Commercial Kitchen Equipment Parts

HENNY PENNY 600

Henny Penny 600 User Manual

Provided by PartHubz

parthubz.com

833-700-8006 | support@parthubz.com

HENNY PENNY®
Global Foodservice Solutions

Henny Penny
Pressure Fryers
Model 500
Model 561
Model 600

TECHNICAL MANUAL

NOTICE

This manual should be retained in a convenient location for future reference.

A wiring diagram for this appliance is located on the rear shroud cover of the control panel.

Post in a prominent location, instructions to be followed if user smells gas. This information should be obtained by consulting the local gas supplier.

The Model 600 Fryer is equipped with a continuous pilot. But Fryer cannot be operated without electric power. Fryer will automatically return to normal operation when power is restored.

Do not obstruct the flow of combustion and ventilation air. Adequate clearance must be left all around appliance for sufficient air to the combustion chamber.

CAUTION
FIRE HAZARD

To avoid a fire, keep appliance area free and clear from combustibles.

⚠ WARNING

Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

⚠ DANGER

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE. FIRE OR EXPLOSION COULD RESULT.

Technical Data for CE Marked Products

Nominal Heat Input: (Net)	Natural (I_{2H}) = 21.1 KW (72,000 Btu/h) Natural (I_{2E}) = 21.1 KW (72,000 Btu/h) Natural (I_{2E+}) = 21.1 KW (72,000 Btu/h) Natural (I_{2L}) = 21.1 KW (72,000 Btu/h) Liquid Propane (I_{3P}) = 21.1 KW (72,000 Btu/h)
Nominal Heat Input: (Gross)	Natural (I_{2H}) = 23.4 KW (80,000 Btu/h) Natural (I_{2E}) = 23.4 KW (80,000 Btu/h) Natural (I_{2E+}) = 23.4 KW (80,000 Btu/h) Natural (I_{2L}) = 23.4 KW (80,000 Btu/h) Liquid Propane (I_{3P}) = 22.9 KW (78,000 Btu/h)
Supply Pressure:	Natural (I_{2H}) = 20 mbar Natural (I_{2E}) = 20 mbar Natural (I_{2E+}) = 20/25 mbar Natural (I_{2L}) = 25 mbar Liquid Propane (I_{3P}) = 30 mbar Liquid Propane (I_{3P}) = 37 mbar Liquid Propane (I_{3P}) = 50 mbar
Test Point Pressure:	Natural (I_{2H}) = 8.7 mbar Natural (I_{2E}) = 8.7 mbar Natural (I_{2E+}) = 8.7/10 mbar Natural (I_{2L}) = 10 mbar Liquid Propane (I_{3P}) = 25 mbar
Injector Size:	Natural (I_{2H}) = 1.04 mm Natural (I_{2E}) = 1.04 mm Natural (I_{2E+}) = 1.04 mm Natural (I_{2L}) = 1.04 mm Liquid Propane (I_{3P}) = 0.66 mm
Restrictor Size:	Natural (I_{2E+}) = 4.1 mm

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

TABLE OF CONTENTS

Section **Page**

Section 1. TROUBLESHOOTING 1-1
1-1. Introduction 1-1
1-2. Safety 1-1
1-3. Troubleshooting 1-2

Section 2. MAINTENANCE 2-1
2-1. Introduction 2-1
2-2. Maintenance Hints 2-1
2-3. Preventive Maintenance Schedule 2-2
2-4. Removing the Control Panel 2-2
2-5. Temperature Regulation (Single Stage) 2-3
2-6. Calibrating the Standard Single Stage Thermostat 2-5
2-7. Testing the Thermostat 2-5
2-8. Thermostat Replacement (All Models) 2-6
2-9. High Temperature Limit Control (Electric and Gas Models) 2-9
2-10. Heating Elements (Electric Models) 2-12
2-11. Heating Contactors (Electric Models) 2-15
2-12. Gas Burner Assembly (Gas Models) 2-18
2-13. Thermocouple (Gas Models) 2-21
2-14. Gas Control Valve 2-23
2-15. Electrical Components 2-26
2-16. Timing Control 2-32
2-17. Pressure Regulation/Exhaust 2-34
2-18. Filtering System 2-53
2-19. Gas Conversion 2-58
2-20. Electrical Conversions 2-60
2-21. Wiring Diagrams 2-61
2-22. Index of Wiring Diagrams 2-61

Section 3. PARTS INFORMATION 3-1
3-1. Introduction 3-1
3-2. Genuine Parts 3-1
3-3. Model Variations 3-1
3-4. How to Find Parts 3-1
3-5. Subassemblies 3-2
3-6. How to Order Parts 3-2
3-7. Prices 3-3
3-8. Delivery 3-3
3-9. Warranty 3-3
3-10. Recommended Spare Parts for Distributors 3-3
3-11. Index of Parts List Illustrations 3-4

Section 4. PROGRAMMING 4-1

Appendix A ANNUAL PREVENTIVE MAINTENANCE A-1

LIMITED WARRANTY FOR HENNY PENNY EQUIPMENT

Subject to the following conditions, Henny Penny Corporation makes the following limited warranties to the original purchaser only for Henny Penny appliances and replacement parts:

NEW EQUIPMENT: Any part of a new appliance, except baskets, lamps, and fuses, which proves to be defective in material or workmanship within two (2) years from date of original installation, will be repaired or replaced without charge F.O.B. factory, Eaton, Ohio, or F.O.B. authorized distributor. Baskets will be repaired or replaced for ninety (90) days from date of original installation. Lamps and fuses are not covered under this Limited Warranty. To validate this warranty, the registration card for the appliance must be mailed to Henny Penny within ten (10) days after installation.

FILTER SYSTEM: Failure of any parts within a fryer filter system caused by the use of the non-OEM filters or other unapproved filters is not covered under this Limited Warranty.

REPLACEMENT PARTS: Any appliance replacement part, except lamps and fuses, which proves to be defective in material or workmanship within ninety (90) days from date of original installation will be repaired or replaced without charge F.O.B. factory, Eaton, Ohio, or F.O.B. authorized distributor.

The warranty for new equipment covers the repair or replacement of the defective part and includes labor charges and maximum mileage charges of 200 miles round trip for a period of one (1) year from the date of original installation.

The warranty for replacement parts covers only the repair or replacement of the defective part and does not include any labor charges for the removal and installation of any parts, travel, or other expenses incidental to the repair or replacement of a part.

EXTENDED FRYPOT WARRANTY: Henny Penny will replace any frypot that fails due to manufacturing or workmanship issues for a period of up to seven (7) years from date of manufacture. This warranty shall not cover any frypot that fails due to any misuse or abuse, such as heating of the frypot without shortening.

0 TO 3 YEARS: During this time, any frypot that fails due to manufacturing or workmanship issues will be replaced at no charge for parts, labor, or freight. Henny Penny will either install a new frypot at no cost or provide a new or reconditioned replacement fryer at no cost.

3 TO 7 YEARS: During this time, any frypot that fails due to manufacturing or workmanship issues will be replaced at no charge for the frypot only. Any freight charges and labor costs to install the new frypot as well as the cost of any other parts replaced, such as insulation, thermal sensors, high limits, fittings, and hardware, will be the responsibility of the owner.

Any claim must be presented to either Henny Penny or the distributor from whom the appliance was purchased. No allowance will be granted for repairs made by anyone else without Henny Penny's written consent. If damage occurs during shipping, notify the sender at once so that a claim may be filed.

THE ABOVE LIMITED WARRANTY SETS FORTH THE SOLE REMEDY AGAINST HENNY PENNY FOR ANY BREACH OF WARRANTY OR OTHER TERM. BUYER AGREES THAT NO OTHER REMEDY (INCLUDING CLAIMS FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES) SHALL BE AVAILABLE.

The above limited warranty does not apply (a) to damage resulting from accident, alteration, misuse, or abuse; (b) if the equipment's serial number is removed or defaced; or (c) for lamps and fuses. THE ABOVE LIMITED WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS, AND ALL OTHER WARRANTIES ARE EXCLUDED. HENNY PENNY NEITHER ASSUMES NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT ANY OTHER OBLIGATION OR LIABILITY.

Revised 01/01/07

SECTION 1. TROUBLESHOOTING

1-1. INTRODUCTION

This section provides troubleshooting information in the form of an easy to read table.

If a problem occurs during the first operation of a new fryer, re-check the installation per Section 2 of the Operator's Manual.

Before troubleshooting, always recheck the operating procedure per Section 3 of the Operator's Manual.

1-2. SAFETY

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



SAFETY ALERT SYMBOL is used with DANGER, WARNING, or CAUTION which indicates a personal injury type hazard.



NOTICE is used to highlight especially important information.



CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.



CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



DANGER INDICATES AN IMMINENTLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.

1-3. TROUBLESHOOTING

To isolate a malfunction, proceed as follows:

1. Clearly define the problem (or symptom) and when it occurs.
2. Locate the problem in the troubleshooting table.
3. Review all possible causes. Then, one-at-a-time work through the list of corrections until the problem is solved.



Refer to the maintenance procedures in Section 2 of this manual to safely and properly make the checkout and repair needed. If maintenance procedures are not followed correctly, injuries and/or property damage could result.

1-3. TROUBLESHOOTING (Continued)

PROBLEM	CAUSE	CORRECTION
	COOKING SECTION	
Product Color Not Correct:		
A. Too Dark	• Temperature too high	• Reduce thermostat setting
		• Remove and replace defective thermostat per Thermostat Replacement section
	• Shortening too old	• Change shortening
	• Shortening too dark	• Filter shortening
		• Shortening taste test, see Operator Manual
		• Change shortening
	• Dip solution too strong for product	• Use correct dip solution or shorten product immersion time
	• Breading product too far in advance	• Bread product closer to actual frying period
B. Too Light	• Temperature too low	• Increase temperature
		• Remove and replace defective thermostat per Thermostat Replacement section
	• Dip solution too weak for product	• Correct dip solution
	• Incorrect preheat procedures	• Allow proper preheat time
		• Stir shortening prior to dropping product into frypot
	• Frypot overloaded with product	• Reduce cooking load
	• Slow fryer heatup/recovery	• Refer to burner or heating elements in Maintenance section

1-3. TROUBLESHOOTING (Continued)

PROBLEM	CAUSE	CORRECTION
	COOKING SECTION (Continued)	
C. Product Greasy	• Shortening old	• Replace shortening
	• Temperature too low	• Increase thermostat settings • Temperature not recovered when product was dropped in frypot basket • Replace thermostat if needed
	• Frypot overloaded	• Reduce cooking load
	• Product not removed from frypot immediately after depressurization	• Remove product immediately after depressurization of the frypot
D. Spotted Product	• Improper separation of the product	• Refer to Operator's Manual
	• Product was incorrectly dipped in water before breading	• Agitate product during the dipping procedure
	• Breading not uniform on product	• Sift breading regularly • Separate product during breading • Refer to Operator Manual
	• Burned breading particles on product	• Filter the shortening more frequently
	• Product sticking together	• Separate product prior to pressure cooking; refer to Operator's Manual
E. Dryness of Product	• Moisture loss prior to cooking	• Use fresh products • Keep product covered with a moist cloth to reduce evaporation
	• Over cooking the product	• Reduce cooking time • Reduce cooking temperature

1-3. TROUBLESHOOTING (Continued)

PROBLEM	CAUSE	CORRECTION
COOKING SECTION (Continued)		
E. Dryness of Product (Continued)	• Low operating pressure	• Check pressure gauge reading; check for pressure leaks
	• Product load too small	• Increase quantity to obtain correct operating pressure and product quality
Product Flavor (Taste):		
A. Salty taste	• Breading mixture is too salty	• Sift breading after each use • Incorrect breading mixture • Discard old breading
	• Marination mixture too concentrated	• Reduce the concentration of the marination mixture
	• Incorrect choice of breading	• Use breading designed for the desired product
B. Burned taste	• Burned shortening flavor	• Replace shortening
	• Shortening needs filtering	• Filter shortening more frequently
	• Frypot not properly cleaned	• Drain and clean frypot
C. Bland taste	• Raw product not fresh	• Use fresh raw products
	• Breading mixture incorrect for product (spice content too low)	• Use breading designed for desired product
	• Cooking temperature too high (spice flavors lost)	• Use correct temperature for breading used
	• Breading does not adhere to product	• Use correct dip and breading, and use correct procedure for the product

1-3. TROUBLESHOOTING (Continued)

PROBLEM	CAUSE	CORRECTION
COOKING SECTION (Continued)		
D. Rancid taste	• Shortening too old	• Replace shortening, and follow recommended care and use of shortening; refer to Operator's Manual
	• Noncompatible products cooked within the same shortening	• Replace shortening • Use compatible products, and follow recommended care and use of shortening; refer to Operator's Manual
	• Infrequent filtering	• Replace shortening, and follow recommended care and use of shortening; refer to Operator's Manual
	• Raw product not fresh	• Use fresh product
General:		
A. Meat separation from bone	• Incorrect meat cut	• Use correct meat cutting procedures
	• Overcooking	• Reduce cooking time
	• Raw product contains too much water	• Allow product to drain after marinating
	• Product not fresh	• Use fresh product
B. Bone color not proper	• Using frozen product (black bone)	• Use fresh product
	• Improper handling of product (black bone)	• Use proper handling procedures for product
	• Product not thoroughly cooked (red bone)	• Increase cooking time

1-3. TROUBLESHOOTING (Continued)

PROBLEM	CAUSE	CORRECTION
COOKING SECTION (Continued)		
C. Breading falls off	• Incorrect breading procedures	• Use correct breading procedure; refer to Operator's Manual
	• Product partially frozen during breading	• Thoroughly thaw the product, before breading
	• Improper handling of cooked product	• Handle cooked product carefully
	• Excessive stirring of product prior to closing the lid	• Separate the product; refer to Operator's Manual
D. Product sticking together	• Product breaded too long prior to cooking	• Refer to breading & frying instructions
	• Improper separation procedures prior to closing the lid	• Separate the product; refer to Operator's Manual
	• Frypot overloaded with product	• Reduce the cooking load
	• Improper loading procedure	• Load product properly into frypot; refer to Operator's Manual
POWER SECTION		
With switch in POWER position, the fryer is completely inoperative (NO POWER)	• Open circuit	• Check to see that unit is plugged in • Check breaker or fuse at supply box • Check control panel fuses per Electrical Components section (electric model only) • Check voltage at wall receptacle • Check MAIN POWER switch per Electrical Components section; replace if defective • Check cord and plug per Electrical Components section • Check circuit breaker on single phase fryers

1-3. TROUBLESHOOTING (Continued)

PROBLEM	CAUSE	CORRECTION
	PRESSURE SECTION	
Pressure will not exhaust at end of cook cycle	• Exhaust line from solenoid valve to expansion tank clogged	• Release pressure from frypot; clean all pressure lines, exhaust stacks, and expansion tank on gas model
	• Solenoid valve clogged	• Check and clean solenoid valve per Pressure Regulation/Exhaust section
Operating pressure too high	• Deadweight clogged	• Place proper quantity of moist product within frypot to generate steam
	• Exhaust line to stack clogged	• Clean exhaust line to stack
Pressure does not build	• Not enough product in fryer or product not moist	• Place proper quantity of moist product into frypot to generate steam
	• Metal shipping spacer not removed from deadweight	• Remove shipping spacer per Operator's Manual
	• Lid open or not latched	• Close and latch lid
	• Solenoid valve leaking or not closing.	• Check or clean solenoid valve per Pressure Regulation/Exhaust section
	• Deadweight valve leaking	• Repair per Pressure Regulation/Exhaust section
	• Main timer not closing solenoid	• Check main timer per Timing Control section
	• Lid gasket leaking	• Adjust lid limit stop; if this does not correct the problem, reverse the lid gasket; if this fails to correct the problem, replace the lid gasket
	• Safety relief valve leaking	• Check and replace, if necessary, per Pressure Regulation/Exhaust section

1-3. TROUBLESHOOTING (Continued)

PROBLEM	CAUSE	CORRECTION
FILTER SYSTEM SECTION		
Filter motor runs but pumps shortening slowly	• Filter valve not open	• Open filter valve
	• Pump clogged	• Remove and clean pump per Filtering System section
	• Filter frame not properly assembled	• Handles must put pressure on filter
	• Filter line connections loose	• Tighten all filter line connections
	• Solidified shortening in lines	• Clear all filter lines of solidified shortening
	• Charcoal filter clogged (if applicable)	• Change charcoal filter (if applicable)
Pump switch ON, motor does not run	• Defective switch	• Check/replace switch per Electrical Components section
	• Defective motor	• Check/replace motor per Filtering System section
	• Motor thermal protector tripped	• Reset thermal switch per Filtering System section

