01-909I

Table of Contents

Safety and Compliance

Henny Penny fryers have many safety features incorporated. However, the only way to ensure safe operation is to fully understand the proper installation, operation, and maintenance procedures. The instructions in this manual have been prepared to aid you in learning the proper procedures. Where information is of particular importance or is safety related, the words DANGER, WARNING, CAUTION, or NOTICE are used. Their usage is described as follows:

DANGER	**DANGER!** indicates hazardous situation which, if not avoided, will result in death or serious injury.
DANGER!	
WARNING	**WARNING!** indicates hazardous situation which, if not avoided, could result in death or serious injury.
WARNING!	
CAUTION	**CAUTION!** indicates hazardous situation which, if not avoided, could result in moderate or minor injury.
CAUTION!	
NOTICE	*NOTICE* is used for information considered important regarding property damage.

These are the original version controlled Henny Penny instructions for Pressure Fryer Electric / Gas (PFE/PFG) model 500, 561 or 600 (PFE/PFG 500,561,600). This manual is available on the Henny Penny Public website (www.hennypenny.com). Read these instructions completely prior to installation and operation of this appliance to ensure compliance to all required installation, operation and safety standards. Read and obey all safety messages to avoid damage to the appliance and personal injury.

WARNING

- **This fryer must be installed and used in a way that water does not contact the oil which can cause splashing and boiling over of oil and steam leading to personal injury; excludes normal product moisture.**
- **Burn risk! Do not move the fryer or filter drain pan while containing hot oil. Personal injury or serious burns can result from splashing hot oil.**

This appliance is intended for commercial use in kitchens of restaurants, bakeries, hospitals, etc. but not for the continuous mass production of food such as in a factory setting. During use the units airborne A-weighted emission sound pressure is below 70 db(A). All repairs must be performed by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

Always use strain relief. The provided power cord must be installed with a strain relief in a way that if the strain relief fails, wires L1, L2, L3 and N must draw taunt and fail first. If the supplied power cord or an existing one becomes damaged, do not use it; rather, replace it with a known good power cord. The power cord must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

Proper daily, weekly, monthly, quarterly and yearly maintenance must be performed on this appliance to ensure safe and continuous operation. This appliance must never be cleaned with a water jet or steam cleaning tool. Cleaning brushes are shipped with the appliance and proper cleaning instructions are included in this manual.

Proper maintenance also increases the usable life of the appliance and oil, which reduces lifetime operating costs. Additionally, old oil increases the possibility of surge boiling and fire due to the reduced flash point of the oil. The oil temperature must never exceed 450º F (230º C).

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a

person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

This appliance is not intended to be operated by means of an external timer or a separate remote control system.

This appliance must be installed in accordance with the manufacturer's instructions and the regulations in force and only used in suitably ventilated location. Read the instructions fully before installing or using the appliance.

This appliance must be installed with suitable ventilation in accordance with the manufacturer's instructions and the regulations in force to prevent the occurrence of unacceptable concentrations of substances harmful to health. Proper air flow is essential to permit efficient removal of the steam exhaust and frying odors.

Chapter 1 Introduction

1.1 Overview

This manual provides basic operating procedures for the Henny Penny Computron 8000 Control. See the fryer specific Operator's Manual for more details on fryer operation.

1.2 Technical Support

For further information, please contact Technical Services using one of the following options:

Email: technicalservices@hennypenny.com

Call:

- U.S. and Canada: +1-800-417-8405
- Global: +1-937-417-8405

Text:

- Distributor Service: 937-519-3207
- Parts Requests: 937-519-2980
- General Technician: 937-519-3278

Live chat via the Henny Penny website, extranet, or customer support website.

Chapter 2 Controls and Indicators

2.1 Features

The C8000 controller has the following features:

- 16-digit Alphanumeric display (14-segment LED digits).
- Indicator lights (LED's) for Heat and Pressure outputs.
- Wait and Ready indicator lights.
- Controller stays live while power switch is in the OFF or PUMP positions.
- Monitored interlocks for 24 VAC Fuse, High Limit, Drain Switch, Power Switch.
- Speaker-driven tone output (not piezo beeper), with programmable tone and volume.
- Ten programmable products, with up to 10 intervals and 4 alarms per product.
- Text-based error displays for probe errors, high limit, drain open, etc.
- Statistics tracking such as Last Load, Daily Stats, Review Usage, Error Log, Activity Log, etc.
- Filter enforcement after X cook cycles, further cooking is disabled until after the oil is filtered (hardware support for confirming that filtering is performed).
- Oil Management functions with Change Oil prompt based on total cook cycles and/or running hours.
- Clean-out (boil out) mode.
- Password-protected programming modes.
- Programmable settings, Review Usage data, Error Log, Statistics data stored in EEPROM memory (10+ year retention even when fryer is unplugged).
- Activity Log statistics stored in capacitor backed-up RAM (typically retained for several weeks, even when fryer is unplugged).
- 4-Head Electric Fryers have Amps monitoring capability with a display of current draw for each supply leg.

2.2 Decals

NOTE: The 8-Head version control (591/691) is the same as the 4-Head (500/600) version except the ON/OFF/PUMP power switch is located on the fryer, rather than on the C8000 control panel.

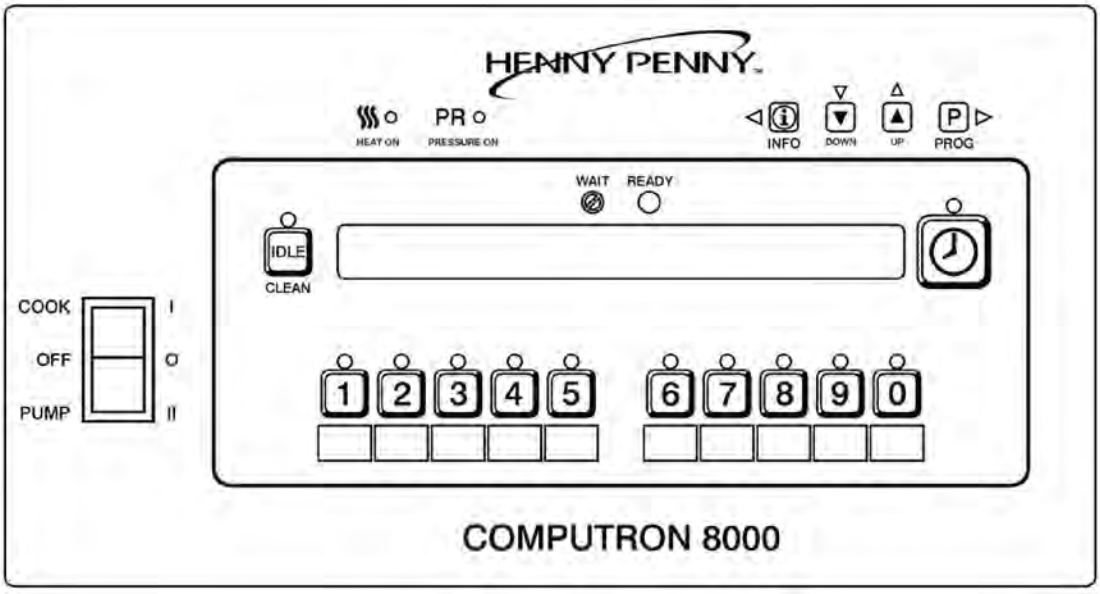


Figure 2-1 4-Head

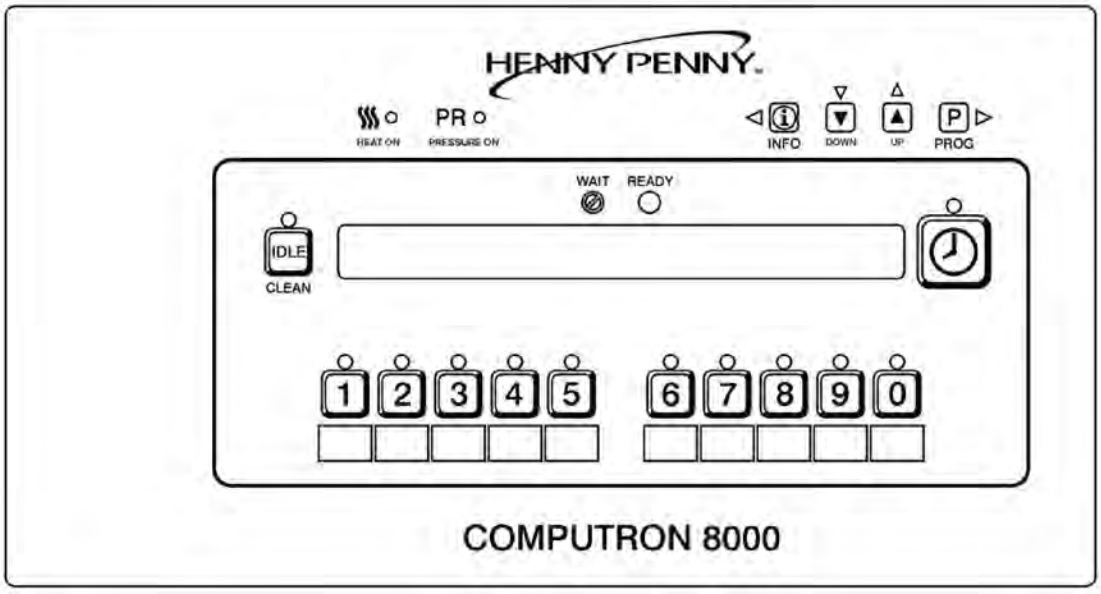
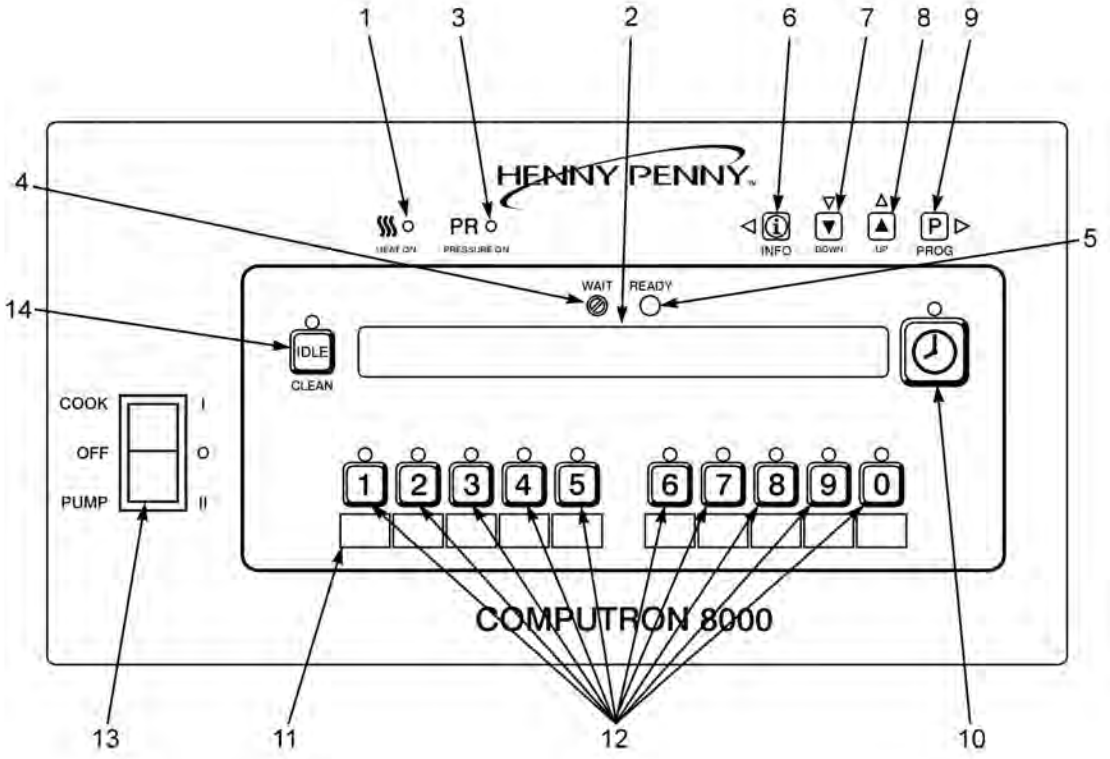


Figure 2-2 8-Head

2.3 Navigation

NOTE: The 8-Head version control (591/691) is the same as the 4-Head (500/600) version except the ON/OFF/PUMP power switch is located on the fryer, rather than on the C8000 control panel.



ITEM NO.	FEATURE	FUNCTION
1	HEAT ON	Lights when the control calls for heat and the elements or burners come on and heat the shortening.
2	Digital Display	Shows all the functions of the Cook Cycle, Program Modes, Diagnostic Modes, and Alarms.
3	PR PRESSURE ON	Lights when the solenoid closes and pressure starts to build inside the vat (frypot).
4	WAIT	Flashes when the shortening temperature is NOT at the proper temperature for cooking product.

ITEM NO.	FEATURE	FUNCTION
5	READY	Lights when the shortening temperature is 5° F (3° C) below to 15° F (9° C) above the cooking temperature, signaling the operator that the shortening temperature is at the proper temperature for cooking product.
6	◁ INFO	Press to display the following fryer information and status: • The temperature of the shortening • The temperature setpoint • Filter status • The number of times filtered today • The average no. of filters per day • No. of times Cook Cycle was stopped early today • No. of times Cook Cycle was stopped early in past week • Oil Life Display (Only if “Change Oil” feature is enabled) • Date and time Additionally: • If pressed while in Program Mode, use to advance to the previous setting. • Press with P ▷ PROG to access Information Mode which has historic information on the operator and fryer’s performance.
7 / 8	▽ DOWN △ UP	Used to adjust the value of the currently displayed setting in the Program Modes.
9	P ▷ PROG	Press to access Program Mode, and then use to advance to the next setting. Press with ◁ INFO to access Information Mode which has historic information on the operator and fryer’s performance.
10		Used to start and stop Cook Cycles and to stop the timer at the end of a Holding Cycle.

ITEM NO.	FEATURE	FUNCTION
11	Menu Card Window	The name of the food product associated with each product window selection button. The menu card strip is located behind the decal.
12	Product Select Buttons	Used to select the product for cooking. See Special Program Mode item SP-10 for cook cycle setting.
13	Cook / Pump Switch	A 3-way switch: • Center OFF position. • Turn the switch to the COOK position to operate the fryer. • Turn the switch to the PUMP position to operate the filter pump. **NOTE**: Certain conditions must be met before operating the filter pump. These conditions are covered later in the Filtering section of the fryer manual.
14		Used to manually enter Idle or Clean-Out Mode.

Chapter 3 Installation and Removal

3.1 Lower the Control

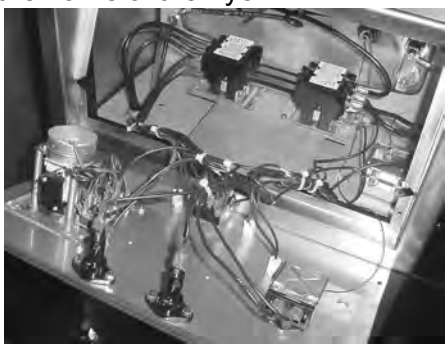
WARNING **To avoid electrical shock or property damage, move the power switch to off and disconnect main circuit breaker, or unplug cord at wall receptacle.**

To replace parts inside the fryer, lower the control by doing the following:

1) Place the main power switch to the off position. The switch is labeled POWER/ OFF/PUMP.
2) Remove the two screws from the bottom of the control.

10170023

3) Carefully slide the control upward until it lifts off the metal hangers.
4) With the fryer door closed, place the lower edge of the control in the slot between the door and the frame of the fryer.



3.1.1 Raise the Control

1) Raise the control, and then hook it on the metal hangers that hold the top of the control in place.
2) Install the two screws in the bottom of the control.
3) Reconnect power to the fryer.

3.1.2 Replace the Control

Follow the steps outlined in 3.1 *Lower the Control*, page 9 and 3.1.1 *Raise the Control*, page 9.

1) Note the locations of the connectors on the back of the control
2) Remove the connectors, and then swap out the old control for the new.
3) Reconnect the connectors on the back of the control.

3.2 Set the Clock

NOTE: Upon initial start-up or after control board replacement, if CLOCK SET automatically displays, start at CS-1.

Log in to Clock Set Mode by doing the following:

1) Press P PROG ▷ and hold for 5 seconds until LEVEL 2 displays.
2) Press P PROG ▷ and CLOCK SET and ENTER CODE displays.
3) Press 1, 2, 3, CS-1, SET, MONTH displays.

MODE	PARAMETER	DESCRIPTION
CS-1	SET MONTH	The month setting blinks and may be set from 1 (January) to 12 (December). Set the Calendar Month by doing the following: 4. Press ▽ DOWN ▼ △ UP ▲ to change the month. 5. Press P PROG ▷, CS-2, SET and DATE displays. The date flashes.
CS-2	SET DATE	The date setting blinks and may be set from 1 to 30 or 1 to 31 as appropriate. If the month is presently set to 2 (February), the date is programmable from 1 to 28 or 1 to 29 depending on whether or not the indicated year is a leap year. **NOTE**: If you cannot set the date to February 29th you may need to step ahead and set the year first, so that the controller sees the present year is a leap year.

MODE	PARAMETER	DESCRIPTION
		Set the calendar date (day of the month) value by doing the following: 6. Press ▽ DOWN ▼ △ UP ▲ to change the date. 7. Press P PROG ▷, CS-3, SET and YEAR displays. The year flashes.
CS-3	SET YEAR	The year setting blinks and may be set from 2000 to 2099. Set the year value by doing the following: 8. Press ▽ DOWN ▼ △ UP ▲ to change the year. 9. Press P PROG ▷, CS-4, SET and HOUR displays. The hour and AM or PM flashes.
CS-4	SET HOUR	In AM/PM mode, the hours and the AM/PM indicator both blink. The hours may be set from 12:xx AM to 11:xx PM. Set the time of day clock hours value: 10. Press ▽ DOWN ▼ △ UP ▲ to change the hour, either AM/PM setting. 11. Press P PROG ▷, CS-5, SET and MINUTE displays. The minutes flash.
		In 24-hour mode a special "24-HR" reminder is displayed. The hours alone blink (there is no AM/PM indicator). The hours value can be set from 0:xx to 23:xx. Set the hours value using step 10 and then continue at step 11.
CS-5	SET MINUTE	In either mode (AM/PM or 24-hour mode) the minutes value blinks and may be set from xx:00 to xx:59. Set the time of day clock minutes value by doing the following: 12. Press ▽ DOWN ▼ △ UP ▲ to change the minutes.

MODE	PARAMETER	DESCRIPTION
		13. Press P PROG ▷, CS-6, CLOCK MODE, and 1. AM/PM displays: • 1. AM/PM is 12 hour time. • 2. 24-HR is 24 hour time.
CS-6	CLOCK MODE	This setting controls how time-of-day values are displayed: • Selecting 1. AM/PM selects a traditional US display format: 12:34 A or 11:59 P, etc. In AM/PM format, an A indicates AM - a time before noon. P indicates PM - a time after noon. The first hour after midnight: 12:00 A to 12:59 A. Then next 11 hours are 1:00 A to 11:59 A. The first hour after noon: 12:00 P to 12:59 P. The remaining hours are 1:00 P to 11:59 P. • Selecting 2. 24-HR selects a 24-hour clock display, where hours range from 0:xx to 23:xx, in linear fashion starting at midnight. 14. Press ▽ DOWN △ UP to change from either 12 or 24. 15. Press P PROG ▷, CS-7, DAYLIGHT SAVINGS ADJ, and 2.US displays.

MODE	PARAMETER	DESCRIPTION
CS-7	DAYLIGHT SAVING ADJUST	This setting enables automatic Daylight Saving Time adjustment of the on board real time clock. **NOTE**: If the fryer is not plugged in or running at the time of a DST transition, the adjustment occurs automatically the next time it is powered up. 1. OFF: No automatic adjustments for Daylight Saving Time. 2. US: Automatically applies United States Daylight Savings Time adjustment. DST activated on the first Sunday in April. DST de-activated on the last Sunday in October. 3. EURO: Automatically applies European (CE) Daylight Saving Time adjustment. DST activated on the last Sunday in March. DST de-activated on the last Sunday in October. 16. Press ▽ DOWN ▽ △ UP △ to change to the following: • 1. OFF: No automatic adjustments for Daylight Savings Time. • 2. US: Automatically applies United States Daylight Savings Time adjustment: – DST activated on the second Sunday in March. – DST deactivated on the first Sunday in November. • 3. EURO: Automatically applies European (CE) Daylight Saving Time adjustment. – DST activated on the last Sunday in March. – DST deactivated on the last Sunday in October. 17. Press P PROG ▷ and CS-8, BEGIN NEW DAY and 3:00AM display. **NOTE**: This setting indicates the time of day that statistics start accumulating for a new day. For example, if set to 3:00 AM the late night Cook Cycles and filter operations from midnight to 3:00 AM

MODE	PARAMETER	DESCRIPTION
		Tuesday morning, are accumulated with Monday's statistics. The CS-8 value can be set from 12:00AM (midnight) to 8:00 AM, in half hour increments (12:00 AM, 12:30 AM, 1:00 AM, 1:30 AM, etc.). The default value for general market software is 3:00 AM.
CS-8	BEGIN NEW DAY	This setting indicates the time of day that the controller starts accumulating statistics for a new day. The CS-8 value can be set from 12:00 AM (midnight) to 8:00 AM, in half-hour increments (12:00 AM, 12:30 AM, 1:00 AM, 1:30 AM, etc.). Note that this setting only affects how the "Daily Stats" values are tallied, and has no other affect on fryer operation. If set to 3:00 AM, for example, then late night cook cycles and filter operations from midnight to 3:00 AM are accumulated with the previous day's statistics. For example, assume a store closes at 2:00 AM. In this case, they would probably want the CS-8 value set to 3:00 AM, in order to catch filter operations that may be performed after the store closes. Late-night operation from midnight to 3:00 AM on Tuesday will then be accumulated into the Monday statistics totals. When the store opens again at 8:00 AM on Tuesday, it will start the day with no cook cycles or filters yet. 18. Press ▽ DOWN ▽ △ UP △ to change the time the new day starts. Clock Set is now complete. 19. Press P PROG ▷ and hold to exit.