1-3. TROUBLESHOOTING (Continued)

PROBLEM	CAUSE	CORRECTION
FILTER SYSTEM SECTION (Continued)		
Motor hums but will not pump	• Clogged lines or pump	• Remove and clean pump and lines per Filtering System section • Replace pump seal, rotor and rollers per Filtering System section
HEATING OF SHORTENING SECTION		
Shortening will not heat (Electric Model)	• Blown fuse or tripped circuit breaker at supply box or control panel	• Reset breaker or replace fuse
	• Blown fuse at control panel	• Check fuse per Electrical Components section
	• Faulty main switch	• Check main switch per Electrical Components section
	• No power	• Check cord and plug and power at wall receptacle per Electrical Components section
	• Faulty contactor	• Check contactor per Heating Contactors section
	• High limit control switch open	• Press red high limit reset button per High Temperature Limit Control section
	• Faulty thermostat	• Check thermostat per Thermostat Replacement section
	• Faulty high limit control switch	• Check high limit control switch per High Temperature Limit Control section
Heating of shortening too slow (Electric Model)	• Low or improper voltage	• Use a meter and check the receptacle against data plate
	• Weak or burnt out element(s)	• Check heating element(s) per Heating Elements section
	• Points in contactor bad	• Check contactor per Heating Contactors section
	• Wire(s) loose	• Tighten
	• Burnt or charred wire connection	• Replace wire and clean connectors

1-3. TROUBLESHOOTING (Continued)

PROBLEM	CAUSE	CORRECTION
	HEATING OF SHORTENING SECTION	
Shortening overheating (electric model)	• Check thermostat	• Check faulty thermostat per Thermostat Replacement section
	• Check faulty contactor per Heating Contactors section	• Check contactor for not opening
Shortening will not heat (gas model)	• Pilot not lit	• Light pilot per Gas Pilot Lighting Procedure section in Operator's Manual
A. Pilot will not light	• Plugged pilot orifice, and/or pilot supply tube	• Unplug pilot orifice and/or pilot supply tube
	• Gas supply off	• Turn ON gas supply
	• Faulty gas control valve	• Replace gas control valve
	• Air in gas supply line	• Bleed air from supply line
B. Pilot will not stay lit	• Faulty thermocouple	• Replace thermocouple per Thermocouple section
	• Pilot magnetic plug	• Replace gas control valve per Gas Control Valve section
C. Burner will not light, pilot lit (gas model)	• Drain valve open	• Close drain valve
	• High limit control switch open	• Press red high limit reset per High Temperature Limit Control section
	• Faulty high limit control switch	• With power removed from fryer, check across high limit switch terminals with ohmmeter; replace if no reading is indicated on meter
	• Possible faulty gas control valve	• With power removed from fryer, check across electrical leads of gas control valve with ohmmeter, and gas control valve in ON position; Ohm reading should be 350 ohms resistance; replace the control valve if not within 10%

1-3. TROUBLESHOOTING (Continued)

PROBLEM	CAUSE	CORRECTION
HEATING OF SHORTENING SECTION (Continued)		
C. Burner will not light, pilot lit (gas model) (continued)	• Possible faulty thermostat	• Check thermostat per Thermostat Replacement section; replace thermostat if found to be faulty
Heating of shortening too slow (gas model)	• Supply line too small - low gas volume	• Increase supply line size. Refer to installation instructions in Operator's Manual
	• Incorrect jet size	• Replace with proper size jet for type of gas, and altitude (contact factory)
	• Improper ventilation system	• Refer to Section 1 of Operator's Manual
Shortening overheating (gas model)	• Possible faulty thermostat	• Check thermostat per Thermostat Replacement section; replace thermostat if found to be faulty
SHORTENING FOAMING/DRAINING		
Foaming or boiling over of shortening (gas/electric models)	• Water in shortening	• At end of cook cycle, drain shortening and clean frypot, add fresh shortening, and check procedure for raising lid
	• Condensation line stopped up	• Remove and clean condensation line
	• Improper or bad shortening	• Use recommended shortening
	• Improper filtering	• Refer to the procedure covering filtering the shortening
	• Improper rinsing after cleaning the fryer	• Clean and neutralize the frypot; rinse with vinegar to remove the alkaline then rinse with hot water, and dry frypot

1-3. TROUBLESHOOTING (Continued)

PROBLEM	CAUSE	CORRECTION
SHORTENING FOAMING/DRAINING (Continued)		
Shortening will not drain from frypot (all models)	• Drain valve clogged with crumbs	• Open valve - force cleaning brush through drain opening
	• Drain valve will not open by turning handle	• Replace cotter pins in valve coupling
MAIN TIMER SECTION		
Timer fails to run	• No power input	• Check timer switch • Check timer motor
Buzzer continues to buzz	• Timer set at zero	• Set timer indicator to a setting other than zero
	• Faulty microswitch	• Check and replace faulty microswitch per Electrical Components section
Buzzer will not buzz	• Possible faulty buzzer	• Check buzzer per Timing Control section
	• Timer indicator not returning to zero	• Replace timer per Timing Control section
Timer will not reset	• Faulty timer	• Replace timer
Timer light out	• Faulty lamp	• Replace lamp per Timing Control section
LID SECTION		
Gasket coming out of lid liner	• Crumbs under gasket	• Remove gasket and clean per Pressure Regulation/Exhaust section • Clean top rim of frypot • Replace worn or damaged gasket per Pressure Regulation/Exhaust section
Lid spindle will not turn or turns hard with lid open	• Spindle dry	• Lubricate spindle per Pressure Regulation/Exhaust section
	• Worn acme nut	• Replace acme nut per Pressure Regulation/Exhaust section

1-3. TROUBLESHOOTING (Continued)

PROBLEM	CAUSE	CORRECTION
LID SECTION (Continued)		
Lid will not unlatch from closed position	• Lid gasket not seated properly or idle nut not adjusted	• To check the problem, perform the following procedures: 1. Remove pressure from frypot. 2. Turn main switch to off position. 3. Drain shortening from frypot.  *The next procedure must be performed while holding the lid closed until the lid latch is free from the crossarm. Failure to hold down the lid will result in the lid springing back to a full open position. Personal injury, or damage to the hinge may result.* 4. Remove Tru-Arc ring. Drive latch pin out. Lid will open. 5. Raise lid slowly. 6. Reinstall latch. 7. Adjust limit stop, per Pressure Regulation/Exhaust section. 8. Lid gasket should be properly seated in lid liner.

SECTION 2. MAINTENANCE

2-1. INTRODUCTION

This section provides procedures for the checkout and replacement of the various parts used within the fryer. Before replacing any parts, refer to Section 1, Troubleshooting. It will aid you in determining the cause of the malfunction.

2-2. MAINTENANCE HINTS

1. You may use two test instruments to check the electric components.
   - A continuity light
   - An ohmmeter
2. When the manual refers to the circuit being closed, the continuity light will be illuminated or the ohmmeter should read zero unless otherwise noted.
3. When the manual refers to the circuit being open, the continuity light will not illuminate or the ohmmeter will read 1 (one).

NOTICE

A continuity tester cannot be used to check coils or motors.

2-3. PREVENTIVE MAINTENANCE SCHEDULE

To ensure a long life of the fryers and their components, regular maintenance should be performed. Refer to the chart below.

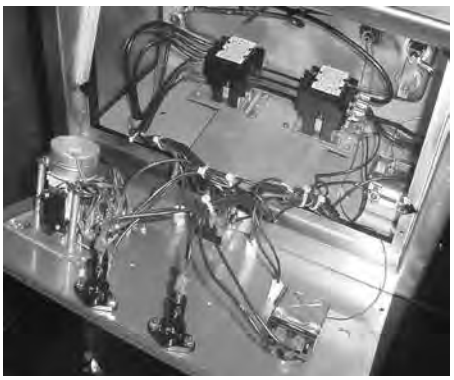
Frequency	Action
Daily (3-4 loads)	Filter shortening
Daily	Clean deadweight valve cap, weight, and orifice
30 Days	Lubricate spindle threads and ball seat
90 Days	Reverse lid gasket
90 Days	Check limit stop adjustment
90 Days	Check and tighten element spreader bars
Once a year	Annual preventive maintenance (see Appendix A.)

2-4. REMOVING THE CONTROL PANEL

To replace parts inside the fryer you will often need to remove the control panel. The following steps provide the correct procedure:



Step 3


Step 4

Removal

1. Place the main power switch to the OFF position. (This switch is labeled POWER/OFF/PUMP.)



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

2. Remove the two screws from the bottom of the control panel.
3. Carefully slide the control panel upward until it lifts off the metal hangers.
4. With the fryer door closed, place the lower edge of the control panel in the slot between the door and the frame of the fryer.

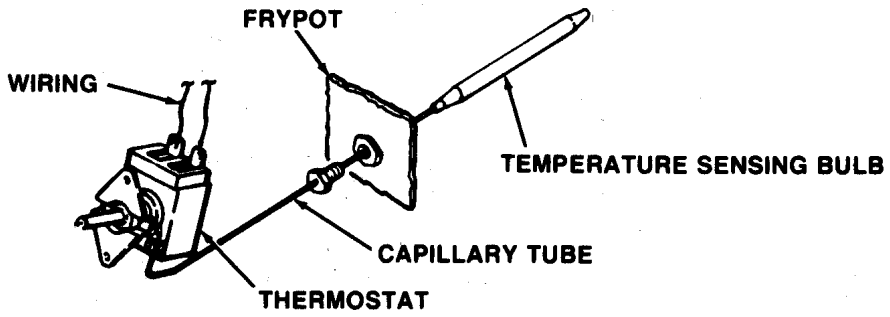
Installation

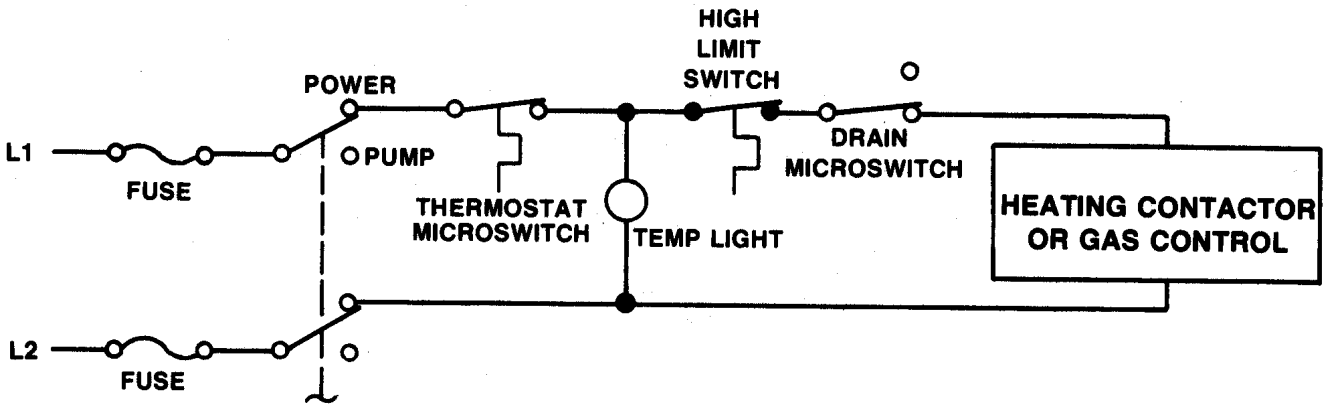
1. To install the control panel, hook it on the metal hangers that hold the top of the panel in place.
2. Install the two screws in the bottom of the panel.
3. Reconnect power to the fryer.

2-5. TEMPERATURE REGULATION (SINGLE STAGE)

Description

The cooking temperature is controlled by the front panel thermostat and monitored by its sensing bulb mounted just inside the frypot. Various thermostats are available, but all work on the same principle.





2-5. TEMPERATURE REGULATION (SINGLE STAGE) (Continued)

Internal Operation

The thermostat bulb is connected to the thermostat by a thin capillary tube. When the temperature rises, the fluid inside the bulb expands (as in a thermometer) and pushes fluid through the tube into the control panel thermostat. When the frypot temperature is lower than the thermostat setting, the TEMP light is illuminated and frypot is being heated. When the temperature setting is reached, a switch inside the thermostat opens the circuit to the heat source and turns off the TEMP light. When the frypot starts to cool, the switch closes the circuit to the heat source.

Drain Microswitch

This interlock provides protection for the frypot in the event an operator inadvertently drains the shortening with the switch in the power position. The heat will automatically shut off when the drain valve is opened.

High Limit Temperature Control

The high limit temperature provides the safety feature of interrupting the heat if the temperature ever exceeds the safe operating limits. On electric models it must be manually reset when the frypot cools. Refer to High Temperature Limit Control section for maintenance of the high limit temperature control.

2-6. CALIBRATING THE STANDARD SINGLE STAGE THERMOSTAT

Henny Penny does not recommend that a field calibration be performed on the thermostats mentioned above. The reasons for this are as follows:

- The thermostat is calibrated in a controlled environment from the factory. The thermostat manufacturers do not recommend any adjustments to the thermostat in the field, as this will affect the factory calibration.
- The difference between a hand-held thermometer and an installed thermostat can be quite large due to shortening temperature variation.
- The adjustment of a thermostat is not precise, since the dial reads only in 25 degrees F increments. The accuracy of a thermostat needs to be less than 5 degrees F.

If a thermostat is not reading accurately and suspected to be faulty, Henny Penny suggests that the thermostat be replaced. If you have any questions, please do not hesitate to call the Technical Services Department.

2-7. TESTING THE THERMOSTAT

Procedure

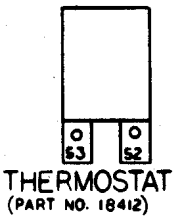
If the thermostat fails to work properly, perform the following checks before replacing the thermostat:

1. Remove electrical power supplied to the fryer.



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

2. Remove the control panel.
3. With an ohmmeter or continuity light, check for continuity as follows.
4. On a standard (single temperature) thermostat, check between terminals 52 and 53. Move the temperature knob from OFF to maximum.
   - At OFF, the circuit should be open.
   - At maximum, the circuit should be closed.



2-8. THERMOSTAT REPLACEMENT (ALL MODELS)

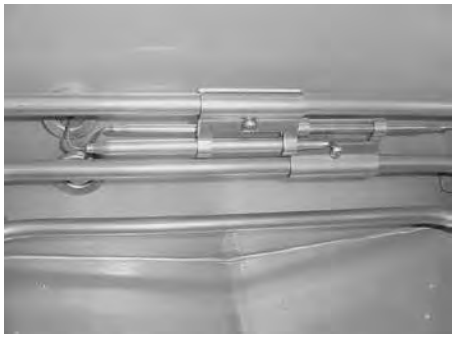
1. Remove electrical power supplied to the fryer.



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

2. Drain the shortening from the frypot.

ELECTRIC



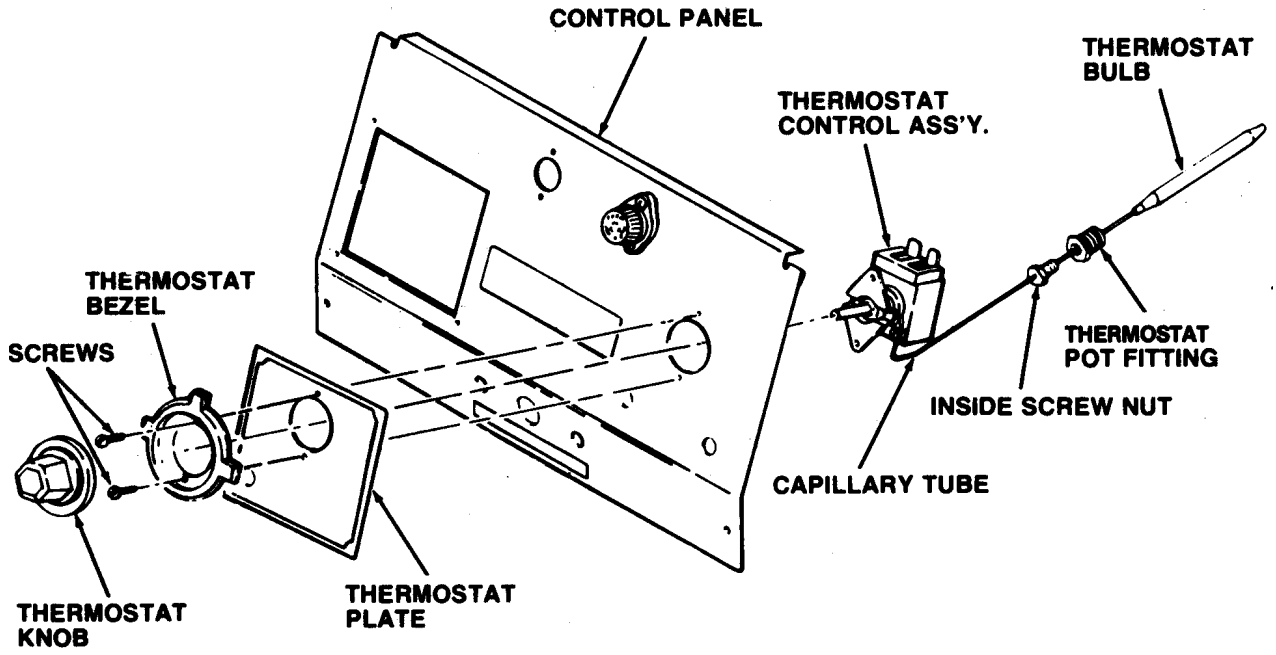
GAS

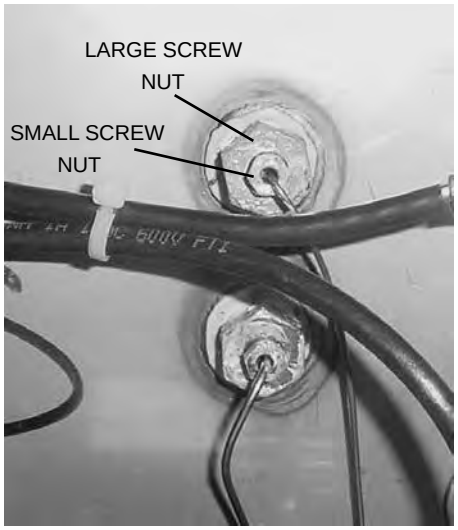


Step 3

3. Remove the thermostat sensing bulb from the bulb holder inside the frypot.
4. Place your thumb at the bend in the capillary tube, where it comes into the frypot, and straighten the bulb. The bulb should be extending out into the frypot.
5. Remove the two screws which secure the control panel to the frame of the fryer.
6. Lift the panel up and off the metal flanges.

2-8. THERMOSTAT REPLACEMENT (ALL MODELS) (Continued)





7. With the door of the fryer closed, put the bottom edge of the control panel in the slot between the door and the frame of the fryer.
8. Locate the thermostat on the back of the panel.
9. Remove the thermostat knob on the front of the control panel.
10. Remove the two screws which secure the thermostat to the back of the panel. Remove the thermostat bezel.
11. Remove the small inside screw nut which holds the capillary line.
12. Remove the large screw nut.
13. Label the wire connections to the thermostat for correct identification when the new thermostat is installed.
14. Disconnect the wires.
15. Remove the defective thermostat.
16. Install the new thermostat.

2-8. THERMOSTAT REPLACEMENT (ALL MODELS) (Continued)

17. Connect the wires to the new thermostat.



Be careful not to cross the wires or thermostat will not operate properly.

18. Uncoil the capillary tube.
19. Insert the bulb through the wall of the frypot.



To avoid electrical shock or other injury, the capillary line must run under and away from all electrical power wires. The tube must never be in contact with the electrical power wires or terminals.

20. Install the thermostat pot fitting into the wall of the frypot and tighten.
21. Replace the thermostat sensing bulb into the mounting bracket.



Do not bend the capillary tube where it connects to the sensing bulb, or damage to capillary will result.

22. ELECTRIC only: slip the bulb holder in place. With bulb in place, tighten the clamp screw.
23. Pull the excess capillary tube from the inside of the frypot.
24. Insert and tighten the inside screw nut into the thermostat pot fitting.
25. Install the two screws on the front of the control panel which secure the thermostat to the back of the panel. Install the thermostat bezel.
26. Install the thermostat knob.

2-8. THERMOSTAT REPLACEMENT (ALL MODELS) (Continued)

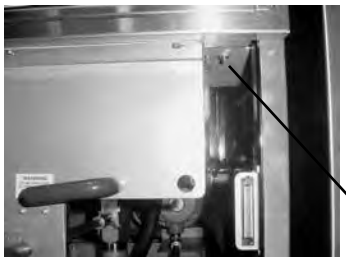
27. Secure the control panel with the 4 screws.
28. Reconnect power to the fryer.
29. Calibrate the thermostat per paragraph 2-6.

2-9. HIGH TEMPERATURE LIMIT CONTROL (ELECTRIC AND GAS MODELS)

Description

This high temperature control is a manual reset control which senses the temperature of the shortening. If the shortening temperature exceeds the safe operating limit, this control switch will open and shut off the heat to the frypot. When the temperature of the shortening drops to the safe operating limit, the control must manually be reset.

Electric



Gas



To locate the high limit reset button, open the door to the drain pan. Look up under the controls and to the right of the filter handle for a red reset button. (On the left for single phase units.)

Checkout

Before replacing a high temperature limit control, check to see that its circuit is closed.



The shortening temperature must be below 380º F to accurately perform this check.

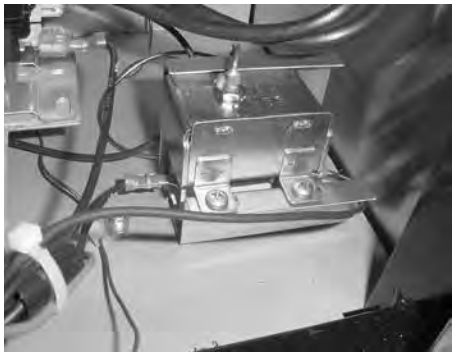
1. Remove electrical power supplied to the fryer.



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

2. Remove the control panel and insert it in the slot above the door. Refer to paragraph 2-4.

2-9. HIGH TEMPERATURE LIMIT CONTROL (ELECTRIC AND GAS MODELS) (Continued)

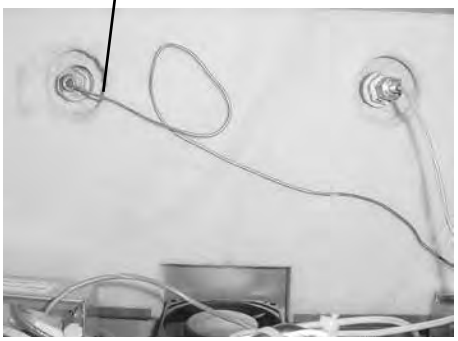


Step 3

Electric



Gas



Step 1

3. Remove the two electrical wires from the high temperature limit control.
4. Check for continuity between the two terminals after resetting the control. If the circuit is open, replace the control, then continue with this procedure. (If the circuit is closed, the high limit is not defective. Reconnect the two electrical wires.)

Replacement



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

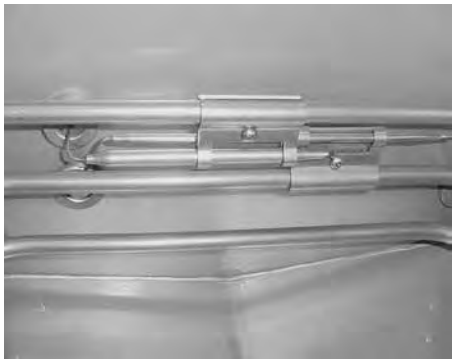
1. If the capillary tube is broken or cracked, the control will open,shutting off electrical power. The control cannot be reset.
2. Drain shortening from the frypot.
3. Remove control panel.
4. Loosen small inside screw nut on capillary tube.
5. Remove capillary bulb from bulb holder inside the frypot.
6. Straighten the capillary tube.
7. Remove larger outside nut that threads into pot wall.
8. Remove the two screws that secure the high limit to the high limit bracket.
9. Remove defective control from control panel area.
10. Insert new control and replace screws.
11. Uncoil capillary line, starting at capillary tube, and insert through frypot wall.



To avoid electrical shock or other injury, the capillary line must run under and away from all electrical power wires. The tube must never be in contact with the electrical power wires or terminals.

2-9. HIGH TEMPERATURE LIMIT CONTROL (ELECTRIC AND GAS MODELS) (Continued)

Electric



Gas



Step 13

12. Carefully bend the capillary bulb and tube toward bulb holder on heating elements, and on electric units, toward the welded clips on gas units.

13. Slip capillary bulb into bulb holder located on heating elements, on electric units, and snap the bulb in place in the welded clips, on gas units. Pull excess capillary line from pot and tighten nut into frypot wall.

CAUTION

Be sure capillary bulb of high limit is located behind capillary bulb of thermostat. Both capillary bulbs and bulb holders should be positioned as not to interfere with basket or when cleaning the frypot wall, or damage to capillary tube could result.

14. With excess capillary line pulled out, tighten smaller nut.

15. Replace front panel.

16. Refill with shortening.

2-10. HEATING ELEMENTS (ELECTRIC MODELS)

Description

Each electric fryer uses three heating element assemblies.



Heating elements are available for 208, 220/240, or 440/480 voltage. Check the data plate inside the door to determine the correct voltage.

Maintenance Hint

If the shortening's temperature recovery is very slow, or at a slower rate than required, this may indicate defective heating element(s). An ohmmeter will quickly indicate if the elements are shorted or open.

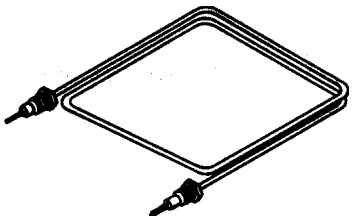
Checkout

1. Remove electrical power supplied to the fryer.



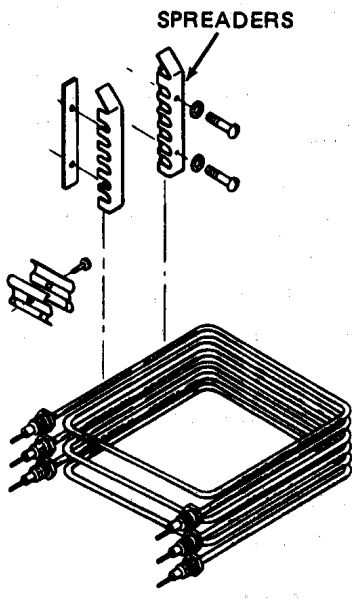
To avoid electrical shock or property damage, move the power switch to OFF and disconnect main circuit breaker, or unplug cord at wall receptacle.

2. Remove the control panel and insert it in the slot above the door. Refer to paragraph 2-4.
3. Perform an ohm check on one heating element at a time, with wires disconnected from element. If the resistance is not within tolerance, replace the element.

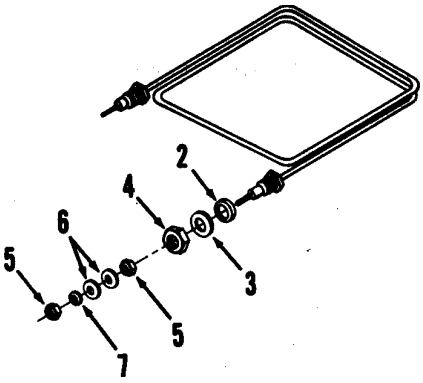


HEATER P/N	POWER	VOLTAGE	RESISTANCE IN OHMS (COLD)
18233-1	4500W	208VAC	9±1
18233-2	4500W	230VAC	11±1.5
18233-4	3750W	208VAC	11±1.5
18233-5	3750W	220VAC	12±2
18233-6	3750W	480VAC	60±5
18233-7	4500W	480VAC	50±4
18233-8	4500W	380VAC	32±3.5

2-10. HEATING ELEMENTS (ELECTRIC MODELS) (Continued)



(Reference Figure 3-16)



Replacement

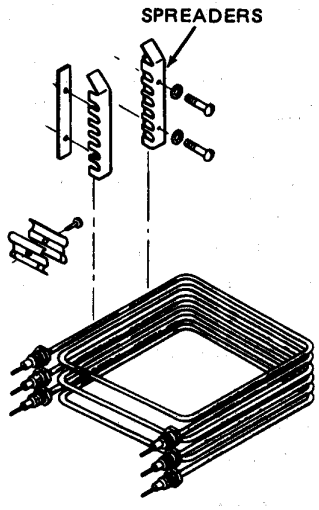
1. Drain the shortening.
2. Remove the thermostat bulb holder from the heating element inside the frypot.
3. Remove the heating element wires from the terminals by removing nuts (5) and washers (6 and 7). Label each so it can be replaced in the same position on the new element.
4. Loosen the bolts on the four element spreaders.
5. Slide the element spreaders to the center of the heating element.
6. Remove the brass nuts (4) and washers (3), which secure the ends of the elements through the frypot wall.
7. Remove the heating elements from the frypot as a group by lifting the far end and sliding them up and out toward the rear of the frypot.

NOTICE

Always install new rubber O-rings (2) when installing heating elements.

8. Install new heating elements with new rubber O-rings (2) mounted on terminal ends, and spreaders loosely mounted in the center of the stacked elements.
9. Replace the heating elements, terminal end first at approximately 45º angle, slipping the terminal ends through the front wall of the frypot.

2-10. HEATING ELEMENTS (ELECTRIC MODELS) (Continued)



10. Replace the brass nuts (4) and washers (3) on the heating element terminals. Tighten the brass nuts to 30 foot lbs of torque.
11. Move the element spreaders from the center of the element, into a position which will spread each element apart evenly on all four sides, and tighten.
12. Replace the thermostat bulb holder on the top element, and position the bulb between the top and second element midway from side to side, and tighten screw which holds the bulb in place.
13. Reconnect the wires to the appropriate terminal as labeled when they were removed.
14. Replace the front control panel.
15. Connect the power cord to the wall receptacle or close wall circuit breaker.

CAUTION

Heating elements should never be energized without shortening in the frypot, or damage to elements could result.

16. Check the heating elements as described in paragraph 2-17 of Operator's Manual.
17. Replace the shortening in the frypot.

2-11. HEATING CONTACTORS (ELECTRIC MODELS)

Description

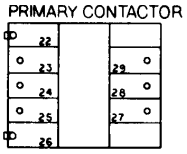
Each electric fryer requires two switching contactors. One is the primary contactor and the second in line is the heat contactor. When open, the primary contactor allows no power to flow to the heat contactor. When closed, the primary contactor completes the timer circuit and the high limit (heat) circuit. It also supplies power to the heat contactor which is controlled by the thermostat.

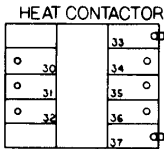
Checkout (power removed)

1. Remove electrical power supplied to the fryer.



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





2. Remove the control panel and insert it in the slot above the door. Refer to Removing the Control Panel section.
3. Perform a check on the contactor as follows:

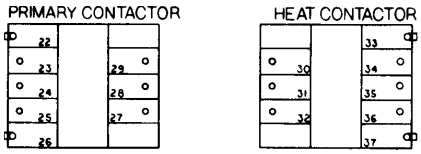
Test Points	Results
from 23 to 29	open circuit
from 24 to 28	open circuit
from 25 to 27	open circuit
from 30 to 34	open circuit
from 31 to 35	open circuit
from 32 to 36	open circuit
from 22 to 26	ohm reading 415
from 33 to 37	ohm reading 415

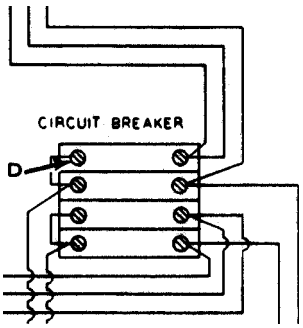
2-11. HEATING CONTACTORS (ELECTRIC MODELS) (Continued)

Checkout (power suppled)



To avoid electrical shock, make connections before applying power, take reading, and remove power before removing meter leads. The following checks are performed with the wall circuit breaker closed and the main power switch in the ON position.

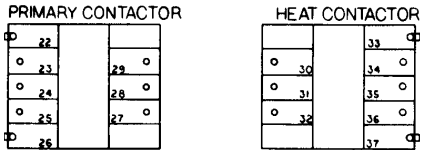




1. With power re-applied, set the thermostat to its maximum temperature.
2. On fryers using single phase power, check voltage as follows:

Test Points	Results
from pin D on circuit breaker to: terminal 34 terminal 35 terminal 36 (If voltage is not present, check output of primary contactor at terminals 27, 28, and 29.)	The voltage should read the same at each terminal. It should correspond to the voltage rating stated on the data plate.