Chapter 4 Programming

4.1 Introduction

NOTE: Passwords are programmable and may be changed by the user.
The controls are preset from the factory, but desired functions can be programmed in the field. This section includes the Product Programming Mode, which are the basic cook settings, and the Level 2 programming, which are the more detailed settings.

4.2 First Level Access and Programming

Operators (Managers) can access Product Programming on the first level by doing the following:

1) Press and hold the PROG button for 1.5 seconds. When PROG displays, release the button.
2) Type the access code. If an invalid access code is entered, the controller beeps and displays -INVALID CODE- for about two seconds, and then returns to normal operation.
3) To exit Product Programming mode, press and hold the PROG button, or press INFO and PROG simultaneously.

NOTE: If the control is left idle for 20 seconds the controller automatically exits (cancels) and returns to normal operation.

MODE	DISPLAY / PROMPT	ACCESS CODE (Default)
Product Programming (Cook Settings)	PROG / ENTER CODE	1, 2, 3

4.3 Default Product Settings

4.3.1 4-Head Fryer (500/600)

PRODUCT PARAMETER	1	2	3	4	5
Display Name	**Chicken**	**Wedges**	**Sausage**	**Egg Roll**	**Fish**
INTERVAL SETTINGS:					
PRELOAD	0:00	0:00	0:00	0:00	0:00
1. TOTAL COOK TIME	10:30	7:00	2:00	3:00	3:30
1. TEMP	325°F	325°F	315°F	320°F	315°F
1. PRESSURE	Yes	Yes	Yes	Yes	Yes
2. STEP 2 AT	0:15	0:15	0:15	0:15	0:15

PRODUCT PARAMETER	1	2	3	4	5
2. TEMP	325°F	325°F	315°F	320°F	315°F
2. PRESSURE	No	No	No	No	No
3. STEP 3 AT	0:00	0:00	0:00	0:00	0:00
3. TEMP					
3. PRESSURE					
ALARM SETTINGS:					
ALARM-1 AT	0:00	0:00	0:00	0:00	0:00
ADDITIONAL SETTINGS:					
QUALITY TMR	0:00	0:00	0:00	0:00	0:00
LOAD COMP	5	5	5	5	5
LCOMP REF	325°F	325°F	315°F	320°F	315°F
GO TO IDLE	No	No	No	No	No
FILTER AFTER?	4	4	4	2	4

PRODUCT PARAMETER	6	7	8	9	0
Display Name	Corn Dog	"CHK FIL" Fillets	"CHK NUG" Nuggets	"CH LIVR" Livers	"CH GZED" Gizzards
INTERVAL SETTINGS:					
PRELOAD	0:00	0:00	0:00	0:00	0:00
1. TOTAL COOK TIME	10:30	4:15	4:00	7:30	12:00
1. TEMP	315°F	320°F	325°F	330°F	330°F
1. PRESSURE	Yes	Yes	Yes	Yes	Yes
2. STEP 2 AT	0:15	0:15	0:15	6:00	11:00
2. TEMP	315°F	320°F	325°F	255°F	255°F
2. PRESSURE	No	No	No	Yes	Yes
3. STEP 3 AT	0:00	0:00	0:00	0:15	0:15
3. TEMP				255°F	255°F
3. PRESSURE				No	No
ALARM SETTINGS:					
ALARM-1 AT	0:00	0:00	0:00	0:00	0:00

PRODUCT PARAMETER	6	7	8	9	0
ADDITIONAL SETTINGS:					
QUALITY TMR	0:00	0:00	0:00	0:00	0:00
LOAD COMP	5	5	5	5	5
LCOMP REF	315°F	320°F	325°F	Step-X	Step-X
GO TO IDLE	No	No	No	No	No
FILTER AFTER?	3	4	4	1	1

4.3.2 8-Head Fryer (59x/69x)

PRODUCT PARAMETER	1	2	3	4	5
Display Name	2-4 HD	6-8 HD	TENDERS	NUGGETS	WNGS/WE
INTERVAL SETTINGS:					
PRELOAD	0:00	0:00	0:00	0:00	0:00
1. TOTAL COOK TIME	10:30	11:30	3:30	2:45	7:00
1. TEMP	325°F	325°F	325°F	325°F	325°F
1. PRESSURE	Yes	Yes	Yes	Yes	Yes
2. STEP 2 AT	0:15	0:30	0:30	0:15	0:30
2. TEMP	325°F	325°F	325°F	325°F	325°F
2. PRESSURE	No	No	No	No	No
3. STEP 3 AT	0:00	0:00	0:00	0:00	0:00
3. TEMP					
3. PRESSURE					
ALARM SETTINGS:					
ALARM-1 AT	0:00	0:00	0:00	0:00	0:00
ADDITIONAL SETTINGS:					
QUALITY TMR	0:00	0:00	0:00	0:00	0:00
LOAD COMP	10	9	5	5	5
LCOMP REF	320°F	312°F	305°F	305°F	310°F
GO TO IDLE	No	No	No	No	No
FILTER AFTER?	4	4	4	4	4

PRODUCT PARAMETER	6	7	8	9
Display Name	PK CHOPS	TNDRLN	VEGGIES	EGGROLL
INTERVAL SETTINGS:				
PRELOAD	0:00	0:00	0:00	0:00
1. TOTAL COOK TIME	6:30	7:00	2:00	7:00
1. TEMP	325°F	335°F	325°F	335°F
1. PRESSURE	Yes	Yes	Yes	Yes
2. STEP 2 AT	0:30	0:30	0:15	0:15
2. TEMP	325°F	335°F	325°F	235°F
2. PRESSURE	No	No	No	No
3. STEP 3 AT	0:00	0:00	0:00	0:00
3. TEMP				
3. PRESSURE				
ALARM SETTINGS:				
ALARM-1 AT	0:00	0:00	0:00	0:00
ADDITIONAL SETTINGS:				
QUALITY TMR	0:00	0:00	0:00	0:00
LOAD COMP	5	5	5	5
LCOMP REF	315°F	300°F	325°F	325°F
GO TO IDLE	No	No	No	No
FILTER AFTER?	4	4	4	10

4.4 Second Level Access and Programming

4.4.1 Second Level Access

Access Operator (Manager) and Technician modes on the second level by doing the following:

1) Press and hold the PROG button for 5 seconds. When L-2 LEVEL 2 displays, release the button. There are six items on the second level menu.
2) Navigate options using the PROG button. Activate any program mode by entering its access code.
3) Type the access code. If an invalid access code is entered, the controller beeps and displays -INVALID CODE- for about two seconds, and then returns to normal operation.
4) To exit Product Programming mode, press and hold the PROG button, or press INFO and PROG simultaneously.

NOTE: If the control is left idle for 20 seconds the controller automatically exits (cancels) and returns to normal operation.

MODE	DISPLAY / PROMPT	ACCESS CODE (Default)
Product Programming Parameters	PROG	1, 2, 3
Special Program Mode	SP PROG / ENTER CODE	1, 2, 3
Date / Time Programming Mode	CLOCK SET / ENTER CODE	1, 2, 3
Data Communications Prog. Mode	DATA COMM / ENTER CODE	1, 2, 3
Heat Control Programming Mode	HT CTRL / ENTER CODE	1, 2, 3
Tech / Service Mode	TECH / ENTER CODE	Reserved for Technician Access Only
Statistics Review Mode	STATS / ENTER CODE	Reserved for Technician Access Only

4.4.2 Set Product Programming Parameters

Use the following steps to set various parameters for each product. Access and set product programming by doing the following:

1) Press and hold P PROG ▷ for one second until PROG displays, followed by ENTER CODE.
2) Enter code 1, 2, 3. SELECT PRODUCT…PRESS PROG scrolls across the display.
3) Press and release the desired product button (1 to 10).
4) Press ▽ DOWN to copy a product, erase a product, preset a product, erase all products, or preset all products.
5) Press and release P PROG ▷. The name of that product displays. (eg. NAME "CHICKEN")

PARAMETER	DESCRIPTION / PROCEDURE
NAME	The product's name (7 digit alphanumeric). Displayed when product is selected, as well as while cooking. If SP-9 Product Buttons set for COOK mode, no product is selected until a cook cycle is started, so dashes are displayed when not cooking.
	1. Press and release ▽ DOWN △ UP and the first letter, or digit, starts flashing. 2. Press and release ▽ DOWN △ UP to change the flashing letter. 3. To continue to the next letter, press P PROG ▷. Then press ▽ DOWN △ UP to change this letter. 4. Repeat step 3 until up to 7 letters are entered. **NOTE**: Blank can be entered by pressing at ▽ DOWN △ UP the same time. 5. Press and hold P PROG ▷ to exit Program Mode, or press and release P PROG ▷ until PRELOAD displays, to continue with Preload Mode.

PARAMETER	DESCRIPTION / PROCEDURE
PRELOAD	Provides a simple way to load product in two batches. For example, load thighs first and let them cook with the lid open for a while, then load remaining product, close and lock the lid, and commence the normal, pressurized cook cycle. The time programmed here is just the "extra" time that the first batch of product should cook. The PRELOAD period always regulates to the Step #1 temperature (below), and keeps the pressure off. The PRELOAD displays: [PRE] 1:59
	1. Press ▽ DOWN △ UP to set a preload time, or press P ▷ PROG if no preload is desired. For example, set preload to 1:00 to cook the large pieces for 1 minute before adding the remaining pieces, close lid, and start the main cook cycle. 2. Press and release P ▷ PROG and 1. TOTAL COOK TIME displays along with the preset time.
1. TOTAL COOK TIME	Overall cook time (0:00 - 59:59) for this product (all intervals, but not including the PreLoad period above). The cook timer starts counting down from this value.
	1. Press ▽ DOWN △ UP to change the overall time of the cook cycle. The time displays in minutes and seconds. 2. Press and hold the buttons, and the time will jump by 5-second increments to a maximum of 59:59. 3. Press and release P ▷ PROG and 1. TEMP displays, along with the preset temperature on the right side of the display.
1. TEMP	Step 1 (interval 1) Oil Temperature (190°F - 380°F). This is the temperature the fryer will regulate to during the first cook interval, as well as the regulating temperature before the cook cycle is started.
	1. Press ▽ DOWN △ UP to change the temperature.

PARAMETER	DESCRIPTION / PROCEDURE
	2. Press and hold the buttons and the temperature will jump by 5-degree increments to a max. of 380☐F (193☐C), and a min. of 190☐F (88☐C). 3. Press and release PROG and 1. PRESSURE displays along with YES or NO.
1. PRESSURE (Pressure fryer only)	Step 1 (interval 1) Pressure setting (YES, NO). YES = cook under pressure during step 1.
	1. Press DOWN UP to build pressure in the first step, or not. 2. Press and release PROG and 2. STEP 2 AT displays, along with a step 2 time.
2. STEP 2 AT	Step 2 Timer setting (0:00 - 59:59). Step 2 begins when the countdown timer = 0:20. This is the point in the cook cycle countdown where the step 2 temperature and pressure settings are activated.
	1. If no step 2 is desired, set time to 0:00 and press PROG . 2. If a step 2 is desired, press DOWN UP and set a time. This is the cook timer countdown time at which the step 2 settings will take effect. 3. Then press PROG to set temperature and pressure. **NOTE**: Up to 10 steps can be programmed for a product, repeating the above step for each cooking step. 4. Press and release PROG and 2. TEMP displays.
2. TEMP	Step 2 Oil Temperature setting (190° F - 380° F). The fryer begins regulating to this temperature once the 2nd interval is started.
	1. Press DOWN UP to change the temperature.

PARAMETER	DESCRIPTION / PROCEDURE
	2. Press and hold the buttons and the temperature will jump by 5-degree increments to a max. of 380☐F (193☐C), and a min. of 190☐F (88☐C). 3. Press and release P ▷ PROG and 2. PRESSURE displays along with YES or NO.
2. PRESSURE (Pressure fryer only)	Step 2 Pressure setting (YES, NO). NO = de-activate pressure when cook cycle reaches step 2.
	1. Press ▽ DOWN △ UP to build pressure in the first step, or not. 2. Press and release P ▷ PROG and 3. STEP 3 AT displays, along with a step 3 time.
3. STEP 3 AT	Step 3 Timer setting (0:00 - 59:59). 0:00 = no third step for this product. Up to ten steps (intervals) are available.
	1. If no step 3 is desired, set time to 0:00 and press P ▷ PROG . 2. If a step 3 is desired, press ▽ DOWN △ UP and set a time. This is the cook timer countdown time at which the step 3 settings will take effect. 3. Then press P ▷ PROG to set temperature and pressure. **NOTE**: Up to 10 steps can be programmed for a product, repeating the above step for each cooking step. 4. Press and release P ▷ PROG and ALARM - 1 AT 0:00 displays.
ALARM-1 AT	Alarm-1 setting (0:00 - Step-1 time). When the countdown timer reaches 0:15 remaining, the controller sounds an audible alarm and generates a blinking display. Alarm-1 display option. Alarms can be programmed to simply blink the time remaining ("TIME" option), or to display one of the following messages: -SHAKE-, -STIR-, -ADD-, or -LID-. With the exception of the -LID- option, alarms simply sound

PARAMETER	DESCRIPTION / PROCEDURE
	three long beeps and show a blinking display for awhile, then the normal cooking display resumes without any user intervention. • The LID alarm is a very specialized alarm that pauses the cooking timer until the user presses the TIMER button to continue the countdown. CLOSE / LID displays until the timer button is pressed. • The LID alarm is used for cook cycles which are started with the lid open, as when loading product in several stages (thighs, then breasts, then legs and wings, for example). The -LID- alarm should be placed just before the first interval that activates pressure. Since the cook timer is paused during the -LID- alarm, the pressurization time will not be reached until after the user has closed and locked the lid, and pressed the TIMER button to acknowledge the LID alarm and resume the countdown. **NOTE**: The PreLoad setting (above) performs a similar function as the -LID- alarm, but the PreLoad option only supports loading product in two batches. Using the -LID- alarm supports multiple batches of product, where the first 1 to 3 batches may be prompted with simple -ADD- alarms, and the final batch is prompted with a LID alarm. It is up to the user to assure that no intervals are programmed to activate pressure until after the -LID- alarm time.
	1. Press and release ▽ DOWN △ UP to set an alarm. **NOTE**: This is the cook timer countdown time at which the alarm will activate. As an example, if a Cook Cycle was set at 3 minutes, and an alarm was to go off after 30 seconds into the Cook Cycle, 2:30 would be set in the display at this time. When the timer counts down to 2:30 the alarm sounds. 2. After the alarm time is set, press P PROG ▷ and ALARM and TYPE flashes on the display, with the alarm type on the right side of the display.

PARAMETER	DESCRIPTION / PROCEDURE
	3. TIME, SHAKE, STIR, ADD and LID can be set by pressing ▽ DOWN △ UP. **NOTE**: An alarm sounds and alarm type flashes, prompting the operator to shake the basket, stir the product, or add product. If TIME is selected, the time remaining flashes on the display. If LID is selected, CLOSE LID flashes on the display. 4. The timer countdown is paused until the lid is closed and  is pressed to restart the timer. **NOTE**: Up to four alarms can be programmed. After the first one is set, the other alarms can be accessed by pressing P PROG ▷ again. 5. Press and release P PROG ▷ until ALARM–2 AT displays along with the preset holding time.
ALARM–2 AT	Alarm-2 setting (0:00 - Step-1 time). 0:00 = there is no second alarm. Up to four alarms are available.
	1. Press and release ▽ DOWN △ UP to set an alarm. **NOTE**: This is the cook timer countdown time at which the alarm will activate. As an example, if a Cook Cycle was set at 3 minutes, and an alarm was to go off after 30 seconds into the Cook Cycle, 2:30 would be set in the display at this time. When the timer counts down to 2:30 the alarm sounds. 2. After the alarm time is set, press P PROG ▷ and ALARM and TYPE flashes on the display, with the alarm type on the right side of the display. 3. TIME, SHAKE, STIR, ADD and LID can be set by pressing ▽ DOWN △ UP. **NOTE**: An alarm sounds and alarm type flashes, prompting the operator to shake the basket, stir the product, or add product. If TIME is selected, the time

PARAMETER	DESCRIPTION / PROCEDURE
	remaining flashes on the display. If LID is selected, CLOSE LID flashes on the display. 4. The timer countdown is paused until the lid is closed and  is pressed to restart the timer. **NOTE**: Up to four alarms can be programmed. After the first one is set, the other alarms can be accessed by pressing PROG again. 5. Press and release PROG until QUALITY TMR displays along with the preset holding time.
QUALITY TIMER	Optional Quality (Hold) timer (0:00 - 59:59). Starts automatically at the end of a cook cycle. 0:00 = disabled.
	1. Press and release DOWN UP to adjust the holding time, up to 90:00 minutes. 2. Press and release DOWN UP to adjust the holding time, up to 90:00 minutes. 3. To exit Program Mode at any time, press and hold PROG for 2 seconds. 4. Press and release PROG and LOAD COMP displays along with the load compensation value. **NOTE**: This automatically adjusts the time to account for the size and temperature of the cooking load.
LOAD COMP	Henny Penny load compensation setting (0 - 20). 0 disables Load Comp (shown as *OFF*). Otherwise, bigger numbers product greater time stretch.
	1. Press and release DOWN UP to change this value to a max. of 20 and a min. of 0. Preset at factory to 5.

PARAMETER	DESCRIPTION / PROCEDURE
	2. Press and release P PROG ▷ and LCOMP REF displays (if load compensation is set to OFF, then "_ _ _" displays) along with the load compensation average temperature. **NOTE**: This is your average cooking temperature for the products you cook. The timer speeds up at temperature above this setting and slows down at temperatures below this setting.
LCOMP REF	Reference value for Load Compensation calculations. Can be set from Setpt 100°F to Setpt, or to the "STEP-X TMP" option. If the LOAD COMP setting is "OFF", this LCOMP REF setting is shown as "——" and may not be programmed: • The STEP-X TMP option uses the current interval's setpoint value for the Load Comp reference, so the reference value changes during the cook cycle if the programmed interval temps change. This method may be more appropriate when interval temperatures are programmed to create a specific temperature curve. • The STEP-X method simulates the way Load Compensation works on the Computron 7000 controller. STEP-X is selected by running the LCOMP REF setting all the way up to the max value. When LCOMP REF is set to a temperature value (Setpt-100 to Setpt), the same reference value is used for the duration of the cook cycle. This is appropriate for single stage cooking, but may also work well for multiple-stage (multi-temperature) cooking. In general, the LCOMP REF setting should be set to the average temperature of a "normal" cook cycle performed with Load Comp set to OFF. After the cook cycle, activate Info Mode (press INFO and PROG simultaneously) and find the cook cycle's average temperature in the Last Load information. Return to Program mode, turn the Load Comp setting on (try a setting of 5 or 10), and set the LCOMP REF to the average temperature that was shown in the Last Load info.
	1. Press and release ▽ ▼ DOWN △ ▲ UP to change this value. Or, to use the cooking setpoint temperature as the load

PARAMETER	DESCRIPTION / PROCEDURE
	compensation reference point, press UP until STEP-X and TEMP flashes on the display. As an example, if the cooking temperature is 350°, the timer speeds up when the shortening temperature is above 350, and slows down when the temperature is below 350. Set the PC FACTOR (pulse control) to 0 degrees for thermostatic heat control while cooking. Else set to 2 degrees Fahrenheit or 3 degrees Fahrenheit (or higher) to avoid temperature overshoot while cooking small loads. 2. Press and release PROG and GO TO IDLE, AFTER DONE displays, along with YES or NO.
GO TO IDLE AFTER DONE	Should the fryer automatically go to Idle mode at the end of this cook cycle? (YES or NO): • If YES, the controller automatically activates IDLE mode at the end of each cook cycle for this product (except for cycles that are stopped in the first 30 seconds). • If set to NO, the controller remains in Cook mode at the conclusion of the cook cycle, with the same product selected.
	1. Press DOWN UP to toggle between YES and NO. 2. Press PROG .
FILTER AFTER (only if SP-8 is set for "MIXED" filter)	This setting (0 - 100) indicates how many cook cycles of this product may be cooked before a filter operation is required. A setting of "0" indicates that this product is exempt from filter counts – any number of loads may be cooked without requiring filtering. When operating in "mixed" filter mode (see SP-8 setting), each product has its own, individual filter cycles setting. This setting specifies how many loads of that product may be cooked before filtering is required, if no other products were being cooked. The controller tracks the mixed mode filter use as a percentage, starting at "0% used" just after filtering and accumulating toward 100% (or beyond). If product A's "FILTER AFTER" setting is set to 5, for example, then each cook cycle of that product adds 20% to the filter use. If product

PARAMETER	DESCRIPTION / PROCEDURE
	B is set to 3, then each product B cook cycle adds 33% to the filter use. When SP-8 is set for "mixed" mode filter tracking, the SP-8A parameter specifies a percent level where the controller begins to suggest – but not require – filtering. The SP-8C parameter specifies a percent level where filter lockout occurs and the user is forced to filter the oil. Continuing the example above, assume that the SP-8A "Suggest Filter At" parameter is set to 90%, and the SP-8C "Filter Lockout At" parameter is set to 110%. If one load of product A is cooked, the filter usage is at 20%. If one load of product B is then cooked, the filter usage reaches 53% (20% + 33%). Two more loads of product A will bring the total to "93% used" (20% +33% +20% +20%). At this point, the SP-8A "Filter Suggested At" level has been reached, so a periodic "FILTER SUGGESTED" message is displayed – during the cook cycle, and after it has completed. However, the filter usage has not yet reached the "lockout" level, so further cooking is still possible. If another load of product B is cooked, the total filter usage now climbs to "126%" – well past the lockout level. At this point, the "FILTER LOCKOUT" message is displayed. At the conclusion of the current cook cycle, no further cooking is allowed until after the oil is filtered.
	1. Press and release ▽ DOWN △ UP until the desired number of Cook Cycles between filters displays. As an example, if 4 is set for a product each time that product is selected, it counts as 25%. Then each time a product is cooked, the percentages add up until 100%, or more is reached. Then, FILTER SUGGESTED displays.
FILTER INCL (only if SP-8 is set for "GLOBAL" filter)	This setting (YES or NO) indicates whether or not this product should be counted in the filter cycles tracking: • If set to YES, then each time this product is cooked it will be counted against the global filter cycle allowance. • If set to NO, then this product may be cooked any number of times without affecting the filter usage or activating a filter lockout.
	1. Press and release ▽ DOWN △ UP for YES if that product is to be included in the filter count, or NO if it is not.