2-11. HEATING CONTACTORS (ELECTRIC MODELS) (Continued)



3. On fryers using three-phase power, check voltage as follows:

Test Points	Results
Heat contactor	The voltage
from terminal 34 to 35	should read
from terminal 35 to 36	the same at
from terminal 34 to 36	each terminal.
Primary contactor	It should
from terminal 27 to 28	correspond to
from terminal 28 to 29	the voltage
from terminal 27 to 29	rating stated on the data plate.

Replacement

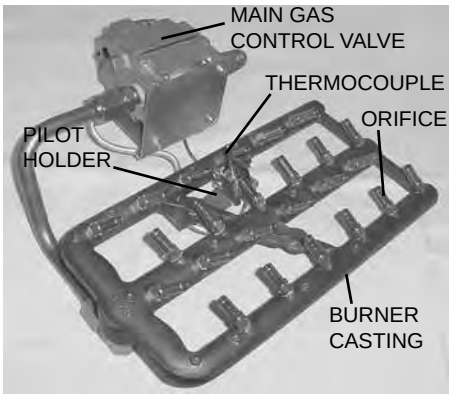
If either contactor is defective it must be replaced as follows:



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

1. Remove only those wires directly connected to the contactor being replaced. Label the wires.
2. Remove the two mounting screws on the base plate and remove contactor.
3. Install the new contactor and tighten the two mounting screws.
4. Connect the labeled wires to their respective positions.
5. Install the control panel per paragraph 2-4.
6. Reconnect power to the fryer and test the fryer for proper operation.

2-12. GAS BURNER ASSEMBLY (GAS MODELS)



Description

The gas model fryer has a gas burner assembly consisting of a burner casting, orifices, thermocouple, pilot holder, and main gas control valve.

Safety Precautions



If converting from natural gas to propane gas or from propane gas to natural gas, conversion must be done by a qualified service technician.

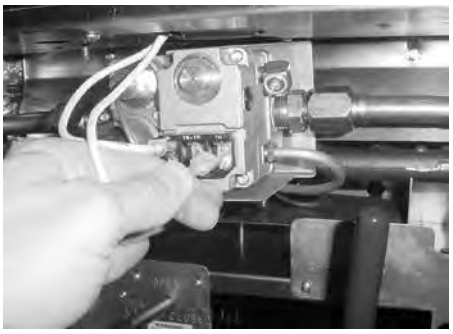


TO AVOID PERSONAL INJURY OR PROPERTY DAMAGE, BEFORE STARTING THIS PROCEDURE, MOVE THE MAIN POWER SWITCH TO THE OFF POSITION. DISCONNECT THE MAIN CIRCUIT BREAKERS AT THE CIRCUIT BREAKER BOX OR UNPLUG SERVICE CORD FROM WALL RECEPTACLE. TURN OFF THE MAIN GAS SUPPLY TO THE FRYER AND DISCONNECT AND CAP THE MAIN SUPPLY LINE TO FRYER, OR POSSIBLE EXPLOSION COULD RESULT.

1. Remove the control panel per paragraph 2-4.

2. Place the control panel back in upright position, in the metal flanges.

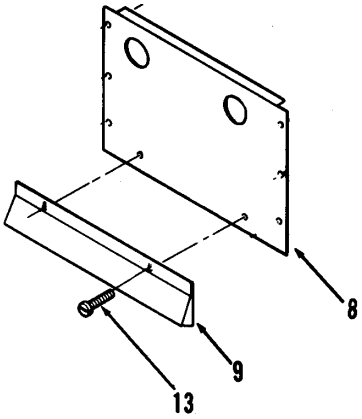
2-12. GAS BURNER ASSEMBLY (GAS MODELS) (Continued)



Step 4

3. Remove wires from the gas control valve.

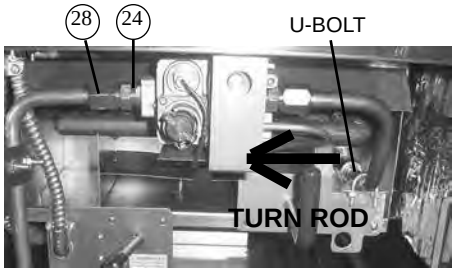
4. Disconnect gas supply line (28) from the connector (24) at control valve. (Refer to photo below.)



Step 6 and 7

5. Loosen the two screws (13) on the heat shield deflector (9), on the firebox and flue assembly and raise the deflector to its highest position.

6. Retighten screws (13) to hold the heat shield deflector in the high position.

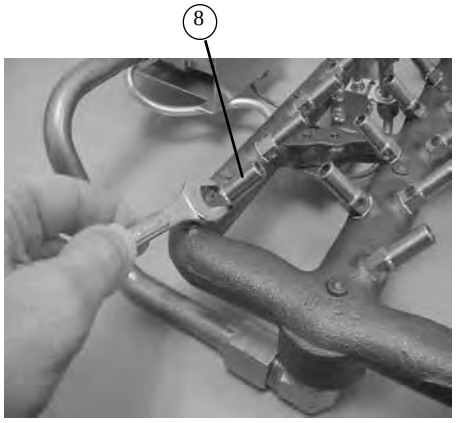


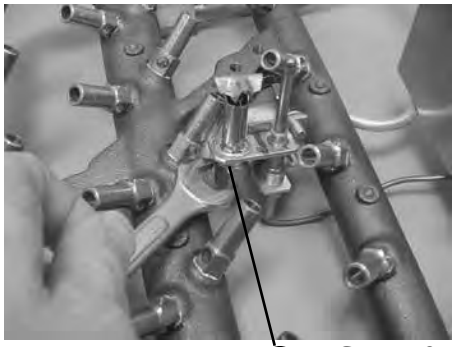
Step 5, 8 and 9

7. Turn the filter valve rod to the OPEN position.

8. Remove u-bolt from rinse hose bracket.

2-12. GAS BURNER ASSEMBLY (GAS MODELS) (Continued)





Step 10c

9. Remove entire gas burner assembly, by lifting and pulling toward front of fryer.

   a. Replace thermocouple (19) as required, per paragraph 2-13.

   b. Repair or replace gas control valve (20) as required, per paragraph 2-14.

   c. Replace orifices (8 and 17) as required.

NOTICE

There are 23 brass orifices and 1 stainless steel orifice. The stainless steel orifice is to be mounted adjacent to the pilot light.

10. Make other repairs or replacements as required.

11. Install entire gas burner assembly.

12. Install u-bolt to rinse hose bracket and gas line.

13. Turn the filter valve handle to the CLOSED position.

14. Loosen the two screws (13) which are holding the heat shield deflector (9) in the high position, and lower it to the normal operating position.

15. Tighten the two screws (13) on the heat shield.

16. Connect gas supply line (28) to the gas control valve connector (24).

17. Install the wires onto gas control valve.

2-12. GAS BURNER ASSEMBLY (GAS MODELS) (Continued)

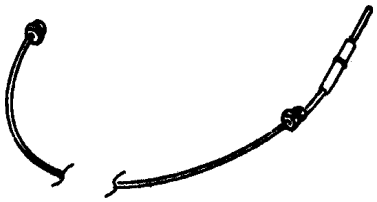
19. Remove control panel and install it in the slot above door.
20. Connect the gas control valve wires to the thermostat and high temperature limit control as labeled.
21. Install control panel per paragraph 2-4.
22. Uncap and reconnect the main gas supply line to the fryer. Turn on the main gas supply



LEAKING GAS MAY CAUSE AN EXPLOSION. CHECK FOR LEAKS PER OPERATOR'S MANUAL PARAGRAPH 2-8.

23. Connect the service cord to the wall receptacle, or close circuit breakers.
24. Relight the gas pilot per the instructions in paragraph 2-10 of the Operator's Manual.

2-13. THERMOCOUPLE (GAS MODELS)



The thermocouple controls the gas control valve. It generates voltage in the millivolt. This voltage signals the gas control valve to remain open to the pilot and burner. When the voltage is not generated, the gas control valve will shut off, not allowing gas to the pilot and main burner.

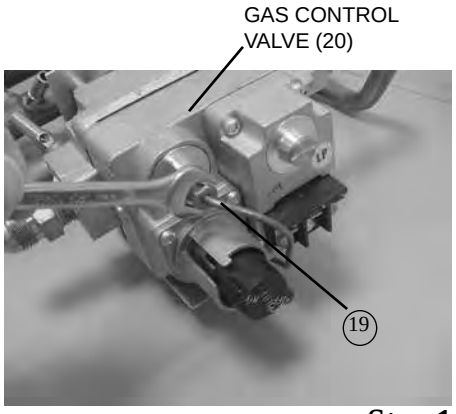


If converting from natural gas to propane gas or from propane gas to natural gas, conversion must be done by a qualified technician.

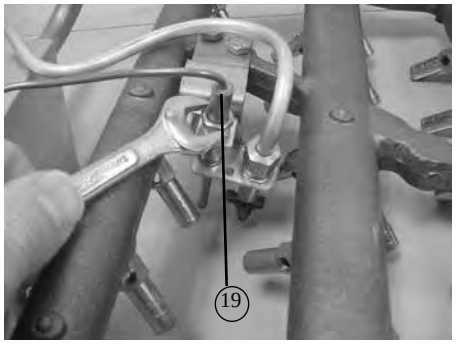


TO AVOID INJURY OR PROPERTY DAMAGE, BEFORE STARTING THIS PROCEDURE, MOVE THE MAIN POWER SWITCH TO THE OFF POSITION. DISCONNECT THE MAIN CIRCUIT BREAKER AT THE CIRCUIT BREAKER BOX OR UNPLUG THE SERVICE CORD AT THE WALL RECEPTACLE. TURN OFF THE MAIN GAS SUPPLY TO THE FRYER. DISCONNECT AND CAP THE SUPPLY LINE TO FRYER, OR EXPLOSION COULD RESULT.

2-13. THERMOCOUPLE (GAS MODELS) (Continued)

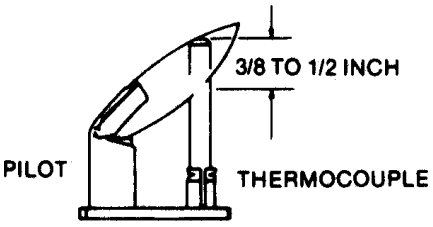


Step 1



Step 2

(Refer to exploded view, Figure 3-30)



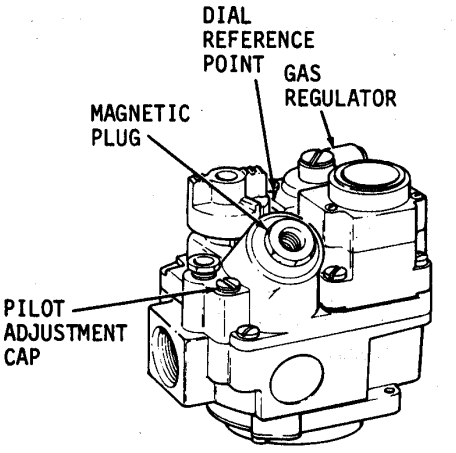
Step 3

Replacement of Thermocouple

Removal of the thermocouple is accomplished with the main gas supply shut off. The main burner may remain inside the fryer, but the work is more easily performed with the burner removed.

1. Using a 3/8” wrench, remove the nut securing the thermocouple (19) in the gas control valve (20).
2. Remove the nut securing the thermocouple in the pilot holder.
3. Install the new thermocouple, being careful not to create sharp bends in the tubing. When the pilot is lit, the flame must surround the top of the thermocouple.
4. Turn on the main gas supply and reconnect the electrical power.
5. Light the pilot per paragraph 2-10 of the Operator’s Manual and test the fryer for proper operation.

2-14. GAS CONTROL VALVE



Description

The gas control valve regulates the flow of gas to the pilot and the main burner. The valve consists of: gas regulator, magnetic plug, pilot gas tube, gas valve knob, pilot adjustment cap and screw, gas outlet and inlet ports, thermocouple connector, and electrical connection. The gas control valve also has a dial reference point - OFF/PILOT/ON.

The components of the gas control valve can be serviced without removing the complete valve from the fryer.

Safety Precautions

NOTICE

If converting from natural gas to propane gas or from propane gas to natural gas, conversion must be done by a qualified technician.

DANGER
EXPLOSION RISK

TO AVOID INJURY OR PROPERTY DAMAGE, BEFORE STARTING THIS PROCEDURE, MOVE THE MAIN POWER SWITCH TO THE OFF POSITION. DISCONNECT THE MAIN CIRCUIT BREAKER AT THE CIRCUIT BREAKER BOX OR UNPLUG THE SERVICE CORD AT THE WALL RECEPTACLE. TURN OFF THE MAIN GAS SUPPLY LINE TO FRYER. DISCONNECT AND CAP THE SUPPLY LINE TO FRYER, OR EXPLOSION COULD RESULT.

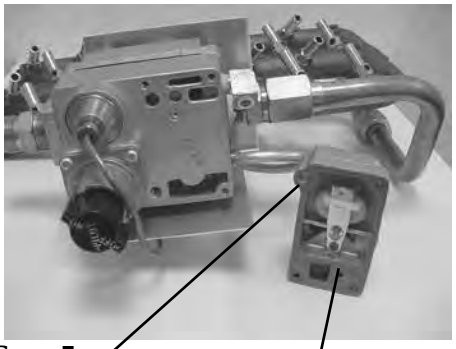
If the gas control valve must be replaced, remove per para. 2-12.

Operator Replacement

1. Depress the gas valve knob and turn to the OFF position.
2. Remove control panel per paragraph 2-4.
3. Label and remove the gas control valve wires.

2-14. GAS CONTROL VALVE (Continued)

Operator Replacement (continued)

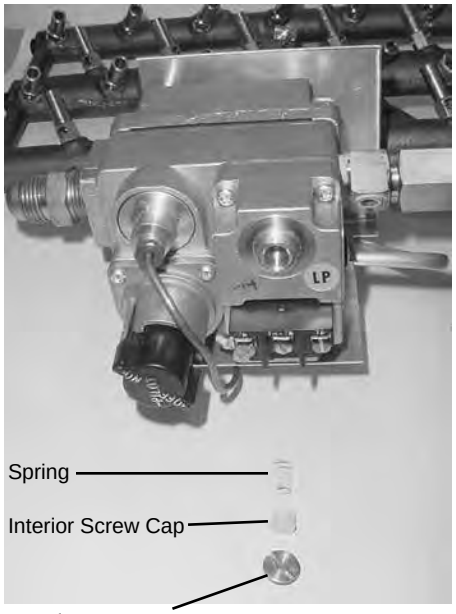


4. Using a T20 “star” screwdriver, remove the four screws securing the operator and gasket.
5. Secure the new operator and gasket with the four screws provided.
6. Reconnect the gas control valve wires.
7. Install the control panel per paragraph 2-4.

Check Procedures:

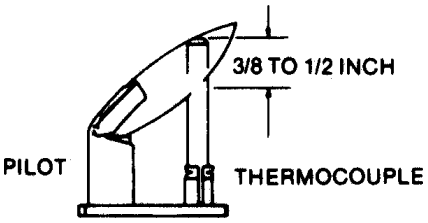
120 volt - 50/60 Hz .....2350 ohms
208-240 volt - 50/60 Hz.....880 ohms
24 volt - 50/60 Hz .....7 ohms

Regulator Spring Replacement



1. Remove the screw cap to the regulator.
2. Remove the plastic interior screw cap and spring.
3. Use the gas control valve manufacturer’s instructions from the envelope containing the regulator spring, and follow the directions.

2-14. GAS CONTROL VALVE (Continued)



Adjusting Pilot Burner

NOTICE

The following two procedures must be performed with the gas supply reconnected and turned on. The service cord must be plugged into the receptacle and the circuit breaker on.

1. The pilot burner is preset at the factory. It may require resetting at the time of installation.
   a. Remove the pilot adjustment cap.
   b. Use a small flat screwdriver and rotate the adjustment screw counterclockwise to increase the size of the flame. Rotate clockwise the adjustment screw to decrease the size of the flame.

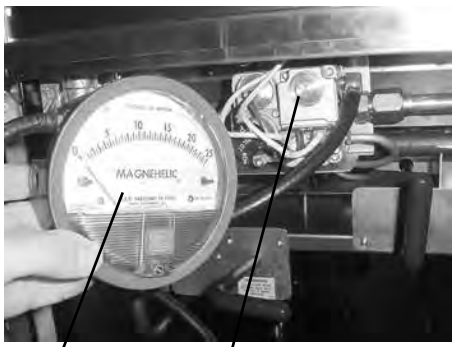
NOTICE

The flame should be set high enough to surround the top of the thermocouple.

Adjusting Regulator

1. The pressure regulator is preset at the factory. It may require resetting at the time of installation.
   a. Turn gas valve knob to OFF position.
   b. Attach a manometer to the gas control valve at the pressure tap.
   c. Turn gas valve knob to PILOT, light, and turn to ON.
   d. Remove the regulator adjustment screw cap.
   e. Rotate the adjustment screw counterclockwise to increase the column indicated on the manometer or rotate clockwise to lower the column indicated.
   f. Turn gas valve knob to OFF and remove manometer.
   g. Replace the regulator adjustment screw cap.
   h. Turn gas valve knob to PILOT and relight. Leak test with soap and water solution.





Step 1a

NOTICE

Natural gas regulator is factory preset at 3 1/2 inches water column.

Propane gas regulator is factory preset at 10.0 inches water column.

2-15. ELECTRICAL COMPONENTS

Safety Precautions



Do not disconnect the ground (Earth) plug. This fryer MUST be adequately and safely grounded (Earthed) or electrical shock could result. Refer to local electrical codes for correct grounding (Earthing) procedures or in absence of local codes, with The National Electrical Code, ANSI/NFPA No. 70-(the current edition). In Canada, all electrical connections are to be made in accordance with CSA C22.1, Canadian Electrical Code Part 1, and/or local codes.



Electric motor bearings are permanently lubricated and do not require attention during normal service life of this fryer.



Fan (Gas Models)

The gas model fryers have a fan in the circuit. This fan operates only with the Main Power switch in the ON position. The fan helps keep the control panel cool by pulling out heat, from between the control panel and frypot.

The replacement of a faulty fan is accomplished using the following procedure:

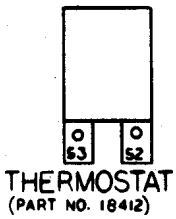


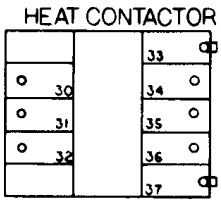
To avoid electrical shock or property damage, move the power switch to OFF and disconnect main circuit breaker, or unplug cord at wall receptacle.

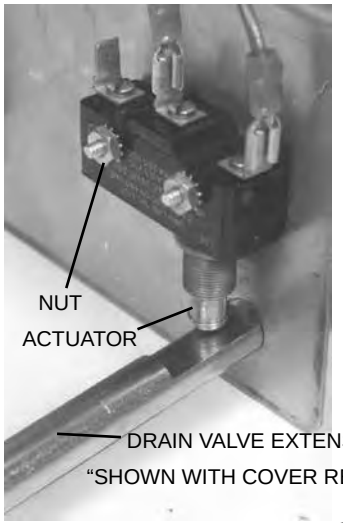
1. Remove control panel per Removing Control Panel section.
2. Label and disconnect fan motor wires.
3. Remove the four cap screws, washers and nuts securing the fan to the heat shield.
4. Remove the fan from the heat shield.
5. Install the new fan on the heat shield and secure with the four screws, washers, and nuts.
6. Reconnect the fan motor wires.
7. Install control panel per Removing Control Panel section.

2-15. ELECTRICAL COMPONENTS (Continued)

(See Wiring Diagrams paragraph 2-21)







Step 2

Drain Switch
(electric models)

All fryer models have a drain microswitch in line with the gas control valve or heat contactor and thermostat. When the drain valve is opened to drain the shortening, this causes drain switch to open, shutting off electrical power to the heating elements.



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

1. The following check should be made to determine if the drain switch is defective. All checks should be made with the drain valve in the closed position, with the actuator pushed in.

   a. Fryers with standard thermostat part number 18412, the continuity check must be made between terminal 52 on the thermostat, and terminal 33 on the heat contactor. If circuit is open, the drain switch is bad and needs to be replaced.

2. To replace the drain switch, remove the two screws and nuts securing switch and switch cover.

3. Label and disconnect wires.

4. Connect wires to new drain switch.

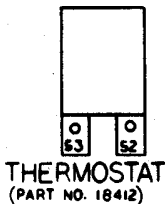
5. Position actuator and attach drain switch and switch cover with two screws and nuts. Tighten nuts to 3 - 4 inch-pounds of torque.

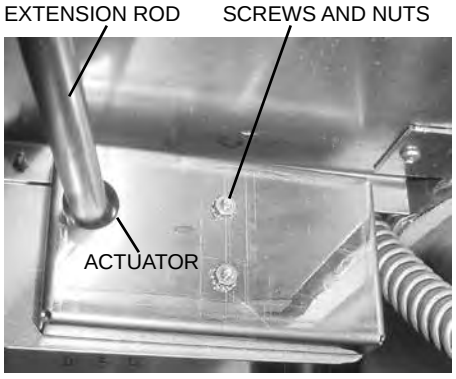
6. Test to see if drain valve extension rod actuates the switch.



Listen for an audible click of switch while rotating drain valve extension rod.

2-15. ELECTRICAL COMPONENTS (Continued)





"SHOWN WITH COVER IN PLACE" **Step 3**

Drain Switch (gas models)

1. The following check should be made to determine if drain switch is defective. All checks should be made with drain switch in the closed position and the power off.



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

   a. For fryers with standard thermostat part number 18412, continuity check shall be made between terminal 52 on thermostat and wire nut between drain switch and gas control valve. If the circuit is open, the drain switch is bad and needs to be replaced.

2. If the circuit is open, the drain switch is bad and needs to be replaced.

3. To replace the drain switch, remove the two screws and nuts securing the switch and switch cover.
4. Label and disconnect the wires.
5. Connect the wires to the new drain switch.
6. Position the actuator and attach the drain switch, and switch cover with the two screws and nuts.
7. Secure with the two screws and nuts.
8. Test to see if the drain valve extension rod actuates the switch.



Listen for an audible click of switch while rotating drain valve extension rod.

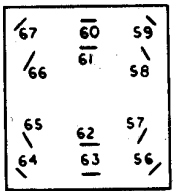
2-15. ELECTRICAL COMPONENTS (Continued)

Main Power Switch (all models)

The Main Power switch is a three way switch with a center OFF position. With the switch in the POWER position, the fryer will operate. With the switch in the PUMP position, the filter pump will operate but the heating unit will not.



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



Continuity Check Procedure

OFF POSITION

Test Points	Results
#60 to #59 then #60 to #67	open circuit
#61 to #58 then #61 to #66	open circuit
#62 to #57 then #62 to #65	open circuit
#63 to #56 then #63 to #64	open circuit
#60 to #61	closed circuit
#62 to #63	closed circuit

POWER POSITION

Test Points	Results
#60 to #59	closed circuit
#61 to #58	closed circuit
#62 to #57	closed circuit
#63 to #56	closed circuit

PUMP POSITION

Test Points	Results
#60 to #67	closed circuit
#61 to #66	closed circuit
#62 to #65	closed circuit
#63 to #64	closed circuit

2-15. ELECTRICAL COMPONENTS (Continued)



Step 3

Replacement

1. Remove control panel per Replacing Control Panel section.
2. Label wires at the Main Power switch and disconnect wires at switch.
3. Remove faulty switch and install new switch.
4. Reconnect wires to switch in the same position as noted on the labels.
5. Replace control panel per Replacing Control Panel section.

Indicator Lights
(all models)

The indicator lights for HEAT-PUMP-POWER, are identical assemblies consisting of a neon light and mounting clip, and are replaced as assemblies.



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

1. Remove control panel per Replacing Control Panel section.
2. Disconnect indicator light wires from the individual power source.
3. Squeeze the retaining clip while removing the indicator light and discard the light.
4. Install the new indicator light.
5. Connect the wires from the new indicator light.
6. Replace control panel per Replacing Control Panel section.

2-15. ELECTRICAL COMPONENTS (Continued)

Fuse Holder(s) (electric models)

There are two fuse holders on each model of the electric fryers. There are no fuse holder assemblies for the gas models other than that at the main power source.



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

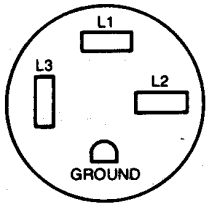
Checking Procedure for Fuses



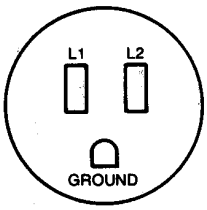
CONTROL PANEL FUSES 3 Phase
Check from #54 to #55 and #68 to #69 on fuse assembly. The circuit should be closed. If not, replace the fuse (HP# EF02-007).

Cord and Plug Check

Perform a check on the cord and plug as follows. Test from each plug prong to the corresponding wire lead on the other end of the cord at junction box. The result should be a closed circuit on each line tested.



Electric Fryer



Gas Fryer

Wall Receptacle (voltage check) (electric models)

Check the voltage across the following lines: L1-L2; L2-L3, L1-L3.

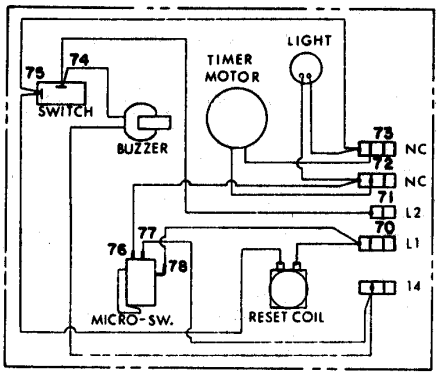
The voltage should read the same for each line test. It should correspond to the voltage shown on the data plate.

(gas models)

Check the voltage across line L1 and L2.

The voltage should correspond to the voltage shown on the data plate.

2-16. TIMING CONTROL



The TIMER CONTROL consists of a microswitch, indicator light, buzzer, reset timer and timer motor.



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

Checking Procedure

Test Points	Results
ON/OFF SWITCH	
Switch in OFF position	
Check from #74 to #75	open circuit
Switch in ON Position	
Check from #74 to #75	closed circuit
BUZZER COIL	
Switch in OFF position	
Check from #14 to #74	
120 volt 50/60 Hz	1550 ohms
208-240 volt 50/60 Hz	5880 ohms
MICROSWITCH	
Timer set at 10 Min.	
Check from #70 to #72	closed circuit
Check from #70 to #14	open circuit
Timer set at 0 Min.	
Check from #70 to #72	open circuit
Check from #70 to #14	closed circuit
MOTOR	
Check from #72 to #73	
120 volt 50/60 Hz	290 ohms
208-240 volt 50/60 Hz	3990 ohms
RESET COIL	
Check from #70 to #75	
120 volt 50/60 Hz	280 ohms
208-240 volt 50/60 Hz	3950 ohms

2-16. TIMING CONTROL (Continued)

Replacement

1. Remove control panel per Removing Control Panel section.
2. Label the wires and remove them from the timer.
3. Remove four screws securing the timer to the control panel.

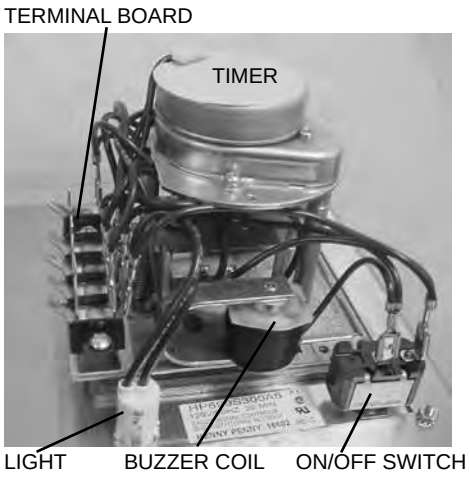
NOTICE

Replacement of timer may not be necessary if lamp is burned out, if buzzer coil is burned open, or if on-off switch is bad. Timer motor & timer microswitch can be replaced separately.

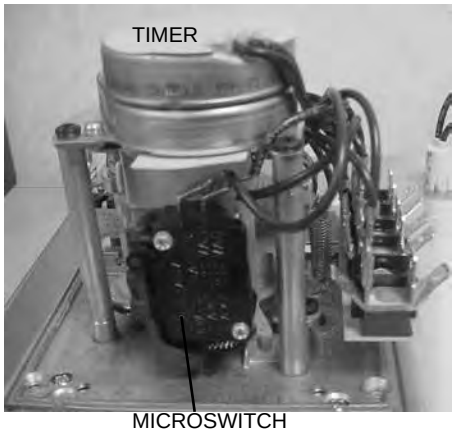
Timer Light

1. Disconnect light wires from terminal board.
2. Remove and discard the bad light assembly.
3. Install new light assembly allowing retainers to snap into place.

Buzzer Coil



1. Remove buzzer and coil from timer.
2. Disconnect buzzer coil wires from terminal board of timer.
3. Install new buzzer and coil to timer.
4. Connect coil wires to terminal board of timer.
5. Install new or repaired timer on control panel and secure with four screws.
6. Attach wires to the timer in accordance with the labels attached.
7. Install control panel per Removing Control Panel section.



Timer Switch

1. Connect light leads to terminal board of timer.
2. Remove switch nuts and remove switch from panel.
3. Disconnect switch wires from terminal board.
4. Install new switch on panel and secure with switch nut.
5. Connect switch wires to the terminal board of the timer.

2-17. PRESSURE REGULATION/ EXHAUST

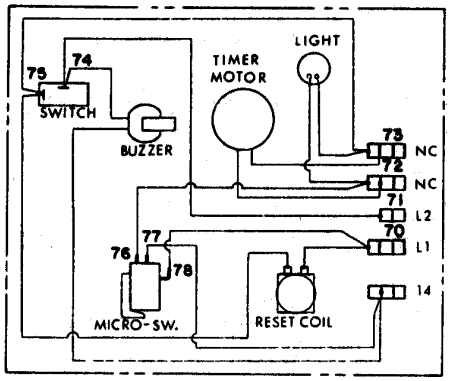
Solenoid Valve

This is an electromechanical device that causes pressure to be held in the frypot. The solenoid valve closes at the beginning of the cook cycle and is opened automatically by the timer at the end of the cook cycle. If this valve should become dirty or the teflon seat nicked, pressure will not build up. The solenoid valve used on all models is the same with the exception of the coil. The gas model fryer uses a 120 volt, 60 Hz, coil. The electric model fryer uses a 208/240 volt 60 Hz coil. The 440/480 volt electric model uses a transformer to drop voltage to 220/240 volts.



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

Coil Check Procedure

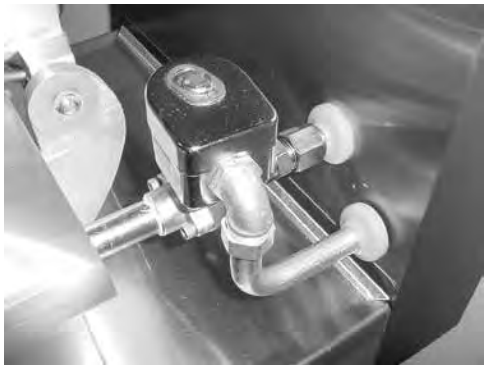


1. Remove wires from terminals 73 and 72 and check across solenoid wires.

Test Volts/Phase	Results
120 volt 60 Hz	50 ohms
208-240 volt 60 Hz	150 ohms
208-240 volt 50 Hz	245 ohms

2-17. PRESSURE REGULATION/ EXHAUST (Continued) Replacement

Solenoid Valve Assembly



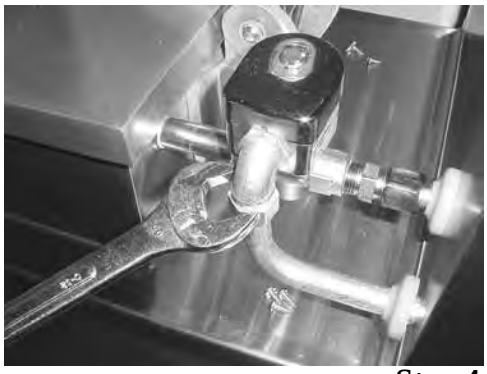
1. Remove Tru-Arc retaining clip on top of the coil housing.