4.4.3 Copy, Erase and Preset

Products and their setpoints can be copied from one menu location on the controller to another location, preset the controls to factory settings, or erase products and all their values.

OPTION	PROCEDURE
MENU	Access by doing the following: 1. Press and hold PROG for one second until PROG displays, followed by ENTER CODE. 2. Enter code 1, 2, 3. SELECT PRODUCT…PRESS PROG scrolls across the display, followed by DOWN FOR OPTIONS. 3. Press DOWN and **OPTIONS**, followed by *1. COPY A PROD displays. 4. Press DOWN again, each time, to view the following options: *1. COPY A PROD *2. ERASE A PROD *3. PRESET A PROD *4. ERASE ALL *5. PRESET ALL 5. To select one of the above options, press while PROG the desired option displays. 6. Selecting PRESET A PROD, or PRESET ALL PROD sets factory setpoints in those menu items. 7. Press INFO at any time to exit the Options menu, or wait 30 seconds and the controller automatically exits.
*1. COPY A PROD Copies a product to another location, leaving the original product intact.	1. Press PROG to select the presently displayed COPY A PROD option. COPY __ TO __ displays. The first set of "_" is blinking.

OPTION	PROCEDURE
	2. Select the product you wish to copy from by pressing the  button: COPY 2 TO __ displays. 3. Press product you want to copy to by pressing the button. The controller responds with a confirmation message: COPY 2 TO 0? 1=YES 2=NO • Press  (YES) and the controller copies product #2 to the product #0 position (the #2 product is left intact). *COPIED* displays, and then returns to the Select Prog Product step with the #0 product already selected. • Press  (NO) or don't press any buttons for 20 seconds and the controller displays X CANCELED X, and then exits the process. No changes are made.
*2. ERASE A PROD Resets a product to "empty" values. Name reset to match button ID, Cook Time reset to 0:00, etc.	1. Press  to highlight the erase option. 2. Press  to select the highlighted option. 3. Press the product button you want to erase (reset to empty). The controller responds with a confirmation message: ERASE PROD ? 1=YES 2=NO • Press  (YES) to confirm that you want to erase the selected product back to an empty value. *ERASED* displays briefly, and then returns to the Select Prog Product display.

OPTION	PROCEDURE
	• Press  (NO) or don't press any buttons for 20 seconds and the controller displays X CANCELED X, and then exits the process. No changes are made.
*3. PRESET A PROD Restores a product to its factory default settings, which could be “empty” values.	**1.** Press  to highlight the preset option. **2.** Press  to select the highlighted option. **3.** Select the product button you want to preset (restore to factory default values). A confirmation prompt displays: PRESET PROD ? 1=YES 2=NO • Press  (YES) to confirm that you want to restore a product to its factory setting. *PRESET* and then *DONE* displays, and then returns to the Select Prog Product display. • Press  (NO) or don't press any buttons for 20 seconds and the controller displays X CANCELED X, and then exits the process. No changes are made.

OPTION	PROCEDURE
*4. ERASE ALL Resets ALL products to "empty" values. Names reset to match button ID's, Cook Times reset to 0:00, etc.	1. Press DOWN to highlight the erase all option. 2. Press P PROG ▷ to select the highlighted option. A confirmation prompt displays: ERASE ALL PROD ? 1=YES 2=NO • Press 1 (YES) to confirm that you want to erase the selected product back to an empty value. *ALL ERASED* displays, and then returns to the Select Prog Product display. • Press 2 (NO) or don't press any buttons for 20 seconds and the controller displays X CANCELED X, and then exits the process. No changes are made.
*5. PRESET ALL Restores ALL products to their factory default settings, which could include "empty" values.	1. Press DOWN to highlight the preset all option. 2. Press P PROG ▷ to select the highlighted option. A confirmation prompt displays: PRESET ALL PROD ? 1=YES 2=NO • Press 1 (YES) to confirm that you want to restore a product to its factory setting. *PRESET ALL* and then *DONE* displays, and then returns to the Select Prog Product display. • Press 2 (NO) or don't press any buttons for 20 seconds and the controller displays X CANCELED X, and then exits the process. No changes are made.

4.5 Special Program Mode

The Special Program Mode is used to set more detailed parameters. Log in to Special Programming by doing the following:

1) Press and hold PROG for 5 seconds until L-2 and LEVEL 2, followed by SP PROG and ENTER CODE displays.
2) Enter code 1, 2, 3, and SP-1 , TEMP. UNITS displays.

   NOTE: If a bad code is entered, an alarm sounds and BAD CODE displays. Wait a few seconds, the control reverts back to the Cook Mode, and then repeat the above steps.

3) To exit from the Special Program Mode at any time, press and hold the PROG button for 2 seconds, or to roll back to previous setting, press INFO.

The following menu displays:

MODE	DISPLAY	DEFAULT	DESCRIPTION
SP-1	TEMP UNITS	ºF	Select Fahrenheit or Celsius.
1. The display flashes SP-1 and TEMP. UNITS, along with ºF or ºC. 2. Press DOWN UP to toggle between ºF or ºC. 3. Press the PROG button to navigate to the next setting.			
SP-2	LANGUAGE	English	Operating Language for displays and messages.
1. Press and release PROG button. SP-2 and LANGUAGE flash on the display, along with the language (Ex. 1.ENGL). 2. To toggle to the desired language, press and release DOWN UP.			
NOTE:	Available Languages: • 1. ENGL: English • 2. FRAN: Francais (French) • 3. DEUT: Deutsch (German)		

MODE	DISPLAY	DEFAULT	DESCRIPTION
	• 4. ESPA: Español (Spanish) • 5. PORT: Portugues (Portuguese) Most normal operating messages and product programming messages are implemented in the languages listed above. However, most error messages and all 2nd level programming modes are still displayed in English only.		
SP-3	DO SYSTEM INIT	INIT	Allows all programmable settings to be initialized to factory preset values.
	1. Press and release P ▷ PROG twice. SP-3 and DO SYSTEM INIT flashes on the display, along with INIT. **2.** Press and hold the ▽ DOWN button for 5 seconds, and then INIT displays, a tone sounds, and IN 3, IN 2, IN 1 flashes on the right side of the display. When INIT starts flashing on the left side of the display, release ▽ DOWN. When DONE displays, the initialization is complete and the controls now have factory preset parameters.		
NOTE:	• This step resets the controls, but doesn't erase product settings. • Calibration data is not affected by this initialization, unless calibration values are found to be outside of acceptable limits. Also, statistics values, the E Log, etc., will not be affected by this initialization.		
SP-4	AUDIO VOLUME	10	Speaker volume (1 - 10).
	1. Press the P ▷ PROG 3 times. SP-4 and AUDIO VOLUME flash on the display, along with the volume value. **2.** Press ▽ DOWN △ UP. to adjust the speaker volume; 10 the maximum value and 1 the minimum.		
SP-5	AUDIO TONE (HZ)	1100	Speaker frequency (50 - 2000 Hz, in 50 Hz).
	1. Press P ▷ PROG 4 times. SP-5 and AUDIO TONE (HZ) flashes on the display, along with the tone value.		

MODE	DISPLAY	DEFAULT	DESCRIPTION
2. Press ▽ DOWN △ UP to adjust the tone of the speaker; 2000 the maximum, 50 the minimum.			
NOTE:	The tone of each controller can be programmed to a different value to allow each piece of equipment to be identified by its own, unique sound.		
SP-6	MELT CYCLE SELECT	1. SOLID	Shortening type setting (1.SOLID, 2.LIQ).
⚠ CAUTION	The type of shortening being used in the fryer determines the amount of heat applied during the Melt Cycle. If the controls are set to the Solid setting, less heat is applied to the shortening than if the controls were set to Liquid. Too much heat applied to solid shortening causes much smoking, and could cause a fire. Match this setting to the type of shortening being used at the time. When using new solid shortening, it is recommended to melt the shortening on an outside source before placing shortening in the vat. Unless elements are completely covered in shortening, fire or damage to the vat could result.		
The Melt Cycle can be set to the type of shortening being used. If the fryer is equipped with a FPS temperature probe, it accounts for the type of shortening automatically and does not need set unless the system becomes disabled. 1. Press and release P PROG ▷ 5 times. SP-6 and MELT CYCLE SELECT flashes on the display, along with l=LIQ or 2=SOLID. 2. Press ▽ DOWN △ UP to toggle between l=LIQ or 2=SOLID.			
NOTE:	• The 1.SOLID setting uses a very conservative melt cycle for safely melting solid shortening. • The 2.LIQ setting allows a more aggressive heat-up rate, but should only be used if liquid oil is in the vat.		
SP-7	IDLE MODE ENABLED?	Yes	Idle mode enable setting (YES, NO).
SP-7A	IDLE SETPT TEMP	250ºF	Setback regulating temperature (190°F - 350°F) for Idle (Standby) mode.
SP-7B	AUTO-IDLE MINUTES	OFF	Period of inactivity (OFF, 1 - 60 min.) that triggers automatic activation of Idle mode.
SP-7C	GO IDLE AT MELT EXIT?	NO	This setting (YES, NO) determines the fryer's operation when it exits

MODE	DISPLAY	DEFAULT	DESCRIPTION
			Melt Mode upon reaching the Melt Exit Temperature.

A programmed Idle Mode allows the shortening temperature to drop to a lower temperature when not in use. This saves on the shortening and utilities.

1. Press and release PROG 6 times. SP-7 and IDLE MODE ENABLED? flashes on the display, along with NO or YES.
2. Press and release DOWN UP to toggle between YES or NO. With YES in the display, the Idle Mode is enabled.
3. Press and release PROG . SP-7A and IDLE SETPT TEMP displays along with the preset temperature.
4. Change idle setpoint temperature, by pressing DOWN UP .
5. Press and release PROG . SP-7B and AUTO-IDLE MINUTES displays along with the preset time.
6. Press DOWN UP to set the minutes the fryer stays idle before the Auto-idle is enabled. **NOTE**: 60 the maximum, OFF the minimum.
7. Press and release PROG . SP-7C and GO IDLE AT MELT? displays.
8. Press DOWN UP to toggle between YES or NO. With YES in the display the fryer automatically enters the Idle Mode once the Melt Mode is exited.

SP-8	FILTER TRACKING MODE	MIXED	Settings: 1.OFF, 2.MIXED, 3. GLOBAL, or 4.SCHED. Specifies what type of filter enforcement is used.

The controls can be set to signal the operator when the shortening needs filtering. The Filter Tracking must be enabled to program the number of Cook Cycles between filtering procedures.

1. Press and release PROG until SP-8 and FILTER TRACKING ENABLED flashes on the display, along with 1, OFF.

MODE	DISPLAY	DEFAULT	DESCRIPTION
2. To enable filter tracking, press ▽ DOWN △ UP to toggle the display from 1, OFF, to 2, MIXED, 3, GLOBAL or 4, SCHED.			
NOTE:	The Mixed setting allows the operator to set different amounts of Cook Cycles, between filters, for each product. If the operator wants to have one setting for all products, then continue at Step XX below.		
MIXED MODE:			
SP-8A	SUGGEST FILTER AT...	90%	Filter usage level (75% - 100%) where the "FILTER SUGGESTED" message is activated.
SP-8B	LOCKOUT ENABLED?	YES	Specifies whether or not a true filter lockout function is enabled (YES or NO).
SP-8C	FILTER LOCKOUT AT...	110%	Filter usage level (100% - 200%) where "FILTER LOCKOUT" is activated.
SP-8D	LOCKOUT - HEAT OIL...	300°F	When a FILTER LOCKOUT occurs, the fryer continues to heat the oil, regulating to the temperature programmed here.

1. If 2. MIXED is selected, press P PROG ▷. SP-8A displays with SUGGEST FILTER AT … and a value between 75% and 100%.
2. Press and release the ▽ DOWN △ UP to change the value.
3. Press P PROG ▷. SP-8B displays with LOCKOUT ENABLED? and YES or NO.
4. Press and release ▽ DOWN △ UP to choose YES or NO.
5. Press P PROG ▷. SP-8C displays with FILTER LOCKOUT AT… and a value between 100% and 200%.
6. Press ▽ DOWN △ UP to change the value.
7. Press P PROG ▷. SP-8D displays LOCKOUT – HEAT OIL….

MODE	DISPLAY	DEFAULT	DESCRIPTION
8. If YES is chosen a temperature displays. Press ▽ DOWN △ UP to set the desired temperature 250-380ºF (121-193ºC). **9.** Go to Product Program mode > Filter Cycle, and then program in the number of cook cycles between filters.			
GLOBAL MODE:			
SP-8A	GLOBAL FILTER CYCLES	8	The number of cook cycles (1 - 99) that are allowed before the user is required to filter the oil.
SP-8B	LOCKOUT ENABLED?	YES	Specifies whether or not a true filter lockout function is enabled (YES or NO).
SP-8C	LOCKOUT - HEAT OIL...	300°F	When a FILTER LOCKOUT occurs, the fryer continues to heat the oil, regulating to the temperature programmed here.
If 3. GLOBAL is selected, SP-8A displays followed by GLOBAL FILTER CYCLES. The right-side of the displays a digit, 1 to 99. **1.** Press ▽ DOWN △ UP to set the desired amount of cook cycles between filters. **NOTE**: In cook mode, the number of global cook cycles remaining displays as 4-HEAD 5X READY. **2.** Press P PROG ▷ and SP-8B displays with LOCKOUT ENABLED? and YES or NO. **3.** Press and release ▽ DOWN △ UP to choose yes or no. **4.** Press P PROG ▷ and SP-8C displays. **5.** If YES was chosen in Step 3, LOCKOUT – HEAT OIL… and a temperature displays. Press ▽ DOWN △ UP to set the desired temperature 250-380ºF (121-193ºC). **6.** Go to Product Program mode, and then press P PROG ▷ until FILTER INCL displays. Each product must be set to YES to be included in the filter tracking.			
SCHEDULED MODE:			
SP-8A SP-8B SP-8C SP-8D	SCHEDULE	F1: 10.00A F2: 2.00P F3: 8.00P F4: - - - -	Specify up to four scheduled filter events, labeled F1 through F4. Program the time of day at which the

MODE	DISPLAY	DEFAULT	DESCRIPTION
			FILTER SUGGESTED prompt is activated.
1. If 4, SCHED is selected, SP-8A displays followed by SCHEDULE. Press PROG and up to 4 different times of day can be programmed by pressing DOWN UP. **NOTE**: Unneeded times should be left at - - - -, otherwise Filter Suggested displays prompting the operator to start filtering.			
SP-8E	SKIP IF LESS THAN...	1 LOAD	The controller can skip activation of a scheduled filter event if no cook cycles (or very few cook cycles) have been performed since the previous filter operation.
1. Press PROG and SP-8E SKIP IF LESS THAN... displays, followed by the number of loads between filters (eg. LOAD 4). As an example: - If the suggested filter time occurs before 4 loads have been cooked, then the filter operation is skipped. - If more than 4 loads have been cooked, then Filter Suggested displays. The numbers of loads can be set by pressing DOWN UP.			
SP-8F	LOCKOUT ENABLED?	YES	Specifies whether or not a true filter lockout function is enabled (YES or NO).
1. Press PROG and SP-8F LOCKOUT ENABLED? displays. Press DOWN UP to choose YES or NO. **NOTE**: Cooking is still permitted during the "suggested" phase. However, if lockout is enabled, and the fryer still has not been filtered after one hour, then the controller activates lockout mode and prompts FILTER LOCKOUT – YOU *MUST* FILTER NOW.			
SP-8G	LOCKOUT – HEAT OIL	300°F	When a FILTER LOCKOUT occurs, the fryer continues to heat the oil, regulating to the temperature programmed here.
1. Press PROG and SP-8G LOCKOUT - HEAT OIL... displays with a shortening temperature. As an example, LOCKOUT - HEAT OIL... 300°F tells the Control to wait			

MODE	DISPLAY	DEFAULT	DESCRIPTION
until 300 degrees ºF is reached, and then the Control displays FILTER LOCKOUT / YOU *MUST* FILTER NOW. Also, repeated high-low tones are activated. This prompts the user that it is now time to filter the shortening. **2.** Press ▽ DOWN △ UP to change.			
SP-9	PRODUCT BUTTONS	2.SELECT	Product button mode (1.COOK, 2. SELECT).
This mode sets up the way products are selected and cook cycles started in the Cook Mode. **1.** Press and release P PROG ▷ until SP-9 PRODUCT BUTTONS flashes on the display. **2.** Press ▽ DOWN △ UP to select one of the following: • 1, COOK: Pressing the product button begins the cook cycle. – The Timer button is used to stop cook cycles. – The appropriate product button must be pressed each time a cook cycle is started. • 2, SELECT: Pressing a product button only displays the product. Press  to start the Cook Cycle. – The product's name appears in the left side of the display, and the controller begins regulating to that product's setpoint temperature. – The Timer button must be used to start a cook cycle. – The Timer button is also used to stop a cook cycle. – Subsequent cook cycles for the same product can be started by simply pressing the Timer button again, as the product is already selected and its name is shown on the display.			
SP-10	CLEAN-OUT MINUTES	15	Timed clean-out (boil-out) period (0 - 99 minutes).
This mode sets the number of minutes for the Clean-Out Mode. **1.** Press P PROG ▷ until SP-10 CLEAN-OUT MINUTES displays, along with the preset minutes. **2.** Press ▽ DOWN △ UP to change the number of minutes, up to 99. When Clean-out Mode is activated, the fryer heats the water to the specified temperature, see SP-11. A countdown timer starts with the number of minutes specified. **NOTE**: If Clean-out Minutes is set to 0 (OFF), the heated water clean-out mode is disable and is not offered to the user.			

<table>
<tr><th>MODE</th><th>DISPLAY</th><th>DEFAULT</th><th>DESCRIPTION</th></tr>
<tr><td>NOTE:</td><td colspan="3">• To clean the vat, fill it with water and cleaning solution and turn the fryer on. In Melt Mode, press and hold the IDLE button. The controller displays CLEAN-OUT? / 1=YES 2=NO. Press the #1 button to activate Clean-out mode.
• As the water temperature nears the [SP 11] setpoint temperature, a timed clean-out period begins automatically.
• At the end of the timed clean-out period, the controller beeps once and displays CLEANING *DONE*. No user acknowledgement is necessary. The controller continues to regulate to the programmed SP-11 temperature until the fryer is turned OFF.</td></tr>
<tr><td>SP-11</td><td>CLEAN-OUT TEMPERATURE</td><td>195°F</td><td>Water temperature setpoint (100°F - 195°F) for Clean-out mode.</td></tr>
<tr><td colspan="4">This mode sets the temperature of the Clean-Out Mode.

1. Press P PROG ▷ until SP-11 CLEAN-OUT TMP displays, along with the set temperature.

2. Press ▽ DOWN △ UP to change the temperature, up to 195 ºF (91ºC).</td></tr>
<tr><td>NOTE:</td><td colspan="3">During clean-out, the user may freely adjust the operating value up or down as necessary to keep the fryer from foaming over.</td></tr>
<tr><td>SP-12</td><td>NOMINAL AMPS READING</td><td>- 4-HD Electric: 31A
- All Other Fryers: OFF</td><td>The normal amps reading (OFF, 1 - 99 amps)</td></tr>
<tr><td colspan="4">1. Press P PROG ▷ until SP-12 AMPS RDG, NOMINAL displays.

2. Check the amp reading on the right side of display (eg. 37A) with the amp reading on the data plate. If readings are different, use ▽ DOWN △ UP to change the display to match data plate. This could vary depending upon how the unit is wired.</td></tr>
<tr><td>NOTE:</td><td colspan="3">• The controller considers any phase current of 2 amps or less to be "OFF". This allowance is for tolerance errors or calibration errors in the current sensor input circuits.
• 4-Head fryer Only:
– The normal amps reading (OFF, 1 - 99 amps). This is the current in each phase of the incoming supply when the heating elements are turned on.</td></tr>
</table>

MODE	DISPLAY	DEFAULT	DESCRIPTION
	– For 3-phase, 4-Head fryers (with or without neutral), this "nominal amps reading" should be set to the amps rating stamped on the data plate fastened to the door of the fryer. – For single-phase units, the parameter should be set to 1/3 of the data plate amps. • All Other Fryers: – For all Gas fryers, this setting is forced to OFF. – For 8 Head Electric fryers, this setting is normally forced to OFF, unless amps sensors are detected by the controller. If this setting is programmed to OFF, or if the Amp sensors are unplugged or not properly detected by the controller, no "amps" warnings are generated regardless of how high or low the amps levels are. Otherwise, this parameter specifies the expected amps reading for each of the three current (amps) sensors.		
SP-13	AMPS READING LOW LIMIT (PERCENTAGE)	4-HD Electric: 80% All Other Fryers: OFF	The lower acceptance limit (50% - 99%) for the amps sensors. Readings below this limit will generate an E-27 HEAT AMPS TOO LOW error.
This is the percentage below the Nominal Amp Reading in which the controls senses a too low amperage warning (E27). Preset at 80%, but can be changed (50 to 99%): 1. Press P PROG ▷ until SP-13 AMPS RDG, LOW LIMIT displays, along with the preset percentage. 2. Press ▽ DOWN ▼ △ UP ▲ to change percentage.			
NOTE:	• If a limit is programmed, all Amps errors are automatically disabled if the amp sensors are unplugged or are not properly detected by the controller. • 4-Head fryer Only: The lower acceptance limit (50% - 99%) for the amps sensors. Readings below this limit will generate an E-27 "HEAT AMPS TOO LOW" error. • All Other Fryers: – The acceptance limits are percentages of the SP-12 Nominal Amps Rdg. – Press and hold the 0 button to view the lower limit as an actual amps reading.		
SP-14	AMPS READING HIGH LIMIT (PERCENTAGE)	4-HD Electric: 120%	The upper acceptance limit (101% - 150%) for the amps sensors.

MODE	DISPLAY	DEFAULT	DESCRIPTION
		All Other Fryers: OFF	Readings above this limit will generate an E-25 HEAT AMPS TOO HIGH error.

This is the percentage above the Nominal Amp Reading in which the controls senses a too high amperage warning (E25). Preset at 115%, but can be changed (101 to 150%):

1. Press PROG ▷ until SP-14 AMPS RDG, HIGHLIMIT displays, along with the preset percentage.
2. Press and release ▽ DOWN △ UP to change percentage.

NOTE:	
	• Even if a limit is programmed here, all Amps errors are automatically disabled if the amp sensors are unplugged or are not properly detected by the controller. • 4-Head fryer Only: The upper acceptance limit (101% - 150%) for the amps sensors. Readings above this limit will generate an E-25 "HEAT AMPS TOO HIGH" error. • All Other Fryers: – The acceptance limits are percentages of the SP-12 Nominal Amps Rdg. – Press and hold the 0 button to view the lower limit as an actual amps reading.

SP-15	PROGRAM CODE CHANGE CHANGE MGR CODE ? 1 = YES	MGR 123	These steps lets you change the "Manager" and "Reset Usage" access codes (passwords).

This allows the operator to change the manager's program passcode (factory set at 1, 2, 3) used to access Product Programming, Special Programming, Clock Set, Data Comm and Heat Control Modes.

1. Press PROG ▷ until SP-15 CHANGE MGR CODE? 1=YES and CODE displays.
2. Press 1 and ENTER NEW CODE P=DONE I=QUIT displays. Use the Product Number buttons to type a new passcode.
3. Press PROG ▷ until REPEAT NEW CODE P=DONE I=QUIT displays. Enter the passcode again.
4. Press PROG ▷ until *CODE CHANGED* displays.

MODE	DISPLAY	DEFAULT	DESCRIPTION

◁ 

5. To cancel, press INFO and *CANCELLED* displays, then reverts back to SP-15 CHANGE MGR CODE? 1=YES. Return to step 1 to begin again.

NOTE:	These steps lets you change the Manager and Reset Usage access codes (passwords).		
SP-16	USAGE CODE CHANGE CHANGE USG CODE ? 1 = YES	USAGE 123	These steps lets you change the "Manager" and "Reset Usage" access codes (passwords).

This allows the operator to change the reset usage code (factory set at 1, 2, 3) to reset the usage amounts of each product. See Review Usage step in Information Mode.

P ▷

1. Press PROG until SP-16 CHANGE USG CODE ? 1=YES and USAGE displays.

2. Press 1 and ENTER NEW CODE P=DONE I=QUIT displays. Use the Product Number buttons to type a new passcode.

P ▷

3. Press PROG until REPEAT NEW CODE P=DONE I=QUIT displays. Enter the passcode again.

◁ 

4. To cancel, press INFO and *CANCELLED* displays, then reverts back to SP-16 CHANGE USG CODE ? 1=YES. Return to step 1 to begin again.

NOTE:	If a password is forgotten, contact the Technical Services for details.		
SP-17	CHANGE SHORTENING: A - COOK CYCLE	OFF	Number of cook cycles (OFF, 1 - 5000) at which the "Change Oil" prompt should be generated.

The operator can set a reminder to change / discard old oil and fill with new oil based on the number of Cook Cycles accumulated. CHANGE OIL SOON displays when the preset number of Cook Cycles has been met, OFF to 5000 in increments of 10.

P ▷

1. Press PROG until SP-17 CHANGE OIL' A – COOK CYCLES displays, along with number of Cook Cycles.

2. Press and release ▽ DOWN △ UP to change the number of Cook Cycles.

MODE	DISPLAY	DEFAULT	DESCRIPTION
NOTE:	• To use the Change Oil feature, the user must take care to reset the Review Usage data (in Info Mode) each time the oil is changed. • Once the Review Usage Total Cook value reaches this programmed limit, the controller periodically displays a CHANGE OIL SOON prompt during Cook mode non-cooking periods, during Idle mode, and whenever the drain is open during filtering. • The Change Oil prompt continues until the Review Usage data is reset – normally when the oil is actually changed.		
SP-18	CHANGE SHORTENING: B - HOURS	OFF	Number of power on hours (OFF, 1..999 hours) at which the "Change Oil" prompt should be generated.

The operator can set a reminder to change the shortening based on the number of power-on hours accumulated, -OFF- to 999 hours. CHANGE OIL SOON displays when the preset number of hours has been met.

1. Press PROG until SP-18 CHANGE OIL' B - HOURS displays, along with a number of hours.
2. Press and release DOWN UP to change the number of power-on hours.
   NOTE: Once the shortening is filtered, to clear CHANGE OIL SOON (i.e. SP-17 & SP-18) display, reset the review usage data in the Information Mode. See Information Mode section of this manual.
3. Press and hold PROG at any time to exit Special Program Mode.

NOTE:	• To use this Change Oil feature, the user must take care to reset the Review Usage data (in Info Mode) each time the oil is changed. • Once the Review Usage Pwr On Hrs value reaches this programmed limit, the controller periodically displays a CHANGE OIL SOON prompt during Cook mode non-cooking periods, during Idle mode, and whenever the drain is open during filtering. • The Change Oil prompt continues until the Review Usage data is reset – normally when the oil is actually changed. • Whenever either one of the Change Oil functions is enabled, an additional display item appears in the Info-button Status display. In any normal operating mode, press the INFO button four times. The control displays: OIL IS XX% USED where XX is the current percentage of cook counts or the current percentage of hours, whichever is higher.

4.6 Program Settings Worksheet

The next two pages are worksheets for your convenience. They may be helpful in determining and recording setpoints.

COMPUTRON 8000 PRODUCT SETTINGS WORKSHEET **CUSTOMER NAME:** **DATE:**					
SETTING	**PRODUCT DESCRIPTION**			ALARM-1	
NAME: _____ (7 Character Max.)				ALARM-1	
PRELOAD: _____ (Always use STEP 1 temp.)				ALARM-1	
	TIME	**TEMP.**	**PRES-SURE**	ALARM-1	
STEP 1	00:00	°F / °C	YES / NO		
STEP 2	00:00	°F / °C	YES / NO	QUALITY TIMER	
STEP 3	00:00	°F / °C	YES / NO	LOAD COMP	
STEP 4	00:00	°F / °C	YES / NO	LCOMP REF.	
STEP 5	00:00	°F / °C	YES / NO	PC FACTOR	
STEP 6	00:00	°F / °C	YES / NO	Go to Idle When Done?	YES / NO
STEP 7	00:00	°F / °C	YES / NO	— Optional Filter Settings — Only one (or neither one) appears	
STEP 8	00:00	°F / °C	YES / NO		
STEP 9	00:00	°F / °C	YES / NO	FILTER AFTER...	
STEP 10	00:00	°F / °C	YES / NO	FILTER INCLUDE?	YES / NO

COMPUTRON 8000 SP PROG SETTINGS WORKSHEET **CUSTOMER NAME:** **DATE:**	
SP-1 TEMP. UNITS	TEMPERATURE: _____°F (FAHRENHEIT) / °C (CELSIUS)
SP-2 LANGUAGE	LANGUAGE: _____ (1. ENGLISH / 2. FRENCH / 3. GERMAN / 4. SPANISH / 5. PORTUGUESE)
SP-3 INITIALIZE STEP	
SP-4 AUDIO VOL.	LEVEL: _____ 1 2 3 4 5 6 7 8 9 10
SP-5 AUDIO TONE (Hz)	FREQUENCY: _____ (50 - 2000 Hz)

COMPUTRON 8000 SP PROG SETTINGS WORKSHEET CUSTOMER NAME: DATE:		
SP-6 MELT CYCLE	SHORTENING: _____ 1. SOLID / 2. LIQUID	
SP-7 IDLE MODE ENABLED? (Select YES or NO below and complete corresponding section)		
YES	**SP-7A IDLE SETPOINT TEMP.**	TEMP: _____
	SP-7B AUTO-IDLE MINUTES	MIN: _____
	SP-7C GO TO IDLE AT MELT EXIT?	YES / NO
NO		
SP-8 FILTER TRACKING MODE: ___ (Select 1, 2 or 3 below and complete corresponding section)		
1. OFF		
2. MIXED	**SP-8A SUGGEST FILTER AT...**	
	SP-8B LOCKOUT ENABLED?	YES / NO
	SP-8C FILTER LOCKOUT AT..	
3. GLOBAL	**SP-8A GLOBAL FILTER CYCLES**	
	SP-8B LOCKOUT ENABLED?	YES / NO
SP-9 PRODUCT BUTTONS	OPTION: _____ 1. COOK / 2. SELECT	
SP-10 CLEAN-OUT MIN.		
SP-11 CLEAN-OUT TEMP.		
SP-12 NOMINAL AMP READING	Normal, expected current draw. (“OFF” for GAS)	
SP-13 AMPS READING LOW LIMIT	Acceptable range below normal (“OFF” for GAS)	
SP-14 AMPS READING HIGH LIMIT	Acceptable range above normal (“OFF” for GAS)	
SP-15 MANAGER’S ACCESS CODE		
SP-16 USAGE CODE		
SP-17 “CHANGE OIL” A - COOK C		
SP-18 “CHANGE OIL” B - HOURS		

Chapter 5 Cooking

CAUTION When using new solid shortening, it is recommended to melt the shortening on an outside source before placing shortening in the vat. Unless elements are completely covered in shortening, fire or damage to the vat could result.

These are general steps explaining the C8000 operation.

1) Be sure the drain valve is in the closed position.
2) Remove fry basket from vat (frypot) and leave lid up.
3) Fill the vat with shortening.
4) Move power switch to the COOK position. The unit automatically goes into the Melt Cycle. When the temperature reaches 230 °F (110 °C) the control goes into the Heat Cycle, and heats the shortening until the temperature setting is reached.

   CAUTION!: A new control may default to solid shortening. If using liquid shortening, go to Special Program SP-6 and set to 2. LIQUID to speed up melt mode.

5) Once out of the Melt Cycle WAIT flashes until 5 °F (3 °C) before setpoint temperature is reached. Then READY illuminates and the selected product show in the display. Select desired product by pressing corresponding product selection number button.
6) Completely stir shortening to stabilize the temperature throughout the vat.
7) Once the shortening temperature has stabilized at the setpoint temperature, place the baskets into the shortening. Then place product into the basket.
8) Lift the basket slightly out of the shortening and shake the basket to separate pieces.
9) Remove basket handle and close lid quickly, latching the lid.
10) Tighten the lid spindle clockwise, sealing the lid. Align the red knob on the spindle with the red knob on the latch.

    DANGER!: LATCH THE LID PROPERLY AND ALIGN THE RED BALLS OR SEVERE BURNS WILL RESULT.

11) Press  to start a Cook Cycle. The display counts down the cooking time.

    NOTE: A different product can be selected during the first minute of cooking, in case the wrong product button was pressed.

12) To check the shortening temperature press ◁ INFO. To stop a Cook Cycle early, press and hold  .

13) Within a few minutes, the pressure gauge increases to the OPERATING ZONE. If not, recheck the installation and operation procedures in the Operator's Manual.

14) Near the end of the Cook Cycle the fryer automatically depressurizes, an alarm sounds and the display flashes DONE. To stop the alarm, press  .

DANGER!: DO NOT ATTEMPT TO OPEN LID UNTIL THE PRESSURE DROPS TO ZERO. LID IS LOCKED WHEN FRYER IS UNDER PRESSURE. DO NOT ATTEMPT TO FORCE THE LID LATCH OR OPEN THE LID WHILE UNDER PRESSURE. OPENING THE LID WHEN THE VAT IS PRESSURIZED ALLOWS HOT SHORTENING AND STEAM TO ESCAPE FROM THE VAT, RESULTING IN SEVERE BURNS.

15) After pressure drops to zero, turn the spindle counter-clockwise.
CAUTION!: Do not flip or spin the spindle cross arm when opening the lid because it could damage the acme nut inside the cross bar.

16) Unlatch and raise the lid quickly to allow most of the condensation on the lid to drain through the drain channel and not into the shortening.
CAUTION!: Do not let the lid slam up against the backstop because damage to the hinge could result.

17) Using the detachable handle, lift the basket and inspect product for doneness. Dump product into holding pan.

18) If a Quality time (hold time) was programmed, the controller automatically starts the hold timer. The display alternately shows the product selected and the quality time remaining in minutes. If a different product is selected during the Hold Cycle, the display only shows the product selected.

19) At the end of the Hold Mode, a tone sounds, the display flashes QUALITY, and the product it was timing. Press and release  .
NOTE: In the Cook Mode, when FILTER SUGGESTED displays, the operator has the option to filter at this time, or to continue cooking. But, if the operator continues cooking, a Filter Lockout may occur within the next Cook Cycle, or two.

The shortening continues to heat when filter lockout occurs. If the shortening temperature is below the preset temperature in the Special Program Mode (SP-8C or SP-8D), a tone sounds and FILTER LOCKOUT, and then WAIT displays. Once the shortening temperature reaches the preset temperature, FILTER LOCKOUT, and then YOU MUST FILTER NOW..... displays and the shortening can now be filtered.

During filter lockout, P PROG ▷ is the only button that functions, until the unit is filtered. Follow the steps in the 500/600 Operator's Manual on filtering.

Chapter 6 Maintenance

6.1 Clean-Out Mode

DANGER **NEVER PRESSURIZE FRYER TO CLEAN. LEAVE THE LID OPEN. WATER UNDER PRESSURE IS SUPER HEATED AND CAUSES SEVERE BURNS IF IT COMES IN CONTACT WITH SKIN.**

CAUTION If the cleaning solution in the vat starts to foam and boil over, immediately turn the Cook/Pump. Switch to OFF and do not try to contain it by closing the fryer lid or severe burns could result.

The Computron 8000 has a Clean-Out Mode (i.e. heated water clean-out) to clean the vat upon initial start-up and every change of shortening. This is a general overview. Follow the detailed steps in the 500/600 Operator's Manual on Cleaning the Vat.

1) When heating the cleaning solution and vinegar solutions, turn the COOK/ PUMP switch to COOK.

2) When the fryer starts the Melt Cycle, press and hold IDLE CLEAN then CLEAN OUT ?, 1= YES 2=NO displays.

3) Press 1 to start Clean-Out Mode. The fryer displays *CLEAN-OUT MODE* and heats up to a pre-programmed temperature, up to 195F (91C), then automatically begins a preset timed countdown.

4) Use the ▽ DOWN △ UP buttons, if necessary, to adjust the temperature and keep the cleaning solution from boiling over.

   See Special Program Modes SP-10 and SP-11 to preset the temperature and time.

NOTE: In situations where restaurant policy does not allow a heated water clean-out, the SP-10 Clean-out Minutes setting in Special Program Mode can be changed to NO/ OFF, and the Clean-out Mode will not be offered to the user.

Chapter 7 Error Code Table

This section provides error codes and related information in the form of an easy-to-read table. In the event of a control system failure, the control displays an error message (i.e. E-1). Also, an alarm sounds when an error code is displayed. To silence this alarm, press any button.

DISPLAY	CAUSE	PANEL BOARD CORRECTION
E-1 (FPS equipped fryers only)	No shortening or low shortening in vat	Check to make sure shortening is a proper level in vat.
E-4	Control board overheating	Turn the power switch to the OFF position, and then turn the switch back to ON. If E-4 displays, the control board is getting too hot: • Check the louvers on each side of the unit for obstructions. • Check cooling fan, if present.
E-5	Shortening overheating	Turn the power switch to the OFF position, and then turn the switch back to ON. If E-5 displays, check the heating circuits and temperature probe.
E-6A	Temperature probe open	Turn the power switch to the OFF position, and then turn the switch back to ON. If E-6A displays, check the temperature probe.
E-6B	Temperature probe shorted	Turn the power switch to the OFF position, and then turn the switch back to ON. If E-6B displays, check the temperature probe.
E-10	High limit	Allow oil to cool, and then reset the high limit by manually pushing up on the reset button. If the high limit does not reset, the high limit must be replaced.
E-12	Faulty FPS probe	Turn the power switch to the OFF position, and then turn the switch back

DISPLAY	CAUSE	PANEL BOARD CORRECTION
(FPS equipped fryers only)		to ON. If E-12 displays, check the FPS probe.
E-15	Drain valve open while fryer on, or drain switch failure	Close the drain, using the drain valve handle. If E-15 displays, have the drain microswitch checked. Drain switch status can be viewed in Info Mode
E-20A	Air pressure switch failure (stuck closed)	Press the Timer button to try the ignition process. If the E-20A error persists, check the air switch. Refer to the Technical Manual.
E-20B	Draft fan or air pressure switch failure (stuck open)	Press the Timer button to try the ignition process. If the E-20B error persists, check the air switch or the blower motor. Refer to the Technical Manual.
E-20C (gas fryers only)	Ignition module(s) failure	Press the Timer button to try the ignition process. If the E-20C error persists, check the ignition module. Refer to the Technical Manual.
E-20D (gas fryers only)	No ignition	Press the Timer button to try the ignition process. If the E-20D error persists, check the: • Gas supply • Gas flow • Gas hose connection • Gas valve Refer to the Technical Manual.
E-25 (electric fryers only)	Heats amps too high	Check the setting in SP-12 (Special Program Mode) to make sure nominal Amps is set correctly. Also, have the electrical supply, wiring and elements checked.
E-26 (electric fryers only)	Heat amps locked on	Have the contactors and PC board checked.

DISPLAY	CAUSE	PANEL BOARD CORRECTION
		NOTE: This error code could be displayed even with the Power switch turned to OFF. Unplug the fryer or shut off the wall circuit breaker to disconnect power to the fryer.
E-27 (electric fryers only)	Heat amps too low	Check the setting in SP-12 (Special Program Mode) to make sure nominal Amps is set correctly. Also, have the electrical supply, contactors, wiring and elements checked.
E-41	Program settings lost	Turn the power switch to the OFF position, and then turn the switch back to ON. If either E-41 or E-46 displays, try to reinitialize the control. If the error code persists, have the control board replaced.
E-46	Control memory failure	
E-47	Analog converter chip or 12-Volt supply failure	Turn the power switch to the OFF position, and then turn the switch back to ON. If the E-47 error persists have the I/O board or the PC board replaced. If the speaker tones are quiet, replace the I/O board.
E-48	Input system error	Replace the PC board.
E-70A	Missing or broken wire in pins 1 and 2 of P11 connector, or faulty connector Faulty I/O board	Check the jumper wire between pins 1 and 2 Check the I/O board replaced, if necessary
E-92	24-VAC fuse on I/O board open (PTC self-resetting fuse)	24-VAC fuse on I/O board open: • Check for shorted component in 24-volt circuit (i.e., hi limit, drain switch). • Check for stuck solenoid valve, causing it to draw too much current.

Chapter 8 Information Mode

This mode gathers and stores historic information on the fryer and operator's performance.