2. Remove the nameplate and cover.

3. If only the coil is replaced, disconnect two coil wires at the wire nuts in the coil housing, and remove the coil from the housing. Then replace nameplate, cover, and Tru-Arc clip.

   If the complete solenoid, or seals are being replaced, continue on to step 4.

Conduit Connector



Step 4

NOTICE

The wires may be connected in any order.

4. Loosen the nut on the 1/2 inch connector and pull piping conduit from the valve case. Leave enough slack to remove the coil housing and yoke.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)

5. If the core-disc assembly is sticking due to buildup of shortening, breading and food particles proceed with the following steps.



Step 5a

a. Unscrew the solenoid bonnet assembly from the solenoid valve body.



Step 5b

b. Remove the solenoid bonnet assembly and the bonnet gasket.



Step 5c

c. Remove the core-disc assembly, core spring retainer, and the core spring.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)

d. Wash all parts in soap and hot water.

NOTICE

If replacing Teflon seals, or complete valve, proceed to step 6, otherwise, assemble in reverse order of disassembly.

Assemble valve core and blade (6), with the smooth side of the hole towards the disc spring guide (9).
(See drawing on next page)

6. A repair kit (Part No. 17120) is available if any of the seals need to be replaced. If any one seal is defective, all seals should be replaced.

NOTICE

Remove the solenoid body from fryer to replace seals. Refer to exploded view of solenoid in figure 3-14 to help identify all parts.

a. Remove back cover.



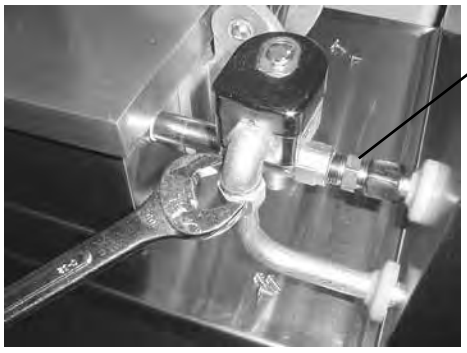
Rear Cover Step a



Exhaust Fitting Step b

b. Loosen both conduit and exhaust fittings.

c. Remove nipple from solenoid body.

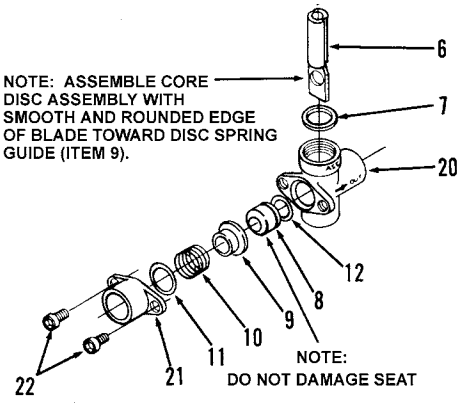


Conduit Fitting Step b

d. Unthread body from fryer.

e. A new solenoid can now be placed on the fryer, and reassembled in reverse order of previous steps, or continue onto step 7 to change the seals.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)



7. To change seals:

   a. Remove the two adapter screws (22) which attach the pipe adapter (21) to the solenoid body (20).

   b. Remove the disc spring (10), guide (9), and seat (8).

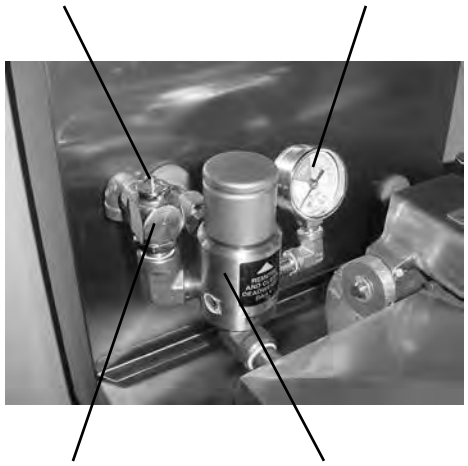
   c. Clean the valve body.

   d. Wet O-ring (12) around seat with water and insert O-ring assembly (flat side first) in valve, through IN side of body. Use a pencil eraser, and press in Teflon seat until it snaps into place. Be careful not to mark or nick the seat.

NOTICE

The smallest nick can cause a pressure leak. Replace all O-ring seals, found in the parts kit, and reassemble valve.

2-17. PRESSURE REGULATION/ EXHAUST (Continued



Deadweight Valve

DANGER
BURN RISK

DO NOT ATTEMPT TO REMOVE THE VALVE CAP WHILE THE FRYER IS OPERATING. SEVERE BURNS, OR OTHER INJURIES COULD RESULT.

The deadweight valve and safety relief valve are located side-by-side at the back of the unit. The valve next to the pressure gauge is the operating control valve, and the other valve is a 14 1/2 lb. safety relief valve.

Valves are working properly, when OPERATING ZONE is indicated on the gauge by the pointer. The gauge pointer should not normally exceed the operating zone. At 14 1/2 psi, the safety relief valve opens to release steam pressure from the frypot.

DANGER
BURN RISK

DO NOT MANUALLY ACTIVATE THE SAFETY RELIEF VALVE. HOT STEAM RELEASES FROM THE VALVE WHEN THE RING IS PULLED. KEEP BODY PARTS AWAY FROM SAFETY VALVE EXHAUST, OR SEVERE BURNS COULD RESULT.

Cleaning Steps

1. Clean the deadweight valve, at the end of each day. Turn the fryer OFF and release all the pressure. Open the lid and then remove the deadweight valve cap and deadweight.

2. Place both the cap and weight in hot detergent water and clean. Make certain to thoroughly clean inside cap, the weight seat, and around the deadweight orifice.

3. Rinse thoroughly with hot water. Dry parts and replace immediately to prevent damage or loss.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)



Safety Valve

Removal and Cleaning of Safety Relief Valve

The safety relief valve should be cleaned once a year.



DO NOT ATTEMPT TO REMOVE VALVE WHILE FRYER IS OPERATING. SEVERE BURNS OR OTHER INJURIES COULD RESULT.

1. Open the lid and then remove the deadweight valve cap and deadweight.



Do not use a pipe wrench. Use thread sealant sparingly

2. Use a wrench to loosen the valve from the pipe elbow, turn counterclockwise to remove.

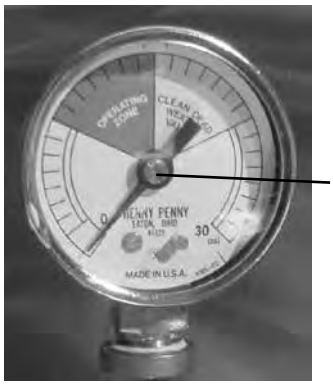
3. Clean the inside of the pipe elbow with hot detergent.

4. Immerse the safety relief valve in a soap water solution for 24 hours. Use a 1:1 dilution rate. The valve cannot be disassembled. It is factory preset to open at 14 1/2 pounds of pressure. If it does not open or close it must be replaced.



TO AVOID PERSONAL INJURY, DO NOT DISASSEMBLE OR MODIFY THIS VALVE. TAMPERING WITH THIS VALVE WILL VOID AGENCY APPROVALS AND THE APPLIANCE WARRANTY, AND COULD CAUSE SERIOUS INJURIES.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)



Step 2

Pressure Gauge

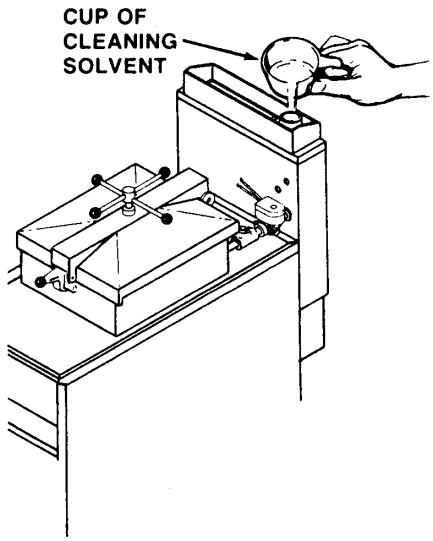
The pressure gauge can be recalibrated should it be out of adjustment.

Calibration Steps

1. Remove the rim and glass.
2. If the indicating hand shows a pressure or vacuum reading when it should stand at “0”, turn the recalibrator screw in the same direction in which the indicating hand is to be moved until the hand stands at proper “0” position.
3. Replace the rim and glass.

Pressure Gauge Cleaning Steps

1. Remove gauge and check inside the pipe fittings from dead-weight body. Make certain fittings are clean and open.
2. Clean and reinstall the gauge.



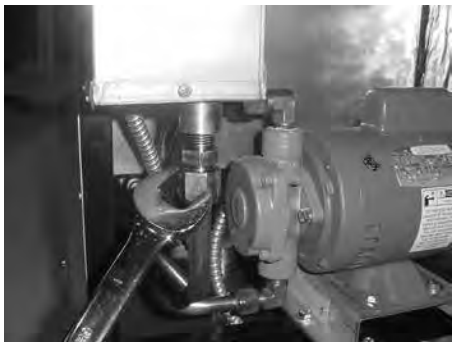
Condensation Box Assembly

The deadweight valve and solenoid exhausts are directed into a condensation box, located in the rear of the fryer. Should this box become clogged, water would spew from the top of the box. The box can be cleaned by running a wire or long brush from the top of the box, through the hole in bottom of the box, or the bottom of the box can be removed to clean.

NOTICE

When cleaning the frypot, pour a cup of cleaning solution into the large exhaust hose at the top of the exhaust tank (see figure at left). This helps prevent the box from getting clogged.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)



Condensation Box Fitting Step 1

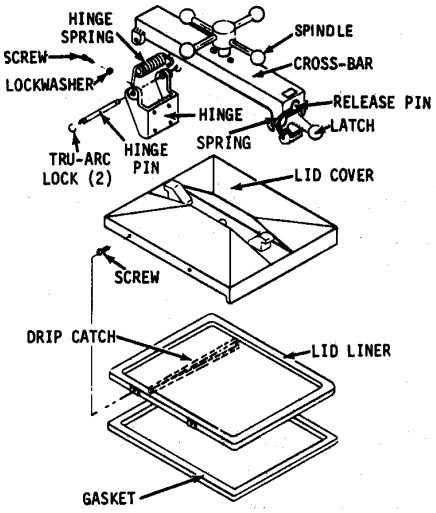


Condensation Box Bottom Step 2

Condensation Box Bottom Removal

1. Loosen fitting at the bottom of the box.
2. Using Phillips head screwdriver, remove 4 screws securing the bottom of the box and pull bottom from assembly.
3. Clean outlet hole in box bottom and check condensation tube for clogs, and clean, if necessary.
4. Reinstall box bottom and condensation line.
5. Seal box bottom with silicone sealant and unit is now ready for operation.

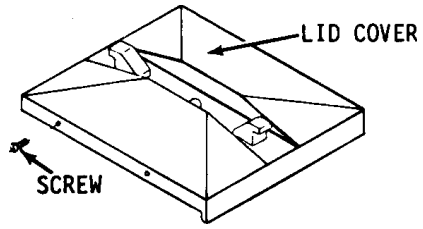
2-17. PRESSURE REGULATION/ EXHAUST (Continued



Lid Cover Assembly

Description

In general, the lid spindle, the limit stop, the cover, the hinge, the inner and the reversible gasket comprise the lid cover assembly.



Lid Cover Removal

The lid cover is easily removable for cleaning or service.

1. Close the lid cover and turn the spindle counterclockwise until it stops.



Step 2

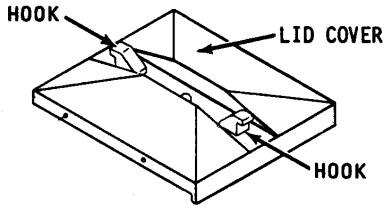
2. Pull the lid release pin on front of crossbar, lift the latch, and raise the crossbar.



Step 3

3. The cover can now be removed from frypot.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)



Lid Cover Installation

1. Place the lid cover on the frypot.
2. Thread the spindle counterclockwise until it is completely extended.
3. Align the rear retaining hook on lid cover in the center slot of the crossbar. Push the cross bar down and pull out on lid release pin.
4. Push the lid to rear of frypot and latch the cross bar to the lid cover. Release the pin.
5. Check that lid cover is fastened properly before raising.

Lid Hinge Spring

The hinge spring needs to be replaced if it is broken, cracked or otherwise loses its tension. A special spring installation tool which greatly simplifies this procedure is available from the factory. (Henny Penny part number 14960)

1. Pull out on the retaining pin knob on the front of the cross bar to release lid cover. (Refer to lid cover removal instructions.)
2. Lift the cross bar up and away from the lid.
3. Remove tru-arc locks and hinge pin if the spring is broken. If the spring is not broken, use spring tool as described in steps 5, 6, and 7, then remove Tru-Arc lock and hinge pin.
4. Remove the broken spring.
5. The new spring is placed in the loading tool so that the spring coil is laying in the u-shaped center of the tool. The perpendicular shaft is placed in the stationary hook of the tool, and the parallel shaft is placed so the adjustable hook will tighten it down.



Step 5

2-17. PRESSURE REGULATION/ EXHAUST (Continued)

Lid Hinge Spring (Continued)



Step 6

6. Tighten the handle on the tool as far as it will go.



Step 7

7. Place the spring (loaded in the tool) into position so that the u-shaped center of the tool is toward the front of fryer and the tool handle is toward the top of the fryer.

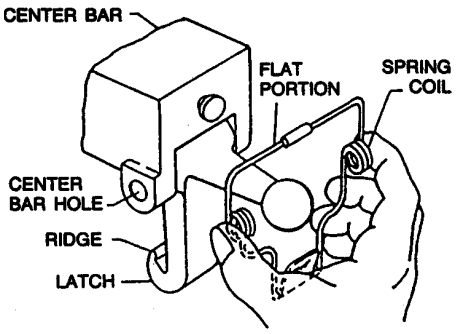
8. Replace hinge pin and Tru-Arc locks. Loosen and remove the tool.

9. Refer to the lid installation procedure and reinstall the lid.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)

Latch Spring Installation

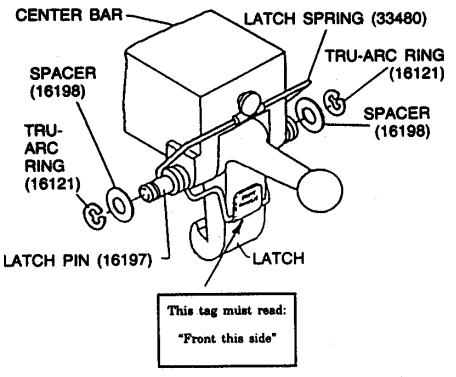
The latch on the crossbar must have the external coil-type latch spring mounted on latch pin. If a latch spring is weak or broken, it must be replaced with a new spring, part number 33480.



WARNING

To avoid severe burns and injinjuries make sure the lid is secure during a cook cycle. The latch spring must be in good working order and properly installed. (Refer to illustrations at left.) If the latch spring is weak, broken, or mounted backwards, it will provide little force against the latch.

1. Replace the crossbar from the lid. (Refer to previous steps on Lid Cover Removal.)



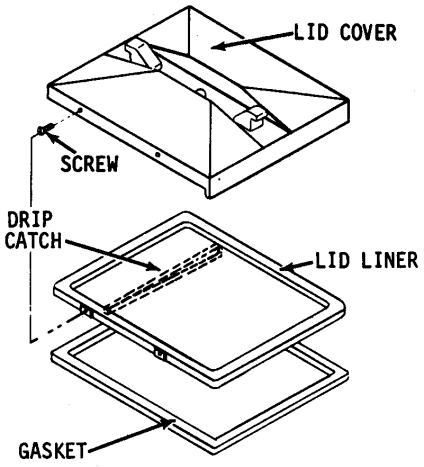
2. With the crossbar in the upright position, remove one of the two Tru-Arc rings from latch pin.

3. Tap out pin from latch while grasping latch, and remove latch and latch spring.

4. Install new latch spring with the coils of spring extending forward. (Refer to illustrations at left.)

5. Secure spring in place with Tru-Arc ring.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)



Lid Liner

1. Remove the four lid liner screws.
2. Use a thin blade screwdriver to pry lid liner from the cover.
3. Clean the liner and the inside of the cover. Replace the liner and screws.

Reversing the Lid Gasket

The gray rubber gasket surrounding the inside of lid is designed to be reversed. Henny Penny recommends that this be done on a quarterly basis.