- Press PROG and INFO at the same time and "*INFO MODE*" displays.
- Press PROG or INFO to access the steps and press to view the statistics within each step. Information Mode is intended for technical use, but the operator can view the following information:

1. **E-LOG**: Last 10 errors and time they occurred.
2. **LAST LOAD**: Information about the most recent Cook Cycle, or the cycle presently in progress.
3. **DAILY STATS**: Information for the last 7 days.
4. **REVIEW USAGE**: Information accumulated since the last time this data was manually reset.
5. **INP A_VHDSF_M**: Provides test of fryer input.
6. **OUTP**: Shoes the state of heater and pressure.
7. **OIL TMP**: Temperature of shortening.
8. **CPU TMP**: Temperature of PC board.
9. **ANALOG**: Status of controller's a-to-d converter.
10. **AMPS**: The present Amp readings to heaters.
11. **ACTIVITY LOG**

NOTE: Press and hold PROG to exit Information Mode at anytime, or after 2 minutes the Control automatically exists back to normal operation.

<table>
<tr><th>FUNCTION</th><th>DESCRIPTION</th></tr>
<tr><td>1. E-LOG (error code log)</td><td>
• Press DOWN and 1A. (date & time) *NOW* displays. This is the present date and time.

• Press DOWN and if an error was recorded, 1B with date, time, and error code information display. This is the latest error code that the controls recorded.

• Press DOWN and the next latest error code information can be seen. Up to 10 error codes (1B to 1K) can be stored in the E-LOG section.

• Press P ▷ PROG to continue to LAST LOAD.
</td></tr>
<tr><td>2. LAST LOAD</td><td>
• Press DOWN to view the following information from the most recent Cook Cycle.
<table>
<tr><th>FUNCTION</th><th>DISPLAY EX:</th></tr>
<tr><td>Time of day the last Cook Cycle was started</td><td>STARTED 10.25A</td></tr>
<tr><td>Product (Last product cooked)</td><td>PRODUCT -2-</td></tr>
<tr><td>Ready? (Was fryer Ready before start?)</td><td>READY? YES</td></tr>
<tr><td>Stopped: Time remaining, or secs past Done</td><td>*DONE* + 9 SECS</td></tr>
<tr><td>Actual Elapsed cook Time (Real seconds)</td><td>ACTUAL TIME 7:38</td></tr>
<tr><td>Programmed cook Time</td><td>PROG TIME 7:00</td></tr>
<tr><td>Actual Time vs. Prog time (Percentage)</td><td>ACT / PROG 109%</td></tr>
<tr><td>Max Temp during Cook Cycle</td><td>MAX TEMP 327°F</td></tr>
<tr><td>Min Temp during Cook Cycle</td><td>MIN TEMP 313°F</td></tr>
<tr><td>Avg Temp during Cook Cycle</td><td>AVG TEMP 322°F</td></tr>
<tr><td>Heat On (percentage) during Cook Cycle</td><td>HEAT ON 73%</td></tr>
</table>
Only if Presently Cooking:
<table>
<tr><td>Present cook step, setpoint, and time rem.</td><td>STEP 1:325°F 6:47</td></tr>
<tr><td>Actual shortening temp, deg below load comp avg, present stretch time (real secs / ck sec)</td><td>313°F LC-12° 1.06</td></tr>
</table>
• Press P ▷ PROG to continue to DAILY STATS.
</td></tr>
<tr><td>3. DAILY STATS (reset each day)</td><td>
• Press DOWN to view the following operation information for any of the last 7 days.

• Press IDLE CLEAN to select which day.
</td></tr>
</table>

<table>
<tr><th>FUNCTION</th><th>DESCRIPTION</th></tr>
<tr><td></td><td>
<table>
<tr><th>FUNCTION</th><th>DISPLAY EX:</th></tr>
<tr><td>Day this data was recorded for</td><td>TUE* APR-30</td></tr>
<tr><td>No. of Hours:Minutes the fryer was on</td><td>TUE* ON HRS 13:45</td></tr>
<tr><td>No. of times shortening was filtered that day</td><td>TUE* FILTERED 3</td></tr>
<tr><td>Total number of cook cycles that day</td><td>TUE* TOTAL CK 38</td></tr>
<tr><td>Cook Cycles stopped before “DONE” that day</td><td>TUE* QUIT COOK 4</td></tr>
<tr><td>Cook Cycles for Product #1</td><td>TUE* COOK -1- 17</td></tr>
<tr><td>Cook Cycles for Product #2</td><td>TUE* COOK -2- 9</td></tr>
<tr><td>Cook Cycles for Product #3</td><td>TUE* COOK -3- 5</td></tr>
<tr><td>Cook Cycles for Product #4</td><td>TUE* COOK -4- 0</td></tr>
<tr><td>Cook Cycles for Product #5</td><td>TUE* COOK -5- 0</td></tr>
<tr><td>Cook Cycles for Product #6</td><td>TUE* COOK -6- 6</td></tr>
<tr><td>Cook Cycles for Product #7</td><td>TUE* COOK -7- 0</td></tr>
<tr><td>Cook Cycles for Product #8</td><td>TUE* COOK -8- 0</td></tr>
<tr><td>Cook Cycles for Product #9</td><td>TUE* COOK -9- 1</td></tr>
<tr><td>Cook Cycles for Product #0</td><td>TUE* COOK -0- 0</td></tr>
</table>

• Press PROG (P ▷) to continue to REVIEW USAGE.
</td></tr>
<tr><td>4. REVIEW USAGE</td><td>
• Press DOWN (▽ ▼) to view the accumulated information since the data was manually reset.
<table>
<tr><th>FUNCTION</th><th>DISPAY EX:</th></tr>
<tr><td>Day the usage data was previously reset</td><td>SINCE APR-19</td></tr>
<tr><td>Number of hours the fryer was on</td><td>PWR ON HRS 165</td></tr>
<tr><td>Number of times shortening was filtered</td><td>FILTERED 34</td></tr>
<tr><td>Total number of cook cycles</td><td>TOTAL CK 462</td></tr>
<tr><td>Cook Cycles stopped before “DONE”</td><td>QUIT COOK 4</td></tr>
<tr><td>Oil Wear based on Number of Cook Cycles</td><td>OIL WEAR 'A' 83%</td></tr>
<tr><td>Oil Wear based on Running Hours</td><td>OIL WEAR 'B' 55%</td></tr>
<tr><td>Cook Cycles for Product #1</td><td>COOKED -1- 193</td></tr>
<tr><td>Cook Cycles for Product #2</td><td>COOKED -2- 107</td></tr>
<tr><td>Cook Cycles for Product #3</td><td>COOKED -3- 58</td></tr>
<tr><td>Cook Cycles for Product #4</td><td>COOKED -4- 0</td></tr>
<tr><td>Cook Cycles for Product #5</td><td>COOKED -5- 13</td></tr>
<tr><td>Cook Cycles for Product #6</td><td>COOKED -6- 69</td></tr>
<tr><td>Cook Cycles for Product #7</td><td>COOKED -7- 0</td></tr>
<tr><td>Cook Cycles for Product #8</td><td>COOKED -8- 7</td></tr>
<tr><td>Cook Cycles for Product #9</td><td>COOKED -9- 15</td></tr>
<tr><td>Cook Cycles for Product #0</td><td>COOKED -0- 0</td></tr>
<tr><td>Reset usage data:
Enter the USG Code (1, 2, 3 unless changed) on this step to zero out all the usage info.</td><td>RESET USG /
ENTER CODE ------</td></tr>
</table>

• Press PROG (P ▷) to continue to REVIEW USAGE.
</td></tr>
<tr><td>5. INP A_ VHDSF_M</td><td>NOTE: The V, H, D, S, F, P and M signals are wired in series. The first signal missing out of the sequence can cause all signals to the right of it to be missing as well.</td></tr>
</table>

FUNCTION	DESCRIPTION
	• Press DOWN to view the status of components and inputs. If the input signal is detected, an identifying letter is displayed (see below). If the signal is not detected, "_" is displayed. With the COOK /PUMP switch in the COOK position, and all inputs detected, A_VHDSF_M displays for electric and A_ VHDSFP_ for gas units. See below for definition of codes. **ALL** A - Power Switch in COOK position B - Power Switch in PUMP position V - Volts - 24 VAC detected H - HIGH LIMIT: If "H" is present, the high limit is good. If "H" is missing, the high limit is tripped D - DRAIN SWITCH: If "D" is present, the drain handle is closed. If "D" is missing, the drain is open or faulty. S - COOK/PUMP switch "on" interlock circuit: If "S" is present, the COOK/PUMP switch is in the COOK position. If the "S" is missing, the power switch is either off, failed or wired incorrectly. **ELECTRIC 4 / 8 - HEAD** • F & M = Hard wired on • P = Hard wired off **GAS 4- HEAD ONLY** • F = Hard wired on • P & M = inputs from ignition module **GAS 8 - HEAD ONLY** • F = Fan vacuum switch • P & M = inputs from ignition module • Press to view the specific status of each input. An underscore ("_") indicates the input is not presently detected. A Checkmark ("√") indicates the signal is detecting a normal input. A blinking

FUNCTION	DESCRIPTION
	("X") indicates the signal is presently detected, but is detected as a half-wave (partially failed) input. • Press PROG (P ▷) to continue to OUTP H* P_.
6. OUTP H* P_ (F*I*H*P_ for gas units)	This mode displays the status of components and outputs. If the output signal is detected, an identifying letter is displayed (see below), followed by an "*". If the output is off, "_" is displayed. • F - Fan output (gas only) • H - Heat output • P - Pressure output • Gas units: – if the fan is on, then "F*" displays. – If the fan is off, then "F_" displays. – If the control senses a problem with the fan output, then "F*" displays with the "*" flashing. • Gas units: I* ignition module on or off • All units: – If the heat is on, then "H*" displays. – If the heat is off, then "H_" displays. – If the controls sense a problem with the heat output, then "H*" displays with the "*" flashing. • Gas units: – If the pressure is on, then "P*" displays. – If the pressure is off, then "P_" displays. – If control senses a problem with the pressure output, then "P*" displays with the "*" flashing. • Press DOWN (▽ ▼) to view the amp "DRAW" status of each output. – If "F √", "H √" and "P √" displays, this means the amps are good. – A flashing "X" behind the F, H or P means too much current.

FUNCTION	DESCRIPTION
	• Press ▽ DOWN to view the No Connect/Ground ("NC/GND") status of each output. This monitors a possible problem with the relays on the output PC board. – If "F √", "H √" and "P √" displays, this means everything on the output PC board is good. – A flashing "X" behind the F, H or P means a problem exists. • Press ▽ DOWN to view the outputs and inputs together. • Press P PROG ▷ to continue to OIL TMP reading.
7. OIL TMP	Oil temperature displays. Press P PROG ▷ to continue to CPU TMP reading.
8. CPU TMP & SOFTWARE INFO	PC board temperature displays: • Press 1 and hold to display Henny Penny part number for the software in the control. • Press 2 and hold to display the customer ID for the software. • Press 3 and hold to display the Software Release Level (i.e., "2.01") for the software. • Press P PROG ▷ to continue on to the ANALOG reading.
9. ANALOG <1> 2.86V	This step displays the present status of any channel of the controller's A to D converter. This feature may be useful to a technician troubleshooting a problem with the fryer or controller. The displayed value can be toggled between volts and bits by pressing 0. If the displayed value has a decimal point, it is voltage (0 to 5 VDC). If no decimal point is shown, the value is a-to-d bits (0 - 4095).

FUNCTION	DESCRIPTION
	Press PROG ▷ to continue onto AMPS reading.
10. AMPS 33 33 33 (Electric Fryers)	This display shows the present readings from the fryer's amps sensors, which monitor the electrical current supplied to the heaters. These values indicate the current through each supply leg to the heaters. These values do not necessarily correspond directly to the current through an individual heater coil. The AMPS values should normally cycle on and off with the heat light and all three values should be about the same. Press and hold PROG ▷ to exit Information Mode at any time, or after 2 minutes the controls automatically exit back to normal operation.
11. Activity Log	Press ▽ DOWN to step backward through a history of events logged by the control. These events record normal operation details and do not necessarily indicate a problem.

Chapter 9 Tech Mode

Use Tech Mode to diagnose service issues.

TECH MODE ITEM			DESCRIPTION
T-1	SOFT-WARE ID	PN / ID / SRL	View software ID's: • Press and hold 1: HP P/N - 32609J H. P. part number for the software. • Press and hold 2: ID - HP C8000 The specific customer or model number, etc. • Press and hold 3: SRL - 1.50 Software release level (version) for this software.
T-2	FRYER TYPE	4 / 8 - Head	Fryer type: Pressure Fryer or Open Fryer; Gas or Electric; 4-Head or 8-Head. • Auto-detected by the controller, based on I/O board and wiring harness connections. This is not a setting you can adjust. • Auto-detection can complete only if the fryer is turned ON and the high-limit and drain switch interlocks are closed. If the display indicates NEED VHDS, then one of the interlocks is not satisfied and the auto-detect routine is unable to proceed.
T-3	PUSH-BUTTON TEST	BTNS	Pushbutton test mode • Press and release buttons (starting with any button other than INFO or PROG) to activate test mode. • Main display shows an indicator letter for each button that is pressed: *Press buttons to test...* - - - - - - - - - - - L 12345 IDUP R 6789A • Number buttons 1-0, Info, Down, Up, Prog, Left-side (Idle), Right-side (Timer).

TECH MODE ITEM			DESCRIPTION
T-4	ALL-ON DISPLAY TEST	ALL	Press and hold any number button to cause all display digit segments, decimal points, LED's, and light bars to be lighted. Release button to return to normal mode.
T-5	SEG-MENTS TEST	SEGS	• Tests each individual display segment (all digits simultaneously) in order to assess whether any segments might be bridged together. • Press and release any number button to step through the test sequence manually, or press and release the Timer button to run the test sequence automatically one time through.
T-6	DIGITS TEST	DIGS	• Tests each individual display digit (all segments on, one digit at a time) in order to assess whether any solder bridges between digits exist. • Press and release any number button to step through the test sequence manually, or press and release the Timer button to run the test sequence automatically one time through.
T-7	DECIMAL PTS TEST	D-PTS	• This step tests each individual display digit decimal point. • Press and release any number button to step through the test sequence manually, or press and release the Timer button to run the test sequence automatically one time through.
T-8	LED'S DISPLAY TEST	LEDS	• This step tests each individual discrete LED. • The test pattern is as follows: Wait, Ready, Idle, Heat, Pressure, Info, Down, Up, Prog, Timer, 1, 2, 3, 4, 5, 6, 7, 8, 9, 0.
T-9	OIL TEMP - CALIB/ OFFSET/ HIGHEST	325°F	View/set calibration offset for oil temperature probe. Also, view/reset max recorded oil temperature. • Press and hold 1: CALIB ADJ 327° F - UP/ DOWN to adjust calibration viewed as a temp. • Press and hold 2: OFFSET ADJ +2° F - UP/ DOWN to adjust calibration viewed as an offset.

TECH MODE ITEM			DESCRIPTION
			• Press and hold 3: HIGHEST 341° F - View highest recorded oil temperature. Reset max temp by pressing the DOWN button while viewing.
T-9A	**IF AUX TMP PROBE DE-TECTED:** AUX TEMP - A: CALIB/ OFFSET/ HIGHEST	418°F	View/set calibration offset for auxilliary (dry-fire) temperature probe. Also, view/reset max recorded aux temperature. • Press and hold 1: CALIB ADJ 418° F - UP/ DOWN to adjust calibration viewed as a temp. • Press and hold 2: OFFSET ADJ +0° F - UP/ DOWN to adjust calibration viewed as an offset. • Press and hold 3: HIGHEST 463° F - View highest recorded aux temperature. Reset max temp by pressing the DOWN button while viewing.
T-10	CPU ° TEMP - CALIB/ OFFSET/ HIGHEST	87°F	View/set calibration offset for CPU board temp. Also, view/reset max recorded CPU board temp. • Press and hold 1: CALIB ADJ 87°F - UP/DOWN to adjust calibration viewed as a temp. • Press and hold 2: OFFSET ADJ +0° F - UP/ DOWN to adjust calibration viewed as an offset. • Press and hold 3: HIGHEST 121° F - View highest recorded CPU temperature. Reset max by pressing the DOWN button while viewing.
T-11	VIEW A-D CHAN-NELS	<9> 2.76V	This feature allows direct viewing of any channel of the analog-to-digital converter chip. This is mainly useful for troubleshooting. • The channel can be selected using the UP or DOWN buttons. • The displayed value can be toggled between Volts and Bits by pressing the number 0 button. • If the displayed value has a decimal point and is followed by a "V" it is voltage (0 to 5 VDC). • If no decimal point is shown, the value is a-to-d bits (0 - 4095).

TECH MODE ITEM			DESCRIPTION
			• 0: CPU temperature (thermistor) • 1: Safety Circuit Comparator Ref. • 2: Safety Circuit Comparator Output • 3: Aux. RTD input (unused) • 4: Oil Tmp RTD input • 5: Transformer secondary (P6-14) • 6: Amp Sensor auto-detect (P10-6) • 7: Unused (P10-5) • 8: Amp sensor #3 (P10-4) • 9: Amp sensor #1 (P10-2) • A: Amp sensor #2 (P10-3) • B: 1/2 Scale (2.5v) • C: Neg Vref (0.0v) • D: Pos Vref (5.0v)
T-12	View the status of the 24 VAC interlock circuit digital inputs:		Each interlock input has an associated indicator digit. If the input signal is currently detected, an identifying letter is displayed. If the signal is not detected, an underscore ("_") is displayed.
4-Head Electric			
DIGITAL INPUTS AB VHDSFPM Normal Display: A_ VHDSF_M			F & M are hardwired on. P is hardwired off.
4-Head Gas			
DIGITAL INPUTS AB VHDSFPM Normal Display: A_ VHDSFP_			F & P are hardwired on. M is hardwired off.
8-Head Electric			

TECH MODE ITEM	DESCRIPTION
DIGITAL INPUTS ABC VHDSFPM Normal Display: A_C VHDSF_M	• F & M are hardwired on. P is hardwired off. • Has "C" input for pressure solenoid auto-detect.*
8-Head Gas	
DIGITAL INPUTS ABC VHDSFPM.PM Normal Display: A_C VHDSFPM.PM	• Has "C" input for pressure solenoid auto-detect.* • FPM.PM are used for ignition system monitoring (two sets of P & M because of dual ignition modules)

NOTE:

- The C (pressure solenoid) input can only be read when the pressure output is turned OFF. When the pressure output is turned ON, the C input normally disappears. The C input on 8-Head fryers is a continuity check off the pressure solenoid output. If a pressure solenoid is connected to the controller, the controller operates the fryer as a Pressure Fryer; otherwise, it operates it as an Open Fryer.
  - A - Power switch COOK (ON) position input signal: There are two power switch on input signals, A and S. The A one is not dependent on the interlock chain, so the controller is always able to read the On/Off status of the power switch even if the high limit is tripped or the drain is open.
  - B - Power switch PUMP position input signal: Should not have A and B at the same time. An exception 8-Hd Gas fryers, A and B can both be on at the same time when the C8000 controller turns the pump on periodically to stir the oil.
  - C - Pressure Solenoid Auto-Detect (8-Head Controllers Only): The C signal indicates that a pressure solenoid (ASCO valve) is presently connected to the controller. Note that this continuity signal can only be read when the pressure output is OFF. The C signal disappears whenever the pressure solenoid output is turned ON.
- The VHDS inputs (below) are wired in series as listed from left to right. The first signal that is missing will cause all signals to the right of it to also be missing. If a V, H, D, or S signal is missing and yet other signals do appear to the right of it, it is likely that the voltage sensor for the missing signal has failed or that something is not wired correctly.
  - V - VOLTS: 24 VAC detected at start of interlock chain. If V is missing, the 24 VAC current limiter (fuse) might be tripped. This fuse device (located on the I/O board) automatically resets as soon as the short condition is fixed.
  - H - HIGH LIMIT: If H is present, the high limit is good. If H is missing, the high limit is tripped out (overheated) or disconnected.
  - D - DRAIN SWITCH: If D is present, the drain handle is closed. If D is missing, the drain switch is open or disconnected.
  - S - Power switch on interlock circuit: If S is present, the power switch is in the ON position. If the S is missing, the power switch is either off, failed, or wired incorrectly.

TECH MODE ITEM	DESCRIPTION
4-Head Electric, 4-Head Gas, 8-Head Electric Fryers:	
• F - The F input is always hardwired ON. These fryers do not have fan vacuum sensors. • P - Gas auto-detect jumper: – 4-Hd Gas Fryers: This signal is hardwired ON. – 4-Hd & 8-Hd Electric fryers: This signal is hardwired OFF and should never be present. • M - Electric auto-detect jumper: – 4-Hd & 8-Hd Electric fryers: This signal is hardwired ON. – 4-Hd Gas Fryers: This signal is hardwired OFF and should never be present.	
8-Head Gas Fryers:	
The FPM. PM input signals monitor the induced draft ignition components (fan sensor and ignition modules). • 8-Head Gas fryers have two ignition modules, and consequently two sets of P and M signals. • The left side P & M in the display (before the period) correspond to the left-side ignition module in the fryer. • The right side P & M (after the period) correspond to the right-side ignition module. • The two sets of P & M signals are interlocked by relays on the I/O board inside the controller. • The controller cannot turn on the gas pilot valve unless both PV signals are present. • The controller cannot turn on the gas main valve (main burners) unless both MV signals are present: – F - FAN: This is the Fan sensor (vacuum switch) interlock input. When F is present, the vacuum sensor is closed (continuity). When F is missing, the vacuum switch is open or is disconnected. – P - The PV (Pilot Valve) output from the ignition module. The ignition module turns PV on when it is trying to establish or maintain the pilot flame. – M - The MV (Main Valve) output from the ignition module. The ignition module turns MV on only when the module has a confirmed flame sense of its pilot flame. Keep in mind that the MV signals are simply enabling signals for the	

TECH MODE ITEM		DESCRIPTION
	gas burners – the burners are not actually activated unless the controller turns the Heat output on.	
T-13	**4-Head Electric Fryers**: OUTPUTS F* H * P _ **NOTE**: Fan output only used on PVS fryers - - - - - - **4-Head Gas Fryers**: OUTPUTS F* H * P _ **NOTE**: Fan output is for cooling fan - - - - - - **8-Head Electric Fryers**: OUTPUTS H * P _ - - - - - - **8-Head Gas Fryers**: OUTPUTS F* I* H* P_ **NOTE**: Fan output is induced draft blower. Ignition output powers both ignition modules	View/set the status of the controller outputs: • If an output is currently on, a star follows the ID letter. • If an output is currently off, a line follows the letter. – F - FAN OUTPUT – I - IGNITION MODULES OUTPUT – H - HEAT OUTPUT – P - PRESSURE OUTPUT The outputs may be manually controlled using the lighted number buttons. The #1 button toggles the first output on and off, the #2 button toggles the second output on and off, etc. For example, on a Gas 8 Head fryer the #1 button toggles the Fan output on and off, while on an Electric 8 Head fryer, the #1 button toggles the Heat on and off. Under manual control, the Heat output will shut off automatically if no buttons are pressed for 30 seconds.

TECH MODE ITEM		DESCRIPTION
T-13A	8-Head Gas Fryers ONLY: OUTPUTS PMP_ AIR_	View/set the status of the Pump and Air Valve outputs: • If an output is currently on, a "star" follows the ID letter. • If an output is currently off, a line follows the letter: – PMP - PUMP OUTPUT – AIR - AIR VALVE OUTPUT The outputs may be manually controlled using the lighted number buttons: • The #1 button toggles the Pump output on and off. • The #2 button toggles the Air Valve output on and off.
T-14	AMPS CALIBRATE 0 0 0 **NOTE**: Amp Sensors are normally present only on 4-Head Electric fryers.	If the Amp Sensor Detect Jumper in the amp sensors assembly is not detected, the controller shows "XX XX XX " / " -NOT- DETECTED" and all Amp Sensor warnings and errors are disabled. **Electric 4 Head Fryers**: The amp sensors monitor the current (amperes) in the heating elements. Depending on the fryer wiring, each amps reading corresponds to either the current in one leg of the supply lines, or to the current to one heating element coil. Consequently, the amps readings here don't necessarily match the amps readings of an individual heater, since each leg on the line cord normally drives two elements (120° out of phase). Press the DOWN button to view the present Nominal, Low Limit, and High Limit settings for amps. (These values are programmed in Special Program mode.) This step allows manual control of the heat output by pressing the #1 button. The heat is turned on unconditionally, so make sure there is oil in the vat and take care to not overheat it. Press the #0 button to view the uncalibrated readings.

TECH MODE ITEM		DESCRIPTION
		Calibration: • Press the TIMER button to perform the calibration sequence, which allows each of the three readings to be adjusted to match reference amp readings. This calibration requires a meter with an amp clamp to take readings at each of the three amp sensors in the fryer. During the calibration sequence, one of the readings is blinking. Use the UP and DOWN buttons to adjust that reading as necessary. • Press the PROG button to advance to the next reading. The displayed values, left to right, match the amp sensor order black, red, and orange. For each amp sensor, the displayed value should be adjusted to match a reading taken with an amp clamp on the same wire the amp sensor is on. When done calibrating, press the TIMER button to cancel the calibration sequence, or press the PROG button repeatedly until the calibration sequence is exited.
T-15	CHANGE TECH CODE? 1 - YES	This step lets you change the "Tech Mode" access code (password). This code is used only to access Tech Mode and Stats Mode.

TECH MODE ITEM		DESCRIPTION
T-16	DO TOTAL INIT	This step allows all programmable settings, all product settings, and all statistics values to be initialized to factory preset values. The Activity Log, however, is not reset by this initialization, and in fact will log a record of the "init" function itself. To totally initialize the controller - including all cook settings - back to factory default values, press and hold the DOWN button for about 2 seconds. Calibration data will not be affected by this initialization, unless values are found to be outside of acceptable limits. **NOTE**: Statistics values, the Error Log, Review Usage data, etc., will be reset by this total initialization. All of the operating history data will be lost. For this reason, the normal Init step in Special Program mode is generally recommended, unless one specifically intends to completely reset all the statistics data.

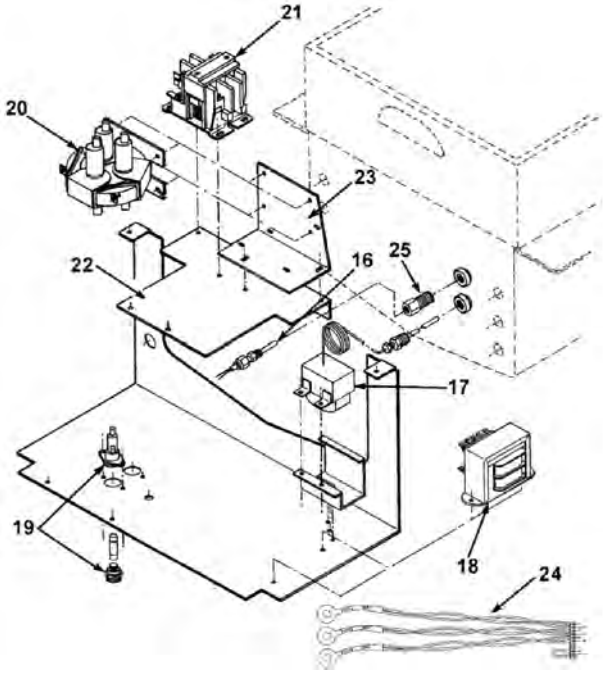
Chapter 10 Replacement Parts

10.1 Controls and Decals

Part Number	Description	Quantity
164944	Flat panel assembly: SN: KA021JJ to GA085JB - Gas SN: KB021JJ to HB013JB - Electric	1
164946	Flat panel assembly: SN: GA086JB and above - Gas SN: HB014JB and above - Electric	1
164945	Bent panel assembly: SN: KA020JJ and below - Gas SN: KB020JJ and below - Electric	1
68798	Bent panel assembly - Campero: SN: KA020JJ and below - Gas SN: KB020JJ and below - Electric	1
68799	Flat panel assembly - Campero: SN: KA021JJ to GA085JB - Gas SN: KB021JJ to HB013JB - Electric	1
164960	Flat panel assembly - Campero: SN: GA086JB and above - Gas SN: HB014JB and above - Electric	1
65462	Bent panel assembly - Jollibee's: SN: KA020JJ and below - Gas SN: KB020JJ and below - Electric	1
65463	Flat panel assembly - Jollibee's: SN: KA021JJ to GA085JB - Gas SN: KB021JJ to HB013JB - Electric	1
164954	Flat panel assembly - Jollibee's: SN: GA086JB and above - Gas SN: HB014JB and above - Electric	1
65171	Control assembly - Express Foods:	1
65193	Control assembly - Servequip:	1
164967	Control assembly - 600 Wendy's w/SSI/FPS:	1

Part Number	Description	Quantity
	SN: GA086JB and above - Gas	
68683	Control assembly - Wendy's w/SSI/FPS: SN: GA085JB and below - Gas	1
164970	Control assembly - '02 GM w/FPS:	1
69307	Control assembly - '02 Giant Eagle:	1
- 64120	AMP sensor PCB	1
65893	Dual gas module I/O W/PS assembly	1
32633	Std. product menu card	1
32634	Blank menu card	1
69228	Campero menu card	1
39089	Jollibee menu card	1
39156	Wendy's/Davco menu card	1
68731	Giant Eagle menu card	1
70846	McDonalds menu card	1
27308	Bent control decal	1
24849	Flat control decal	1
32658	C8000-02 decal	1
39269	C8000-02 Wendy's decal	1
72170	C8000-02 Wendy's English / French decal	1
29898	Power switch	1

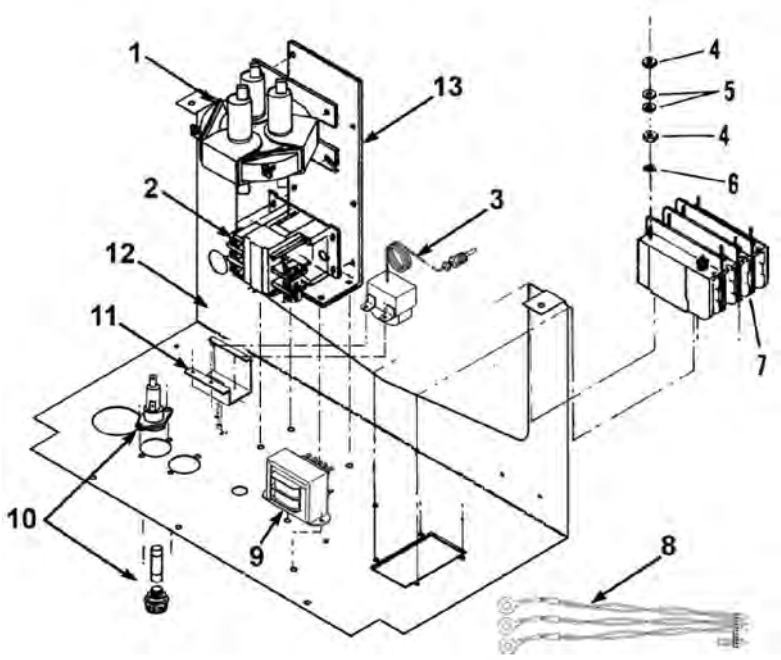
10.2 500 Series 3-Phase



Item	Part Number	Description	Quantity
16	55167	Probe/Compression Fitting Assembly - Electric	1
16	14877	600 FPS Temperature Probe Kit	1
17	16738	High Limit - 450 °F	1
18	72854	Transformer - 10/24v AC Assembly	1
19	18364	Fuse Holder - 15 AMP Assembly	2
19	EF02–007	- 15 AMP Fuse	2
20	29510	Mercury 24v AC Contactor	1
20	65073	Square D 24v AC (CE) Contactor	1
21	29509	24v AC Contactor	1
22	58850	Double Contactor Bracket	1
23	66717	Contactor Bracket Stud Assembly	1
24	24347	Current Sense Transformers Assembly	1
25	FP01–024	1/8 by 3/8 Pipe Bushing	1

Item	Part Number	Description	Quantity
26*	26974	Speaker Assembly	1
27*	29515	24v - 60 Hz. Solenoid	1
27*	29698	24v - 50 Hz. Solenoid	1
27*	29547	- 24v - 50/60 Hz. Solenoid Coil	1
27*	29575	- 24v - 50 Hz. Solenoid Coil	1
28*	63294	1/4” Vat Insulation	1
28*	63295	1/8” Vat Insulation	1

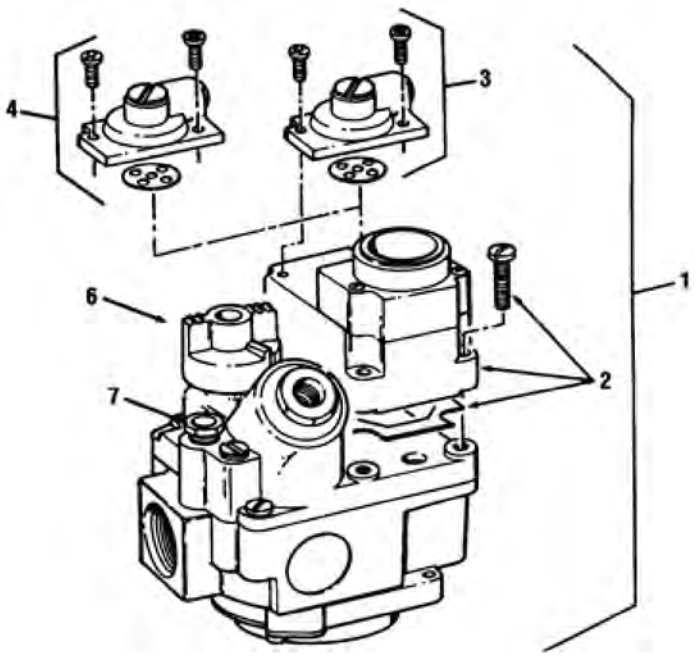
10.3 500 Series 1-Phase



Item	Part Number	Description	Quantity
1	29510	24v AC Mercury Contactor	1
1	65073	Square D 24v AC (CE) Contactor	1
2	29509	24v Contactor	1
3	16738	High Limit Temperature Control	1
4	NS01-014	Hex Nut	16
5	WA01-007	Washer	16

Item	Part Number	Description	Quantity
6	LW02-005	Lockwasher	8
7	18242	50 AMP Circuit Breaker	1
8	24347	Current Sense Xformers Assembly	1
9	72854	Transformer 10/24v AC Assembly	1
10	18364	Fuse Holder 15 AMP Assembly	2
10	EF02-007	- 15 AMP Fuse	2
10	EF02-006	- Fuse Holder	1
11	17216	Bracket High Limit Assembly	1
12	18244	Single Phase (Below KB020JJ) Shroud	1
12	63226	Single Phase (KB021JJ to HB013JB) Shroud	1
12	27418	Single Phase (HB014JB Above) Shroud	1
13	29687	Double Contactor Bracket	1

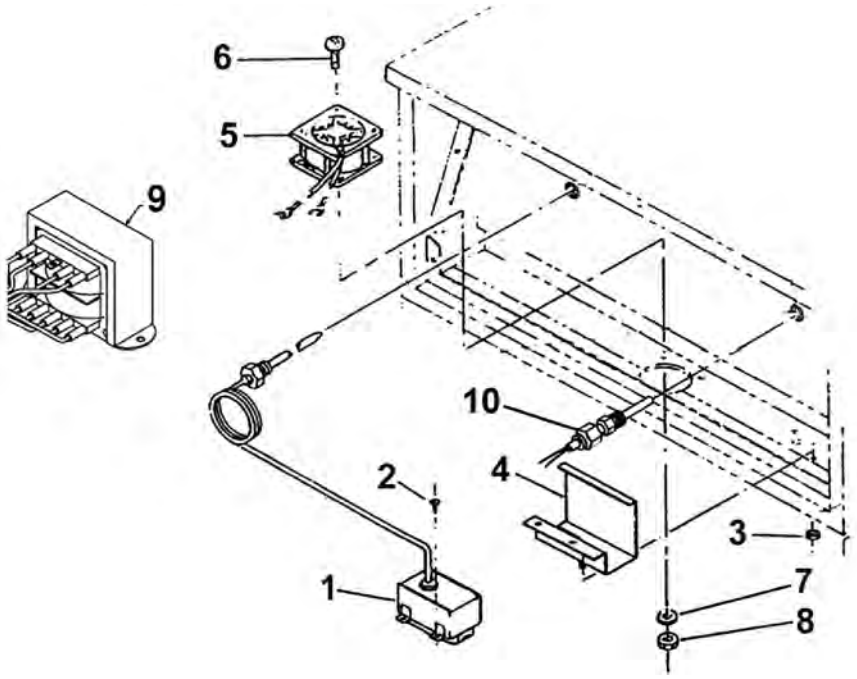
10.4 600 Series Gas Control Valve



Item	Part Number	Description	Quantity
1a	58863	Natural Gas Valve 24v SN: (KA021JJ Above)	1
1a	16216	Natural Gas Valve 120v	1
1b	64036	Propane Gas Valve 24v SN: (KA021JJ Above)	1
1b	16217	Propane Gas Valve 120v	1
1a	16380	Natural Gas Valve 208-240v	1
1b	16381	Propane Gas Valve 208-240v	1
1a	29614	Natural Gas Valve 24v SN: (Below KA020JJ)	1
1b	29728	Propane Gas Valve 24v SN: (Below KA020JJ)	1
2	16254	Gas Control Valve Solenoid 120v NG	1
2	16710	Gas Control Valve Solenoid 208– 240v NG	1
2	16386	Gas Control Valve Solenoid 120 LP	1

Item	Part Number	Description	Quantity
2	16384	Gas Control Valve Solenoid 208– 240v LP	1
3	16253	Gas Control Valve Regulator 3.5 in.	1
4	16352	Gas Control Valve Regulator 10 in.	1
6	16267	Gas Control Valve Knob	1
7	16373	Pilot Tube End Compression Fitting	2

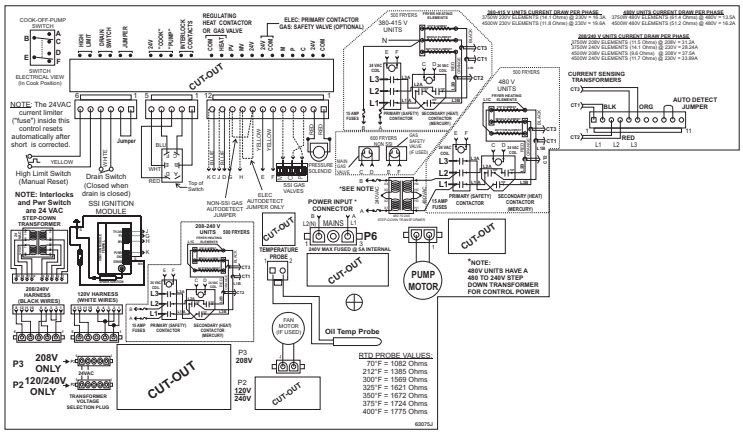
10.5 600 Series Gas Components



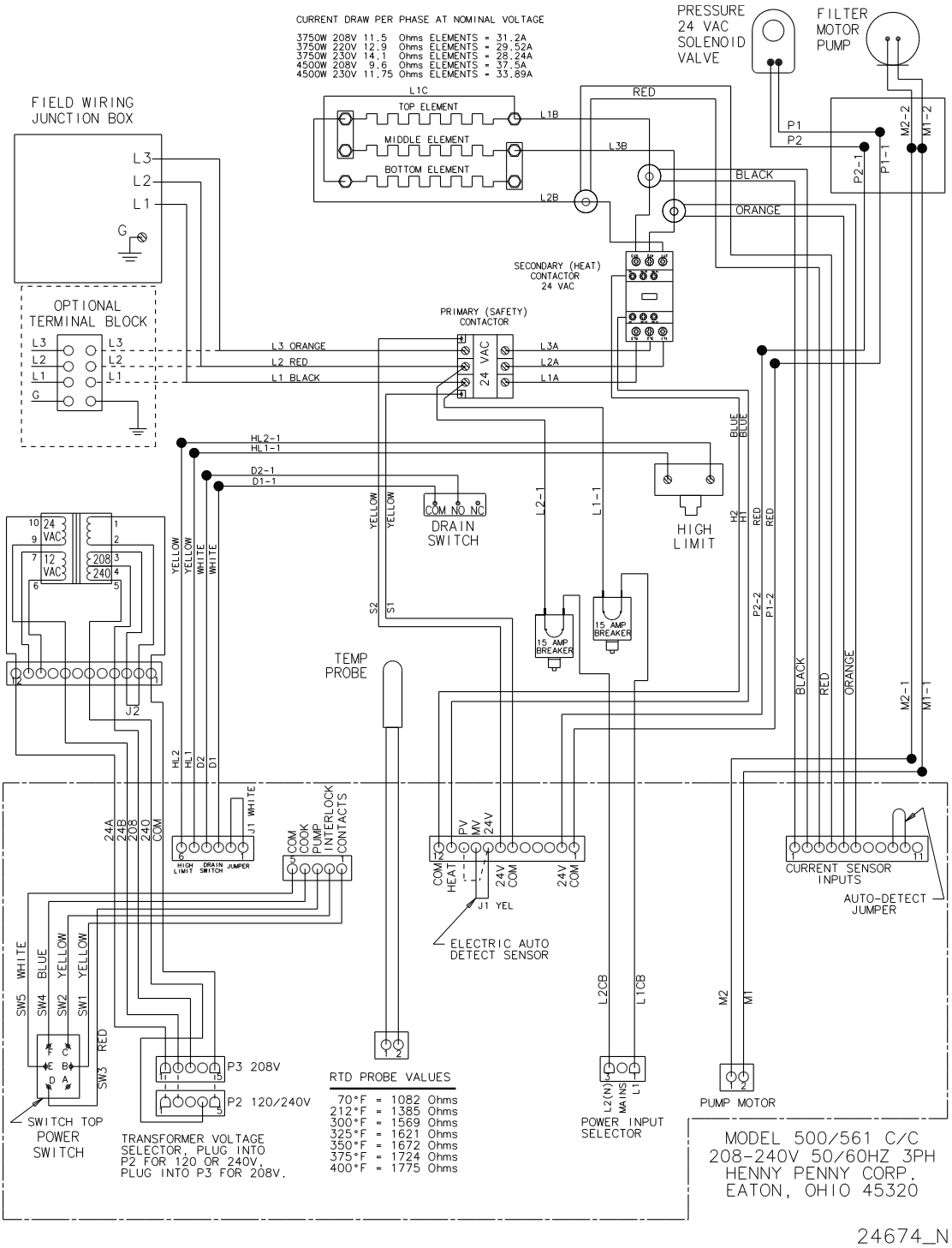
Item	Part Number	Description	Quantity
1	16738	High Temperature Limit Control	1
2	SC02-018	#8 Thread Forming Screw	2
3	NS02-001	#10-32 Hex Keps Nut	2
4	17216	High Limit Thermostat Bracket Assembly	1
5	16684	120 Volt Fan	1
6	SC01-010	- Fan Screw	4
7	WA01-006	- Fan Washer	4