Purpose

Because of heat expansion and the pressure used for the cooking process, the gasket is constantly under extreme stress. Reversing the lid gasket on a quarterly basis will help to assure that the fryer will not lose pressure through leakage.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)

Reversing the Lid Gasket (Continued)



Step 1

1. There are two lid liner screws on either side of the lid cover. Back these four screws out about 1/2 inch.



Step 2

2. Open lid and, using a thin blade screwdriver, pry out the gasket at the corners. Remove the gasket.

3. Clean the gasket and gasket seat with hot water and cleaning detergent. Rinse with clean hot water.

4. Install the gasket with the good side facing out. Tighten the four screws.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)





Step 1



Step 2

Reversing the Lid Gasket (Continued)

NOTICE

Begin the installation by installing the four corners of the lid gasket.

Lid Limit Stop Adjustment

The lid limit stop, with proper adjustment, prevents unnecessary overtightening of the spindle, and as a result, extends the life of the lid gasket.

1. Loosen the Allen set screws on the bottom of the collar of the limit stop assembly.
2. Turn the inner collar of the limit stop clockwise as far as possible. Find the small hole in the inner collar and use a small Allen wrench or Phillips head to help in turning the collar.
3. Close lid and turn spindle until lid gasket meets the top of the frypot rim.
4. From this position, turn spindle at least 3/4 of a turn, but not over one full turn.
5. After rotating spindle to this point, slightly extend the spindle past this position. The spindle should then be at the seven o'clock position.

NOTICE

The seven o'clock position is only to allow slight additional turning of the spindle to relieve any side pressure that could hold the locking pin in the locking collar after all pressure has been released from the frypot.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)

Lid Limit Stop Adjustment (Continued)

It may be necessary to remove knobs and change their position in order to align the red knob with the red knob on the lid cover lid latch. When in the normal operating position, both red knobs should be aligned.

6. Adjust the limit stop by turning it counterclockwise until it stops against the bottom hub of the spindle.
7. Tighten Allen set screws.
8. If the lid cover fails to seal properly, steam will escape around the gasket during the frying operation. The limit stop should be readjusted. This time turn the spindle screw one full turn after the initial contact of the lid gasket against top of the frypot rim.

Spindle Screw Assembly

This assembly is used to tighten the lid cover against the frypot flange.

1. Loosen the set screw in the limit stop collar and loosen the limit stop.
2. Disengage the crossbar from the lid cover as described in the “Lid Cover Removal”. Leave the lid cover in position on the frypot rim with the crossbar in the upright position.



Step 3

3. Turn the spindle so the pin in the locking collar will be exposed.



Step 4

4. Remove pin and locking collar. Use a small diameter punch and a hammer to drive out the pin from the locking collar. Remove the locking collar.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)



Step 5

5. Remove the ball from the locking collar. In some cases, lightly tapping the steel ball with a hammer may be needed.



Step 6

6. Remove and inspect the idle nut.



Step 7

7. Thread the spindle out of the acme nut.



Step 8

8. Loosen the Allen set screw in the outer ring of limit stop. Thread the inside portion up and down several times to check for ease of operation. If thread feels tight or must be forced, threads may be damaged. Discard and replace with new limit stop assembly.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)



Step 9



Step 10



Step 11



Step 11

NOTICE

The acme nut must be changed when there is excessive play and movement between the spindle and the acme nut.

9. Using a nylon tape type wrench unthread the limit stop collar from the acme nut.

10. Gently tap the acme nut from the center crossbar. Inspect the acme nut for thread damage. If the threads are thin and sharp or worn, replace with a new acme nut.

11. Use an Allen wrench and ratchet to remove the retainer.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)



Step 12

12. Remove the locking pin and spring. Inspect and replace, if necessary.

NOTICE

When reinstalling the locking pin, be certain it is put back in its original position. The angled side of the pin should be to the right.



Step 13

13. Use a magnet to remove the ball seat. Inspect and replace if necessary.



Step 13

14. Install the acme nut and limit stop collar. Lubricate the acme nut with special grease (our part number 12124).

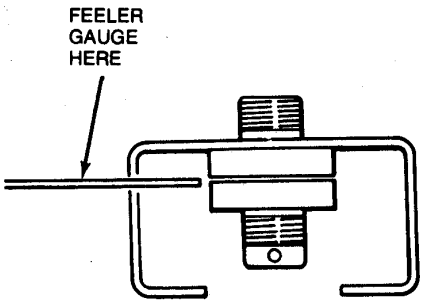
15. Thread the limit stop assembly into the limit stop collar.



Step 16

16 Lubricate the spindle with special grease (our part number 12124) every 30 days.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)



17. Slip the spindle through the limit stop, hold the idle nut against the acme nut, and thread spindle through both. There should be 20 to 60 thousandths between the acme nut and the idle nut. To increase dimension turn the idle nut counterclockwise; to decrease turn clockwise.

18. Install the locking collar, locking pin and ball. Install the ball seat in the lid. Install the retainer and spring.

19. Reassemble the crossbar to the lid cover according to the "Lid Cover Installation" procedure.

20. Readjust the lid limit stop during the test cook cycle.

2-18. FILTERING SYSTEM

Filter Rinse Hose

The filtering system consists of the filter valve, motor and filter pump assembly, filter screen assembly, and tubing.



SHORTENING WITH TEMPERATURE IN EXCESS OF 200ºF FLOWS THROUGH THIS FILTER RINSE HOSE. HEAT CAUSES THE RUBBER HOSE TO AGE AND DETERIORATE. SEVERE BURNS WILL RESULT IF THIS RINSE HOSE ASSEMBLY LEAKS OR RUPTURES. THE HOSE AND FITTINGS SHOULD BE CHECKED DAILY. IF AGING OR DISCOLORATION IS SEEN, THE HOSE SHOULD NOT BE USED.



Step 3

Removal

1. Close the filter valve.

2. Turn the pump switch to the OFF position.

3. Detach the hose.



THE HOSE AND FITTING WILL BE HOT. USE PROTECTIVE GLOVES OR CLOTH WHEN FOLLOWING THIS PROCEDURE, OR SEVERE BURNS COULD RESULT.



This hose is not connected to fryer during normal operation.

2-18. FILTERING SYSTEM (Continued)



Step 1

Installation

1. Attach the filter rinse hose with its quick disconnect female fitting to the other half male fitting inside the door, next to the filter valve handle.

2. To do this slide back the spring ring on the female end of the quick disconnect fitting and let it snap into place over the other half male fitting.

3. With a quick tug on the hose, insure the quick disconnect is locked into position.

Filter Valve Description

The filter valve is a 3/8 inch two-way stainless steel ball valve. If this valve should develop leaks the entire valve must be replaced.



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

Removal

1. Drain the shortening from the frypot.

2. Remove the filter drain pan from the fryer.

3. Remove the cotter pin, handle, and extension rod.

4. Remove the pipe from between the filter pump and valve.



If fryer is equipped with optional filter rinse hose attachment, disconnect pipe from filter valve.

5. Use an adjustable wrench and remove the valve.

6. Replace the valve and reassemble in reverse order.

2-18. FILTERING SYSTEM (Continued)

Filter Pump Repair



The two most common causes for a fryer's inability to pump shortening is that the pump is clogged with breading or solid shortening has cooled and solidified in the lines and pump.



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

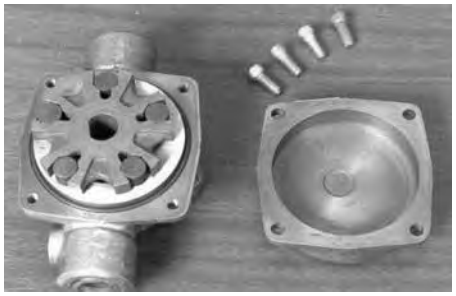


Step 1

Cover Removal

1. Loosen the four Allen head screws on the end of pump and remove the cover.

2. The inside is now exposed leaving a rotor and five teflon rollers. Clean the rotor and rollers.



Step 2

3. To reassemble, place rotor on drive shaft, and place roller into rotor.



A small amount of grease might be needed to hold the bottom roller into place until cover plate is put on. Make sure O-ring is in proper position on plate.

2-18. FILTERING SYSTEM (Continued)

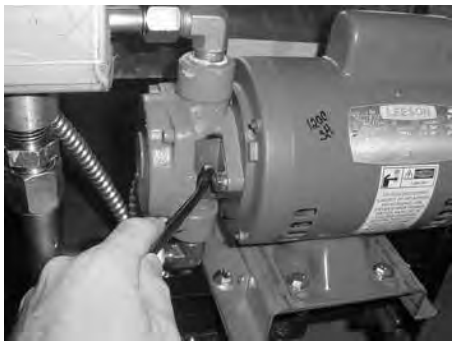
Pump Removal



Step 1

1. If the pump needs to be replaced, loosen one inch nuts from the outflow and inflow lines. Then remove the two bolts holding the pump to the motor with a 1/2 inch wrench.

2. Shaft seal should remain on the motor shaft, or if leaking, could be replaced at this time.



Step 2

3. To replace the pump, remove the four Allen screws, front plate, rotor, and rollers from pump. Place the pump onto shaft and against the shaft seal. Place the two 1/2 inch bolts through the pump and into the motor and tighten. Then replace rotor, rollers, front plate and tighten Allen screws.



CAUTION

When removing a pump from a motor, note the positions of the inlet and outlet parts. Installation of the pump on the motor in any other position could cause damage to the fryer. There is an indicator on the side of the two halves of the pump, this mark must be together and face to the front of the fryer.

2-18. FILTERING SYSTEM (Continued)

Pump Removal (Continued)

4. To replace the pump and motor assembly, insure the main power has been removed from the fryer.



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

5. Remove the cover from the junction box and remove the wire nuts attaching wires leading into the flexible conduit going to the motor.

6. Loosen the two screws securing the flexible conduit to the 90º conduit connector (8). (Refer to Figure 3-6.)

7. Remove tubing to the pump. (Refer to Figures 3-17 and 3-18.)

8. Remove hardware attaching the motor to the motor base bracket and remove motor and pump assembly.

Filter Pump Motor Protector - Manual Reset



The filter pump motor is equipped with a manual reset button in the event the motor's thermal protector actuates. This reset button is located on the rear of the motor. Wait approximately 5 minutes before attempting to reset this protector device.



To prevent burns caused by splashing shortening, the unit's main power switch must be in the OFF position before resetting the filter pump motor's manual reset protection device.

2-19. GAS CONVERSION

Gas model fryers are factory available for either natural gas or propane gas. Factory conversion kits for natural gas and propane gas are available that require the burner jets, pilot jet and regulator assembly to be changed.

Refer to the Technical Manual illustrated parts breakdown for kit identification.



Conversion must be accomplished by an authorized Henny Penny dealer or service representative, or personal injury could result.

Service Hints

On natural gas installation, the gas pressure regulator on the automatic gas control valve is factory set at 3.5 inch water column.

On propane gas installations, the gas pressure regulator on the automatic gas control valve is factory set at 10.0 inch water column.

After converting the fryer, turn on the gas supply and check for leaks. A simple method is to brush all the connections with soapy water, and watch for bubbles which indicate escaping gas.



NEVER USE AN OPEN FLAME TO TEST FOR LEAKS. ESCAPING GAS COULD CAUSE AN EXPLOSION, AND PERSONAL INJURY OR PROPERTY DAMAGE COULD RESULT.

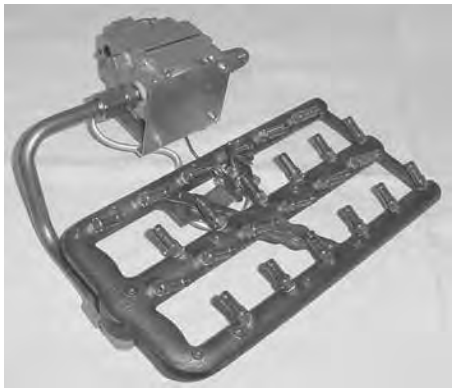
2-19. GAS CONVERSION (Continued)

Maintenance



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 convert from one type of gas to another, follow the procedure below:



Step 3



Step 5

1. Turn the gas valve knob to the OFF position.
2. Close the gas control valve and disconnect fryer supply line.
3. Refer to Figure 3-30 and remove gas control valve and burner assembly per Gas Burner Assembly section.
4. Remove the burner orifices (24 each), and replace with orifices in gas conversion kit.
5. Remove the pilot holder assembly and replace with the one from the kit.
6. Remove the gas control valve manufacturer's instructions from the envelope containing the regulator spring, and follow the directions for converting the gas control valve.



Outlet pressure is stated on the enclosed label.

7. Attach the pressure sensitive data plate label to the data plate, covering up the old rating and pressure information.
8. Install converted gas control valve and burner assembly per Gas Burner Assembly section.
9. Connect the gas supply to the fryer.
10. Insure the power switch is in the OFF position, gas control valve in the OFF position.
11. Connect the electrical power to the fryer.

2-19. GAS CONVERSION (Continued)

12. Check for gas leak at supply line as per Service Hints in this section.

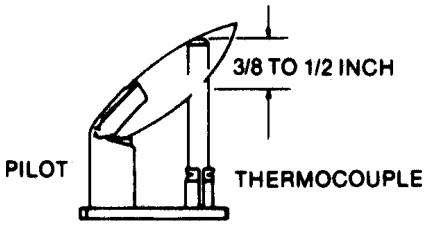
13. Turn the gas control valve on and turn the gas control valve to the pilot position.

14. Check for gas leak at the gas control valve and main gas valve per step 12 of this section. If there are no leaks, continue to step 15.



IF A LEAK IS DETECTED, SHUT OFF GAS CONTROL VALVES AND REPAIR LEAK. ESCAPING GAS COULD CAUSE AN EXPLOSION, AND/OR PERSONAL INJURY AND PROPERTY DAMAGE COULD RESULT.

15. With the gas valve knob at PILOT, depress the dial and light the pilot burner per Operator's Manual.



2-20. ELECTRICAL CONVERSIONS

On occasion, it may be necessary to make electrical conversion to a fryer. Factory conversion kits are available and should be used. The following procedures describe these conversions.

Procedures

208 Volts to 220/240 Volts:
The only change necessary is to remove the 208 volt heating elements and replace them with 220/240 volt heating elements. Delay timers must be changed on variable temperature models.

220/240 Volts to 208 Volts:
The only change necessary is to remove the 220/240 volt heating elements and replace them with 208 volt heating elements. Delay timers must be changed on variable temperature models.

Single Phase to Three Phase:
A factory conversion kit (part number 14034) is available for this conversion. This kit includes all necessary components and a wiring diagram.

Three Phase to Single Phase:
A factory conversion kit (part number 14033) is available for this conversion. This kit includes all necessary components and a wiring diagram.

Refer to the proper figure in the illustrated parts listing (Section 3), and Section 2 for maintenance assistance for the fryer being converted to and from.

2-21. WIRING DIAGRAMS

Illustrations of the wiring diagrams for HENNY PENNY Models 500, 561, and 600 Pressure Fryers are on the following pages.

If there is any doubt about which wiring diagram to use, please contact your distributor. As with all contacts to the distributor, include the model number & serial number from the data plate on your unit.

NOTICE

The legend for **NON**-C1000 & C2000 wiring diagrams, explaining the wire naming system for April 1, 2006 & after, is found on page 2-63.