Item	Part Number	Description	Quantity
8	NS02-005	- Fan Nut	4
9	72854	10/24v AC Transformer Assembly	1
10	14331	Temperature Probe Kit	1
10	14877	600 FPS Temperature Probe Kit	1
11*	36097	Probe Guard	1

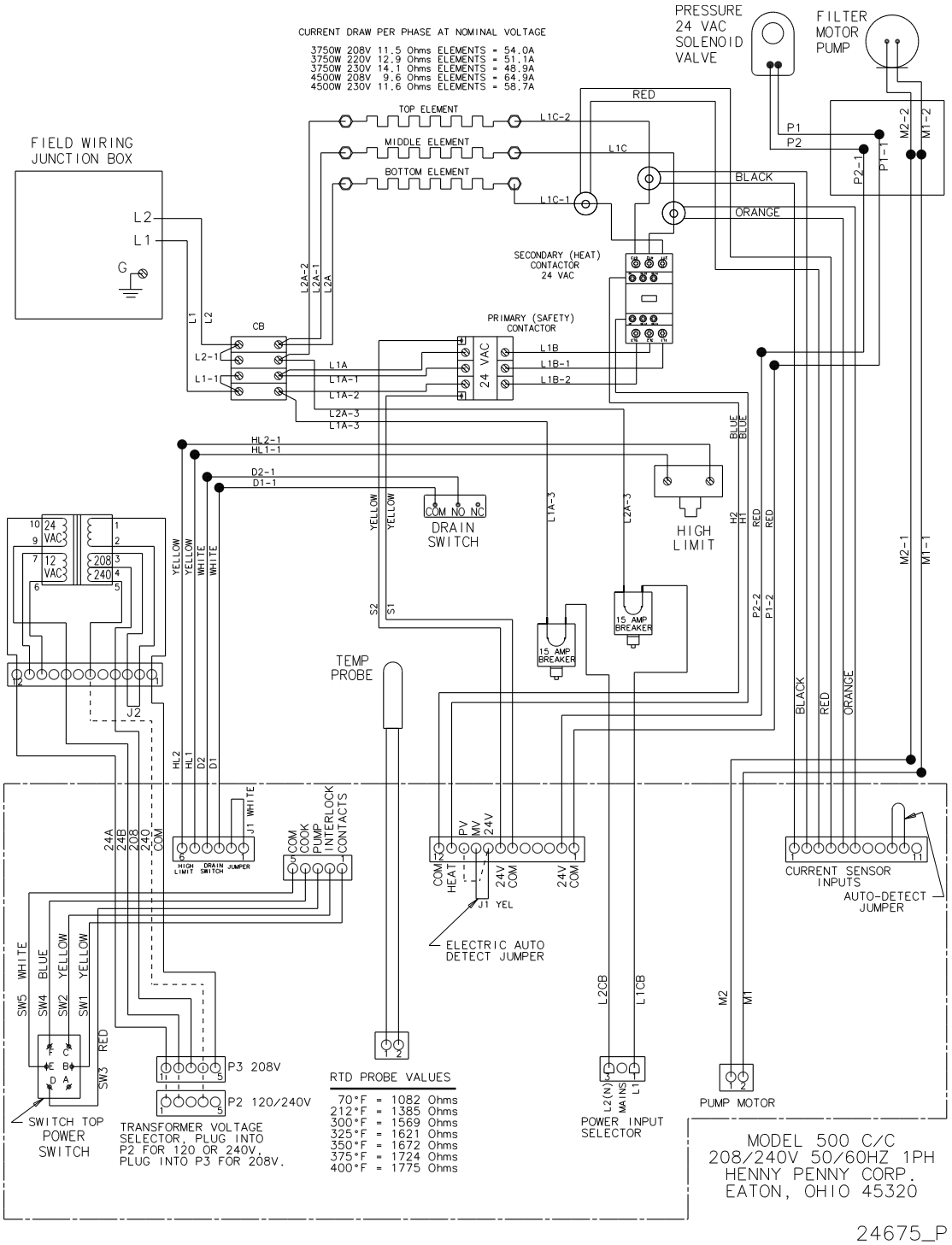
10.6 Rear Panel Wiring Connection Decal



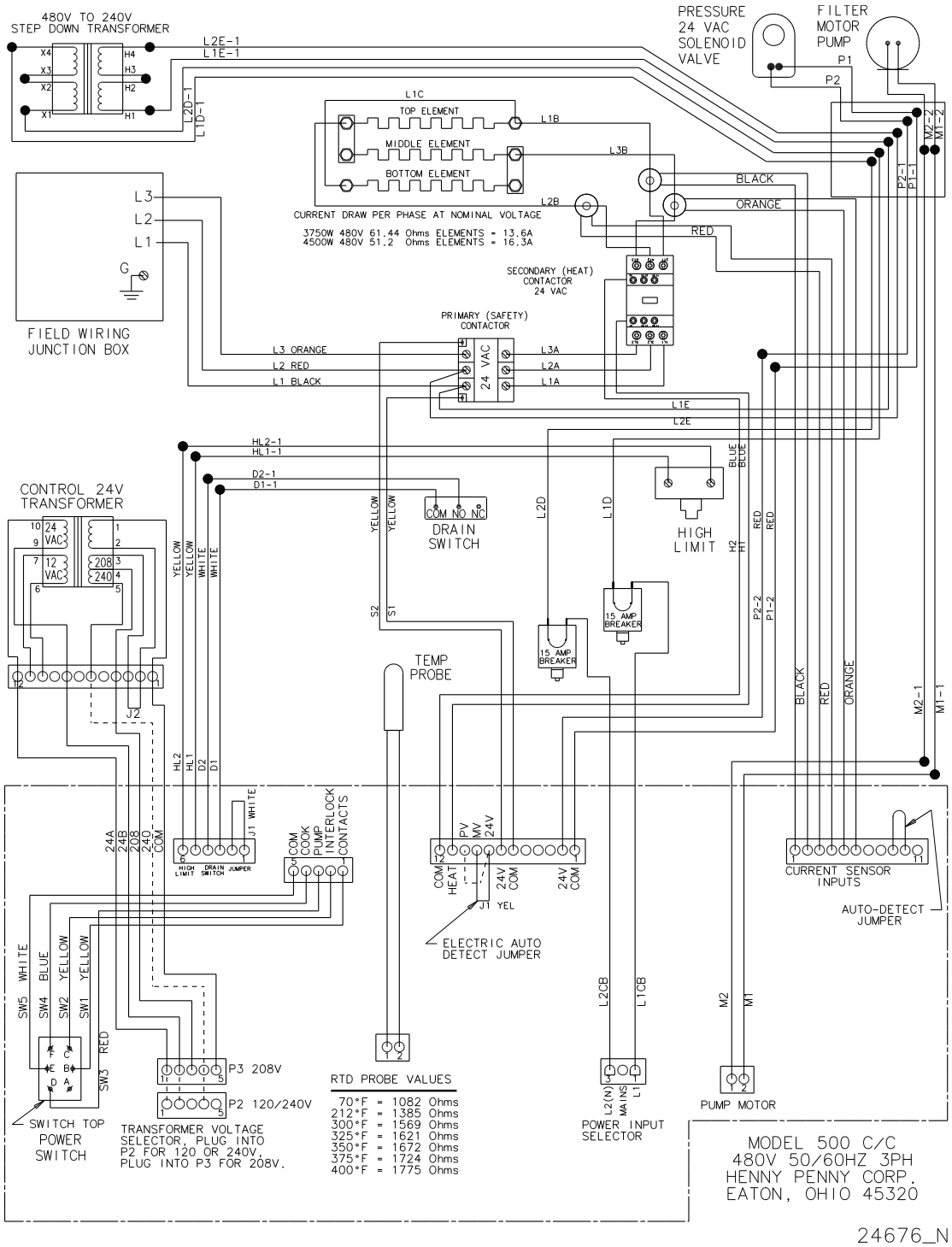
10.7 500/561 208-240v 50/60Hz. 3PH



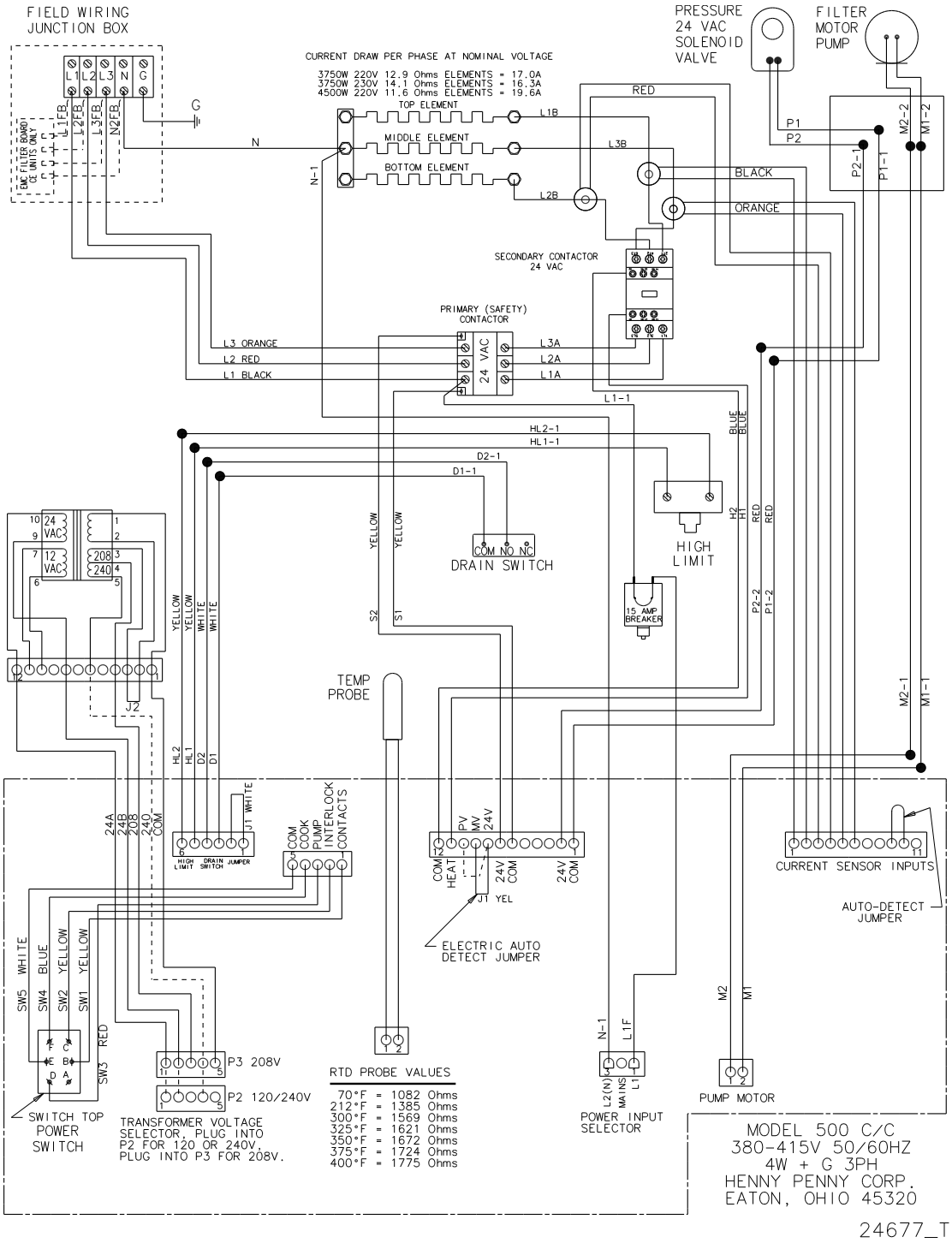
10.8 500 208-240v 50/60Hz. 1PH



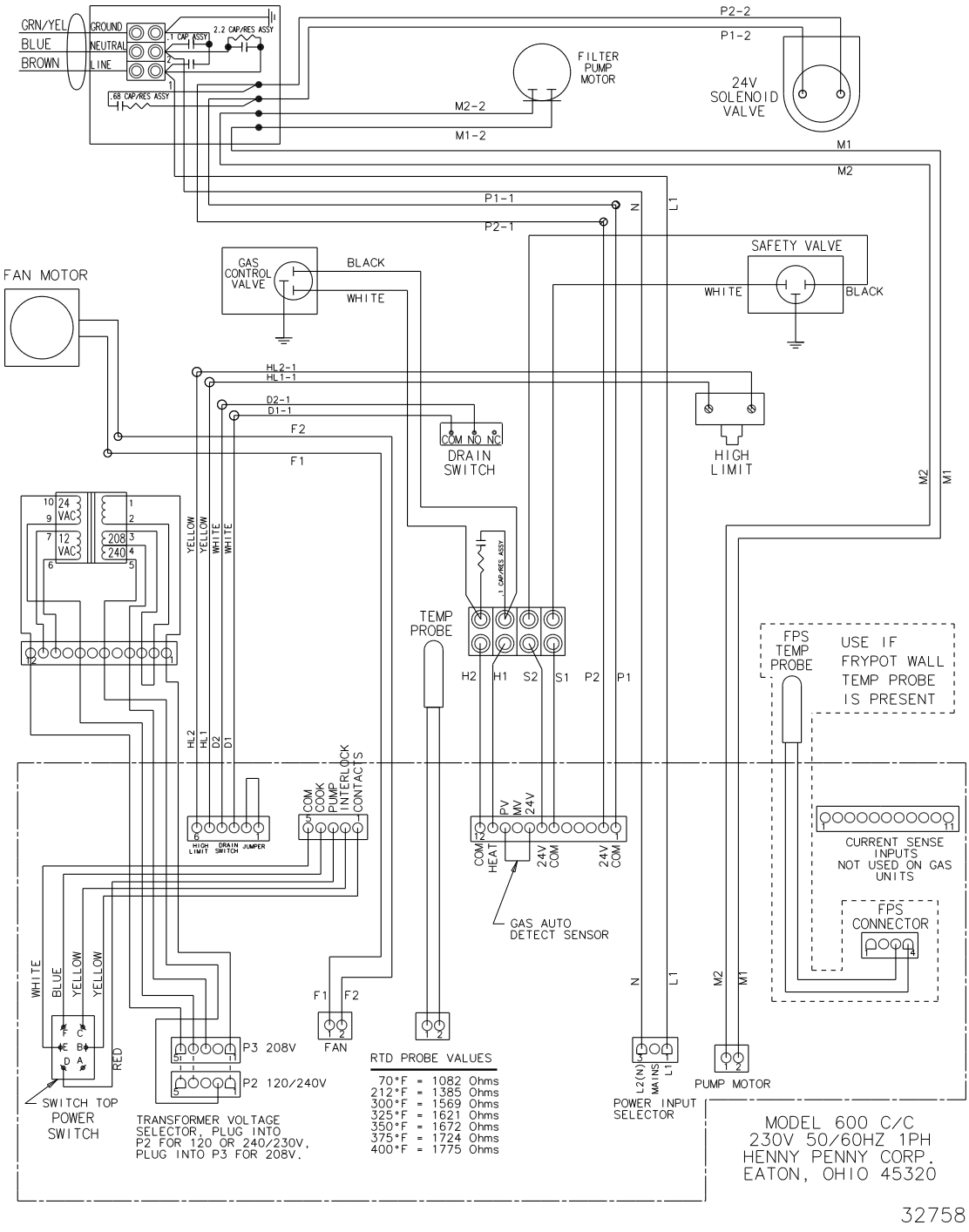
10.9 500 480v 50/60Hz. 3PH



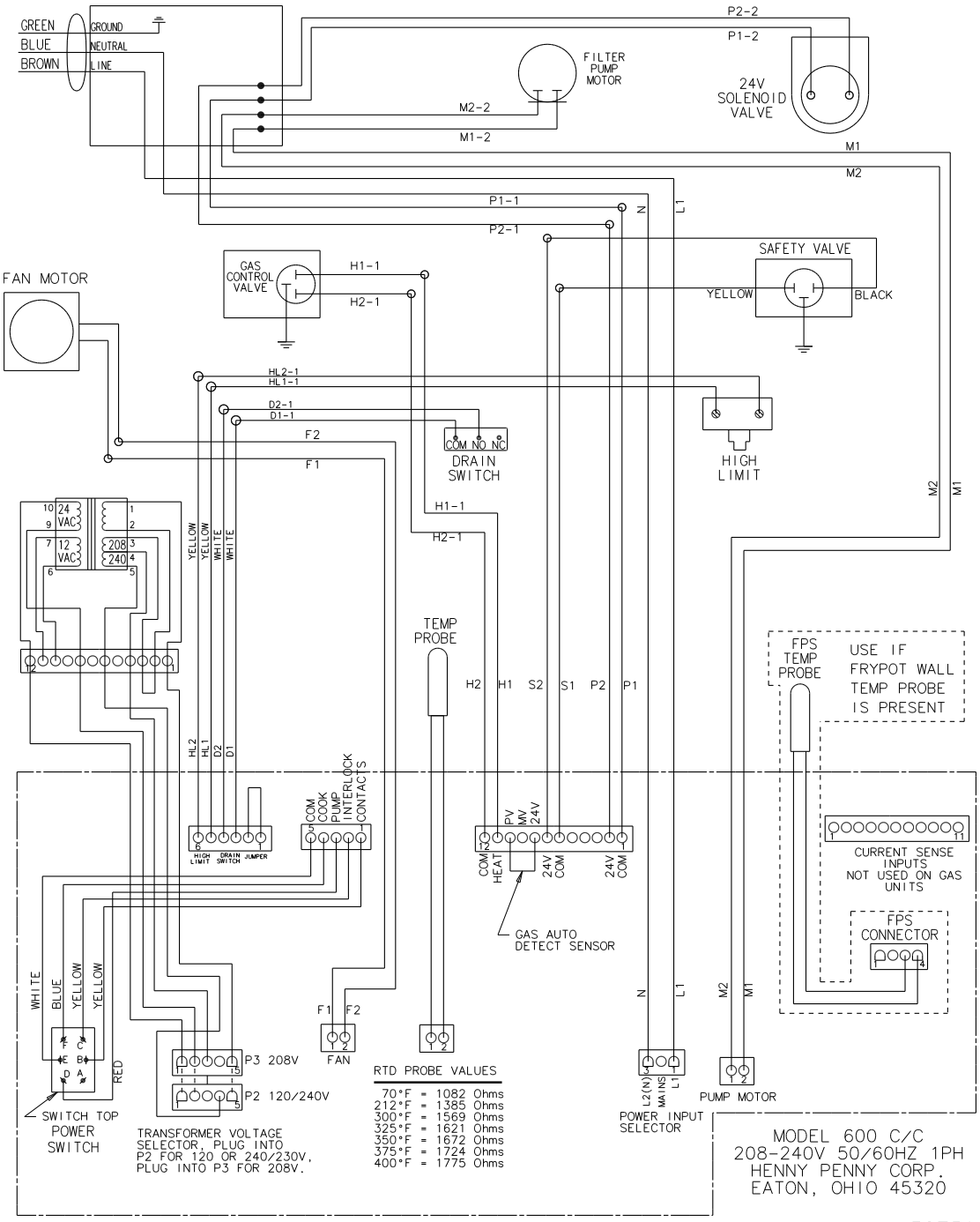
10.10 500 380-415v 50/60Hz. 4W + G 3PH



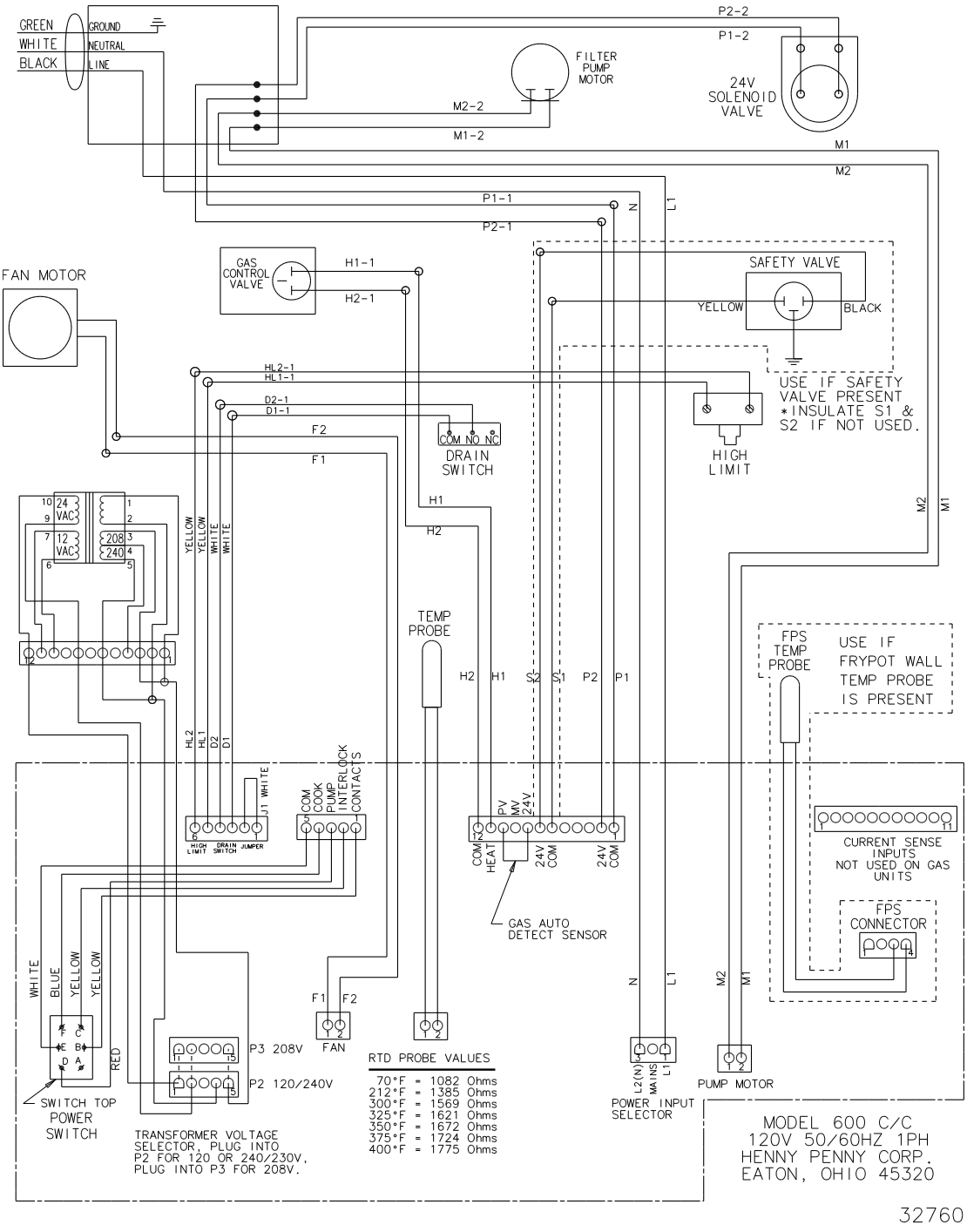
10.11 600 230v 50/60Hz. 1PH



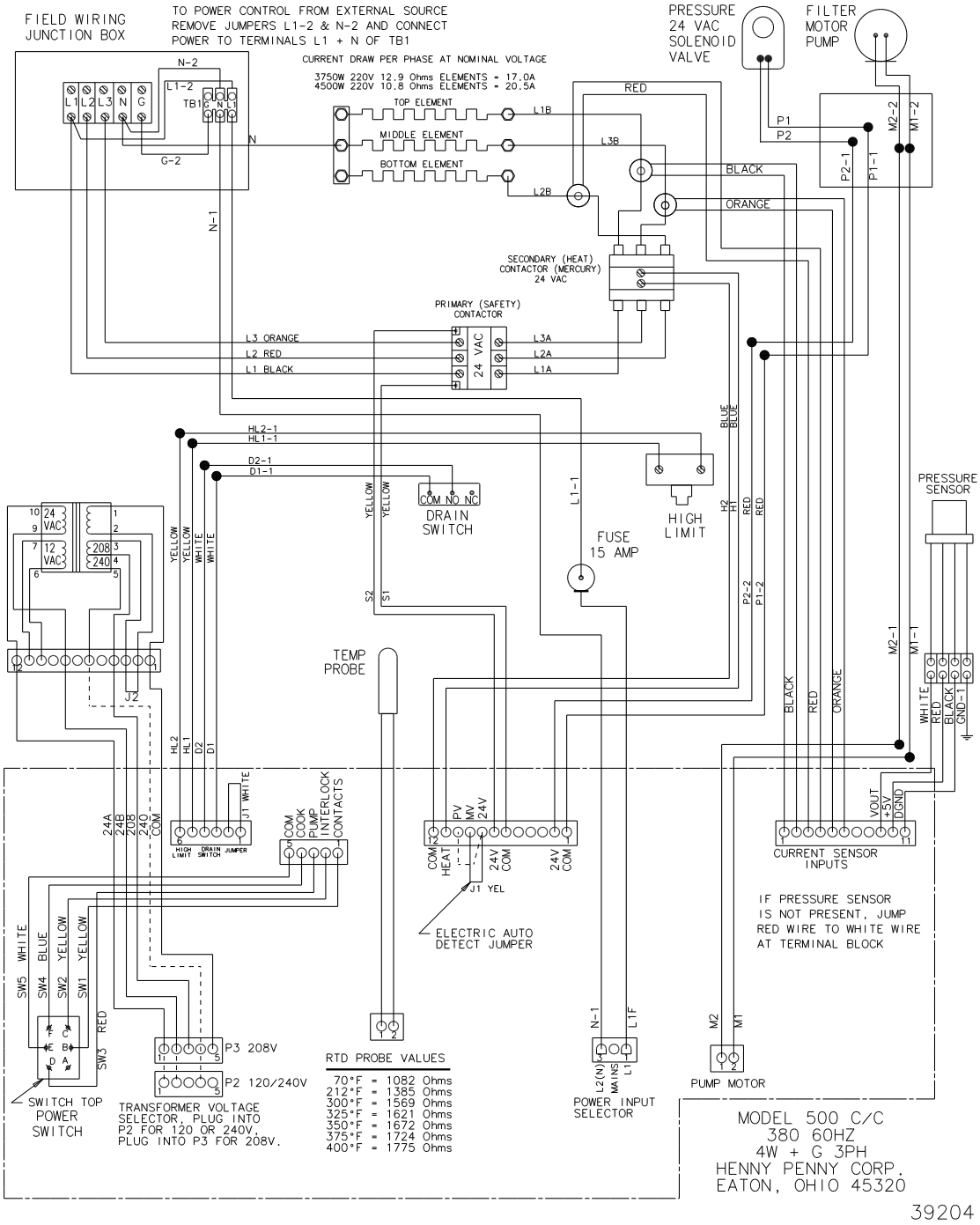
10.12 600 208-240v 50/60Hz. 1PH



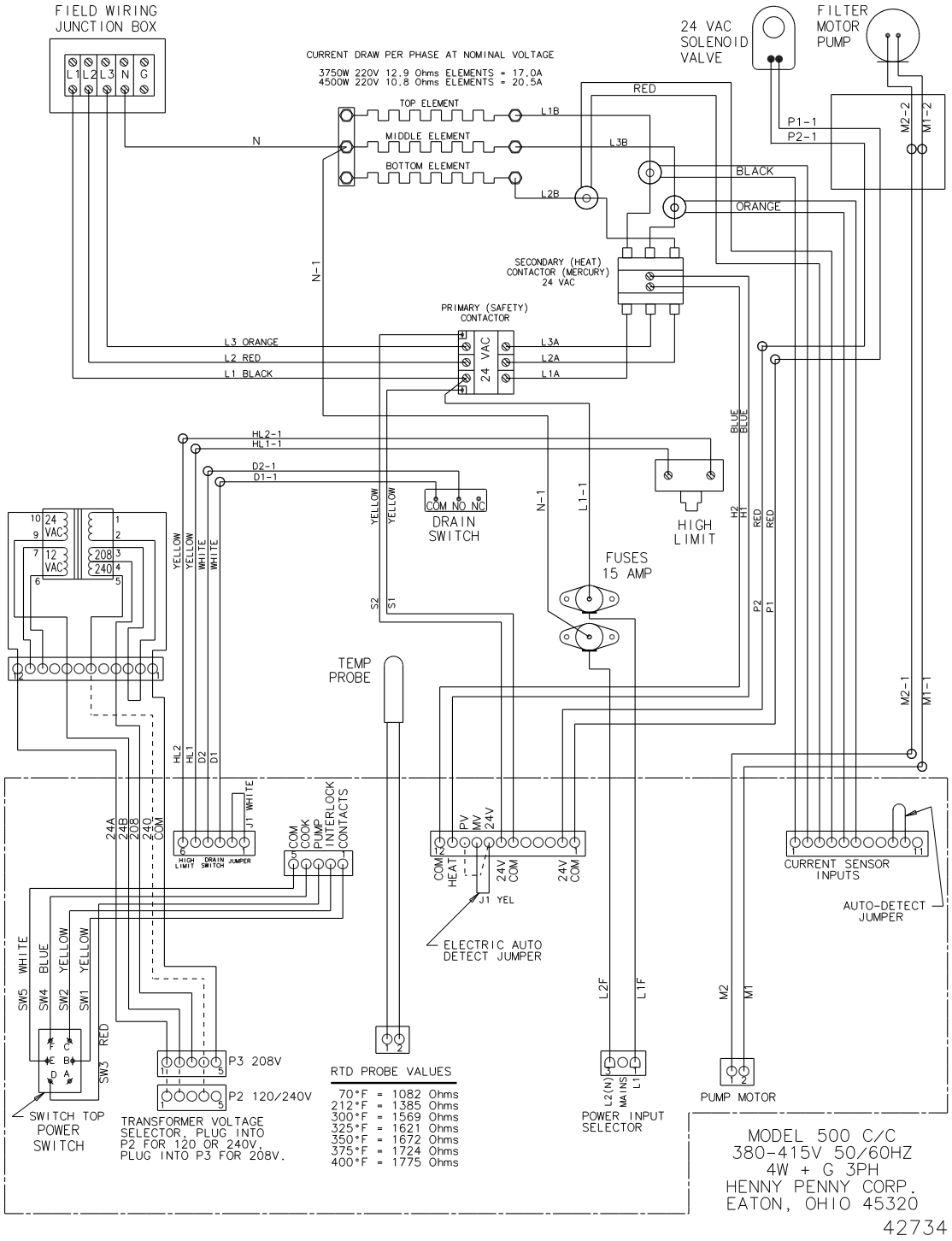
10.13 600 120v 50/60Hz. 1PH



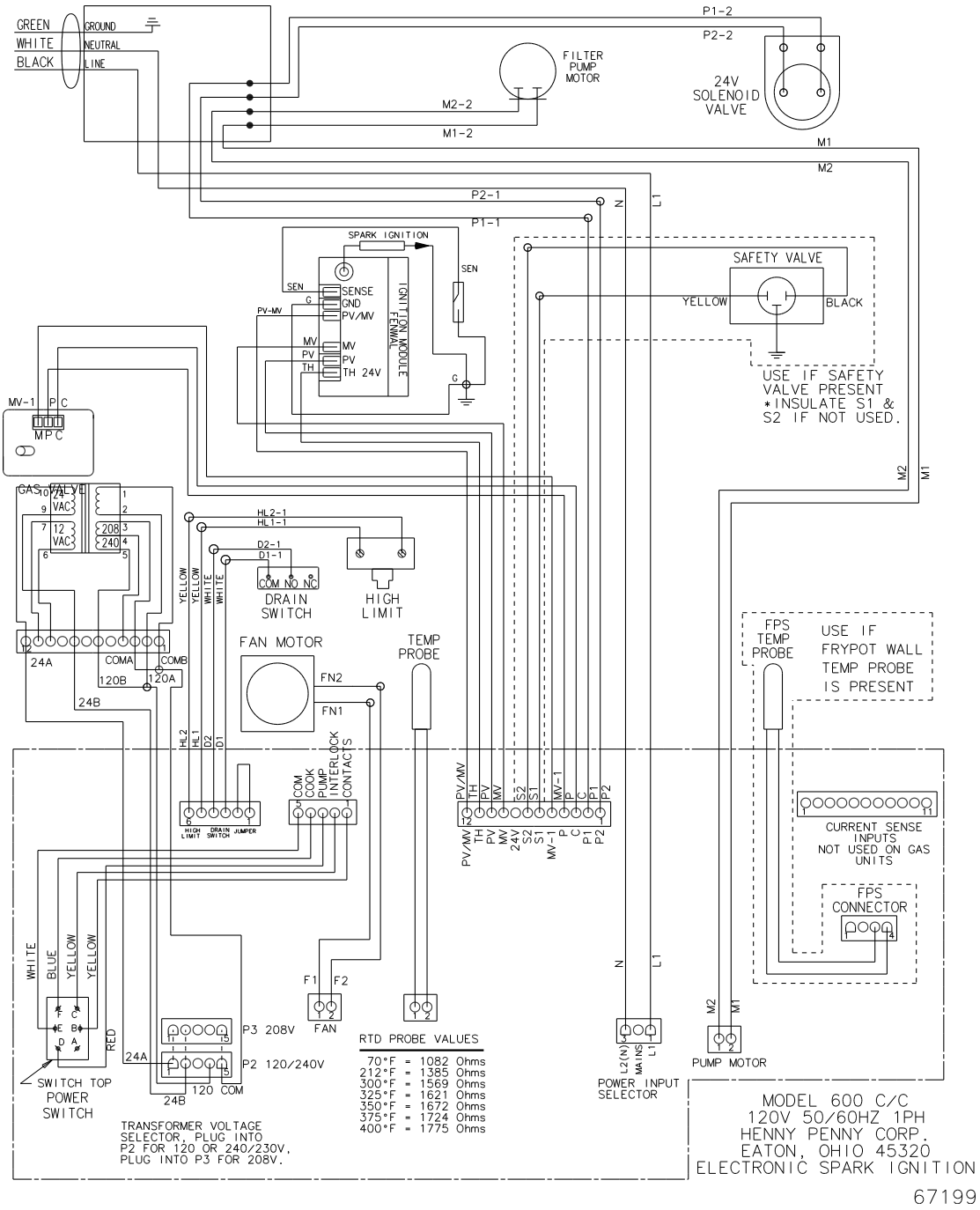
10.14 500 380v 60Hz. 4W + G 3PH



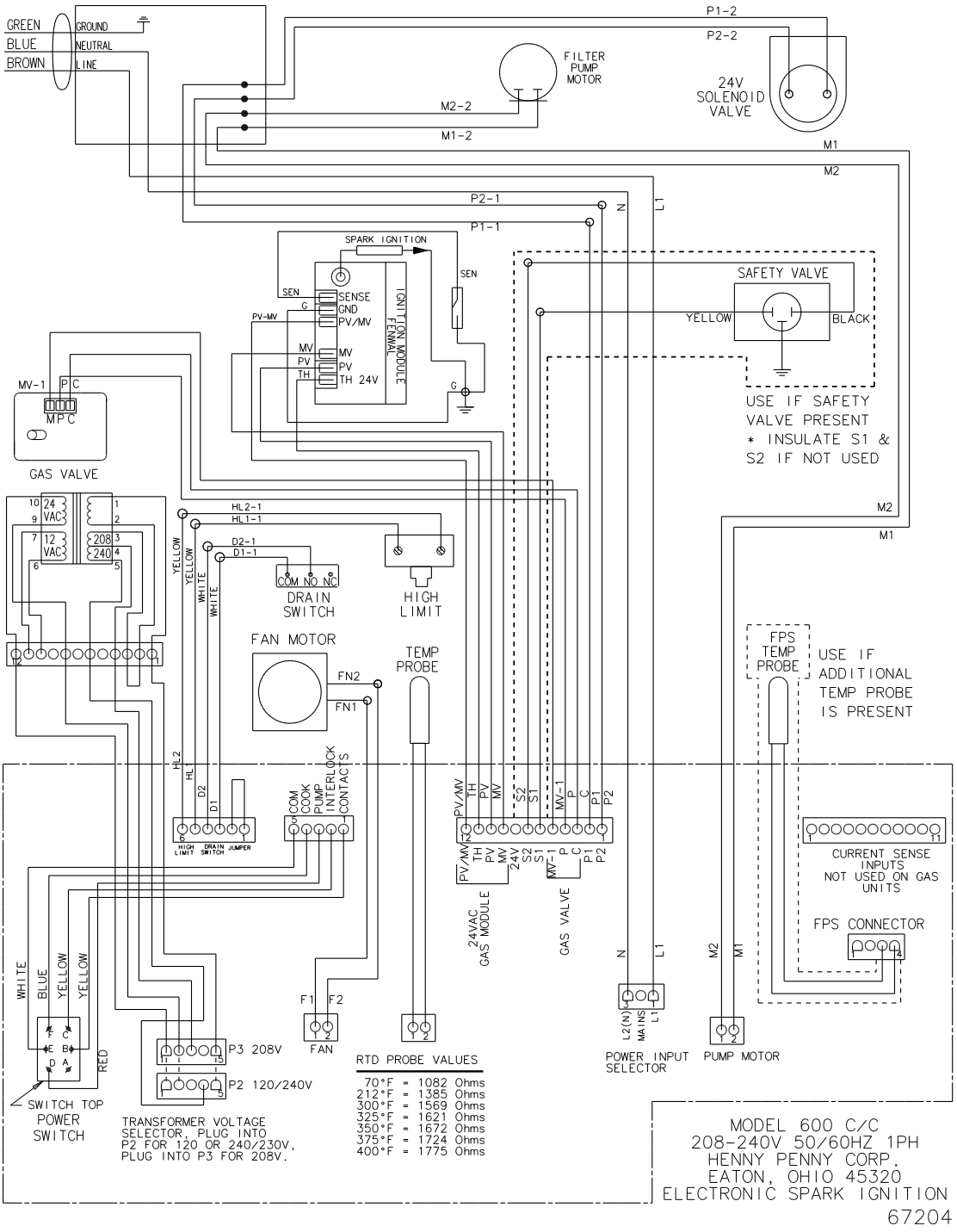
10.15 500 380-415v 50/60Hz. 4W + G 3PH



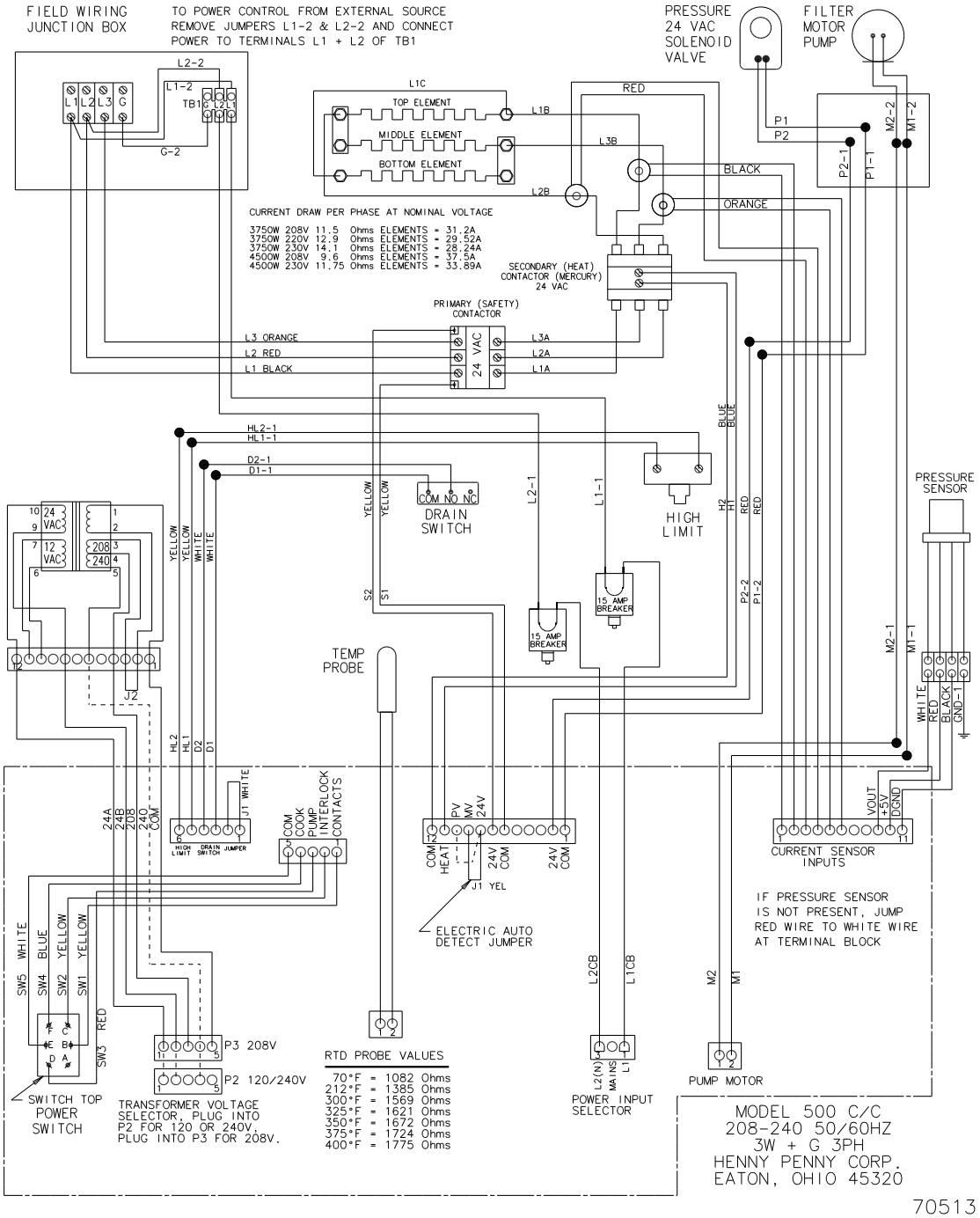
10.16 600 120v 50/60Hz. 1PH



10.17 600 208-240v 50/60Hz. 1PH



10.18 500 208-240v 50/60Hz. 3W + G 3PH



Henny Penny Corporation
P.O.Box 60
Eaton, OH 45320
www.hennypenny.com

Inside the U.S.:
1-800-417-8405
technicalservices@hennypenny.com

Outside the U.S.
1-937-456-8405
intltechsupport@hennypenny.com