2-22. INDEX OF WIRING DIAGRAMS

Title	Page
1. 500 Fryer, 208-240V-50/60 Hz-1Ph (63192) (Before April 1, 2006)	2-64
2. 500 Fryer, 208-240V-50/60 Hz-1 Ph (71995) (April 1, 2006 & After)	2-65
3. 500 Fryer, 208-240V-50/60 Hz-1 Ph (63199) (Before April 1, 2006)	2-66
4. 500 Fryer, 208-240V-50/60 Hz-1 Ph (71988D) (April 1, 2006 & After)	2-67
5. 500 Fryer, 380-415V-50Hz, 3 Ph, 4W+Gnd (63197) (Before April 1, 2006)	2-68
6. 500 Fryer, 380-415V-50Hz, 3 Ph, 4W+Gnd (71993) (April 1, 2006 & After)	2-69
7. 500 Fryer, C1000 & 2000, 208-240V-50/60 Hz-3 Ph, 240V Contactors (78541C)	2-70
8. 500 Fryer, C1000 & 2000, 208-240V-50/60 Hz-1 Ph, 240V Contactors (79421)	2-71
9. 500 Fryer, C1000 & 2000, 208-240V-50/60 Hz-1 Ph, 240V Contactors (79422B)	2-72
10. 500 Fryer, C1000 & 2000, 380-415V-50/60 Hz-3 Ph, 4W+Gnd, 240V Contactors (79414)	2-73
11. 500 Fryer, C1000 & 2000, 480V-50/60 Hz-3 Ph, 240V Contactors (79415)	2-74
12. 500F Fryer, 208-240V-50/60 Hz-1 Ph (51672) (Before April 1, 2006)	2-75
13. 500F Fryer, 208-240V-50/60 Hz-1 Ph (69647) (April 1, 2006 & After)	2-76
14. 500F Fryer, 208-240V-50/60 Hz-3 Ph (63596) (Before April 1, 2006)	2-77
15. 500F Fryer, 208-240V-50/60 Hz-3 Ph (69624) (April 1, 2006 & After)	2-78
16. 500F Fryer, 380-415V-50/60 Hz-3 Ph, 4W+Gnd (63355) (Before April 1, 2006)	2-79
17. 500F Fryer, 380-415V-50/60 Hz-3 Ph, 4W+Gnd (69449) (April 1, 2006 & After)	2-80
18. 500F Fryer, 400V-50 Hz-3 Ph, 4W+Gnd (51300) (Before April 1, 2006) (See 69449 for April 1, 2006 & After)	2-81
19. 500KFC Fryer, 380-415V-50 Hz-3 Ph, 4W+Gnd (63211) (Before April 1, 2006)	2-82
20. 500KFC Fryer, 380-415V-50 Hz-3 Ph, 4W+Gnd (71819) (April 1, 2006 & After)	2-83
21. 500 SC Variable Fryer, 208/240V-50/60 Hz-3 Ph (18311)	2-84
22. 500 SC Variable Fryer, 208/240V-50/60 Hz-1 Ph (18309)	2-85
23. 500SMS Fryer, 208-240V-50/60 Hz-1 Ph (73309D)	2-86
24. 500/561 Electric Fryer, 208-240V-50/60 Hz-3 Ph (63131) (Before April 1, 2006)	2-87
25. 500/561 Electric Fryer, 208-240V-50/60 Hz-3 Ph (71998) (April 1, 2006 & After)	2-88

2-22. INDEX OF WIRING DIAGRAMS

Title	Page
26. 500/561 Fryer, 480V-50/60 Hz-3 Ph (63194) (Before April 1, 2006)	2-89
27. 500/561 Fryer, 480V-50/60 Hz-3 Ph (71994) (April 1, 2006 & After)	2-90
28. 500/561 Fryer, 380-415V-50/60 Hz-3 Ph (4W+Gnd) (63200) (Before April 1, 2006)	2-91
29. 500/561 Fryer, 380-415V-50/60 Hz-3 Ph (4W+Gnd) (72002) (April 1, 2006 & After)	2-92
30. 561 Electric Fryer, 13.5KW, 3 Ph, 208/240 VAC (48184)	2-93
31. 561 Electric Fryer, 13.5KW, 3 Ph, 480 VAC (48193)	2-94
32. 561 Electric Fryer, 13.5KW, 3 Ph, 220 VAC (48198)	2-95
33. 561 Electric Fryer, 13.5KW, 3 Ph, 220/380 VAC or 240/415 VAC (48200)	2-96
34. 561 Electric Fryer, 11.25KW, 3 Ph, 208/240 VAC (55653)	2-97
35. 561 Electric Fryer, 11.25KW, 3 Ph, 220 VAC (55652)	2-98
36. 561 Electric Fryer, 11.25KW, 3 Ph, 220 VAC (55650)	2-99
37. 561 Electric Fryer, 11.25KW, 3 Ph, 220/380 VAC or 240/415 VAC (55661)	2-100
38. 561 Electric Fryer, 11.25KW, 3 Ph, 220/380 VAC or 240/415 VAC (55659)	2-101
39. 561 Electric Fryer, 11.25KW, 3 Ph, 480 VAC (55651)	2-102
40. 561 Electric Fryer, 11.25KW, 3 Ph, 480 VAC (55649)	2-103
41. 561 Electric Fryer, 11.25KW, 3 Ph, 208/240 VAC (55422)	2-104
42. 600 Standard Gas Fryer, 120V-60 Hz-1 Ph, Standard Ignition (63240)	2-105
43. 600 Gas Fryer, 240V-50 Hz-1 Ph, Spark Ignition (55318)	2-106
44. 600 Standard Gas Fryer, 120V, 60 Hz, 1-Phase, Electronic Ignition (34389)	2-107
45. 600 Standard Gas Fryer, 120-240V-50/60 Hz-1 Ph, Standard Ignition (63694)(SN: AN0702112 & below)	2-108
46. 600 Standard Gas Fryer, 120-240V-50/60 Hz-1 Ph, Electronic Spark Ignition (75555B) (SN: AN0703021-AN0711029, Shaw)	2-109
47. 600 Standard Gas Fryer, 120-240V-50/60 Hz-1 Ph, Electronic Spark Ignition (75555E) (SN: AN0703021 & above, Fenwal)	2-110
48. 600 Standard Gas Fryer, 120V-50/60 Hz-1 Ph, Electronic Spark Ignition (67152) (SN: AN0702112 & below)(SN: AN0703021 & above use 75555)	2-111
49. 600 Standard Gas Fryer, 208-240V-50/60 Hz-1 Ph, Electronic Spark Ignition (69076) (SN: AN0702112 & below)(SN: AN0703021 & above use 75555)	2-112
50. 600 Gas Fryer, 230V-50 Hz-1 Ph (34807)(SN: AN0702112 & below)	2-113
51. 600 Standard Gas Fryer, 230V-50 Hz-1 Ph, SSI (75556B) (SN: AN0703021 - AN0711029, Shaw)	2-114
52. 600 Standard Gas Fryer, 230V-50 Hz-1 Ph, SSI (75556D) (SN: AN0711030 & above, Fenwal)	2-115
53. 600 Gas Fryer, C1000 & 2000, 100/120V-50/60 Hz-1 Ph, 24V Gas Valves, 24V SSI (78558)	2-116
54. 600 Gas Fryer, C1000 & 2000, 230V-50 Hz-1 Ph, 24V Gas Valves, 24V SSI (80221)	2-117
55. 600 Fryer, Line Voltage Controls, 120V-50/60 Hz-1 Ph (68598)	2-118
56. 600C/C Fryer, 120V-50/60 Hz-1 Ph, Wendy's FPS, Electronic Spark Ignition (67199G) (SN: AN0703021-AN0711029, Shaw)	2-119
57. 600C/C Fryer, 120V-50/60 Hz-1 Ph, Electronic Spark Ignition (67199J) (SN: AN0711030 & above, Fenwal)	2-120
58. 600C/C Fryer, 208-240V-50/60 Hz-1 Ph (32759)	2-121
59. 600C/C Fryer, 208-240V-50/60 Hz-1 Ph, Electronic Spark Ignition (67204)	2-122
60. 600C/C Fryer, Line Voltage Controls, 208-240V-50/60 Hz-1 Ph (68614)	2-123
61. 600C/C Fryer, Line Voltage Controls, 230V-50/60 Hz-1 Ph (68615)	2-124

2-22. INDEX OF WIRING DIAGRAMS

Title **Page**

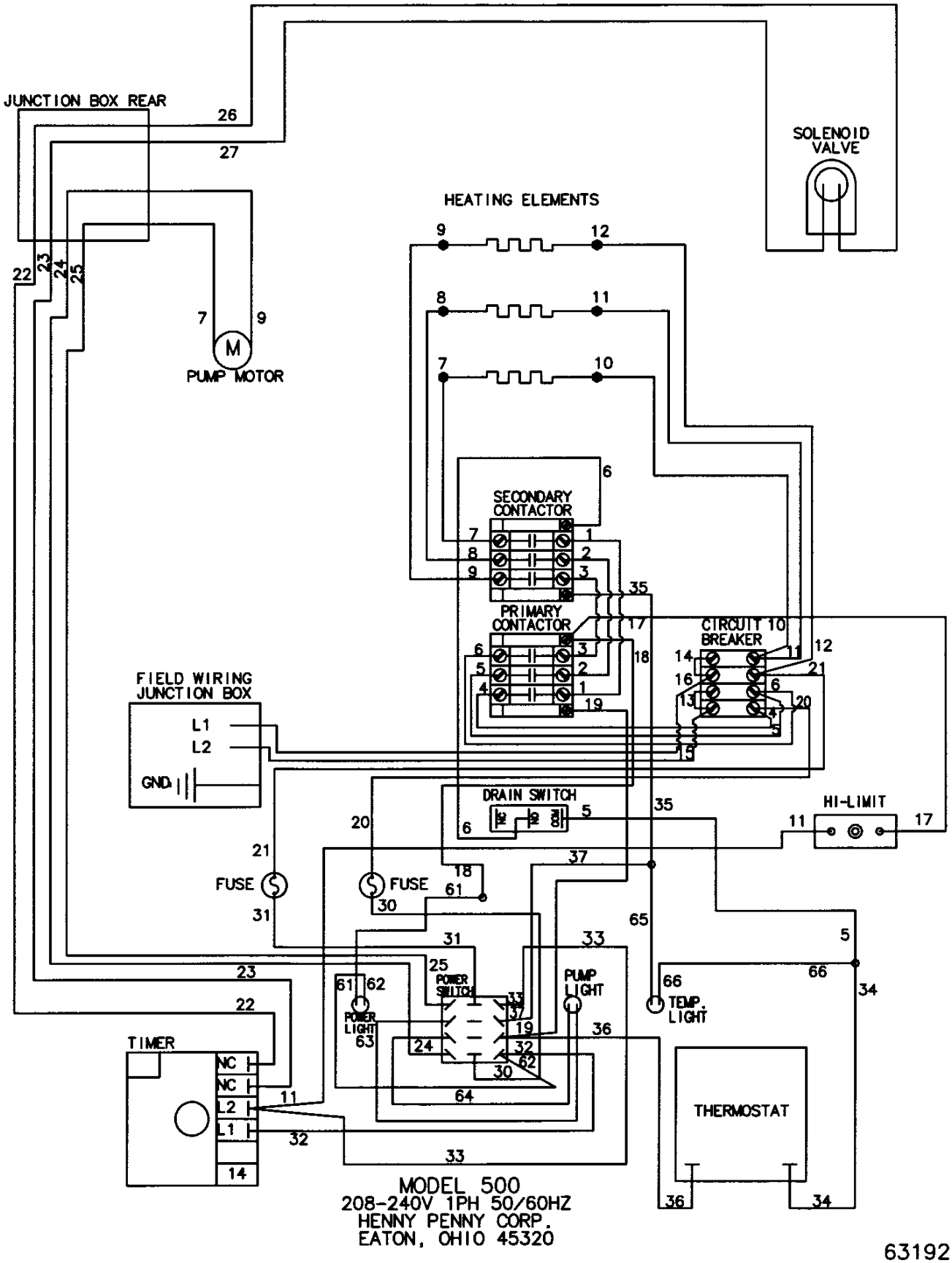
62. 600F Gas Fryer, 100-240V 50/60 Hz, 1-Phase (63357)(SN: AN0702112 & below)..... 2-125
63. 600F Gas Fryer, 100-240V 50/60 Hz, 1-Phase, SSI (75510C)(SN: AN0703021-0711029, Shaw)..... 2-126
64. 600F Gas Fryer, 100-240V-50/60 Hz-1 Ph, SSI (75510E) (SN: AN0711030 & above, Fenwal)..... 2-127
65. 600F Fryer, 230V-50/60 Hz-1 Ph (63358)(SN: AN0702112 & below)..... 2-128
66. 600F Fryer, 230V-50/60 Hz-1 Ph, SSI, (75511C) (SN: AN0703021-0711029, Shaw)..... 2-129
67. 600F Fryer, 230V-50/60 Hz-1 Ph, SSI, (75511D) (SN: AN0711030 & above, Fenwal)..... 2-130
68. 600F Fryer, 120V-50/60 Hz-1 Ph (23457) (SN: AN0702112 & below)
(SN: AN0703021 & above use 75510) 2-131

69. 600 SC Gas Fryer, 120V-60 Hz-1 Ph, Dual Thermostat (17353)..... 2-132

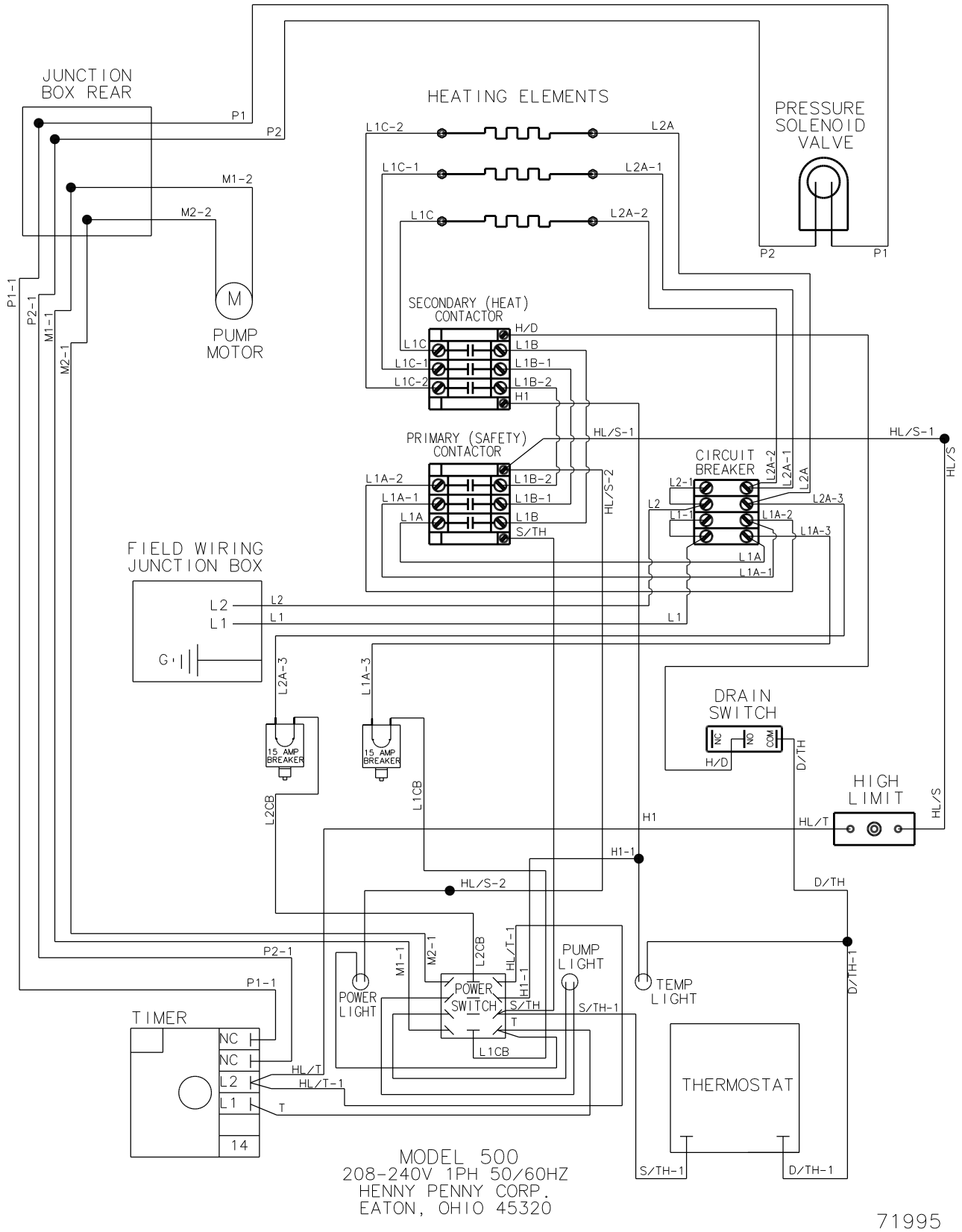
70. 600SMS Fryer, 100-240V-50/60 Hz-1 Ph, SMS, SSI (75190) 2-133
71. 600SMS Fryer, 230V-50 Hz-1 Ph, SMS, SSI (75512B) (SN: AN0703021-AN0711029, Shaw)..... 2-134
72. 600SMS Fryer, 230V-50 Hz-1 Ph, SMS, SSI (75512C) (SN: AN0711030 & above, Fenwal) 2-135

WIRING DIAGRAMS LEGEND

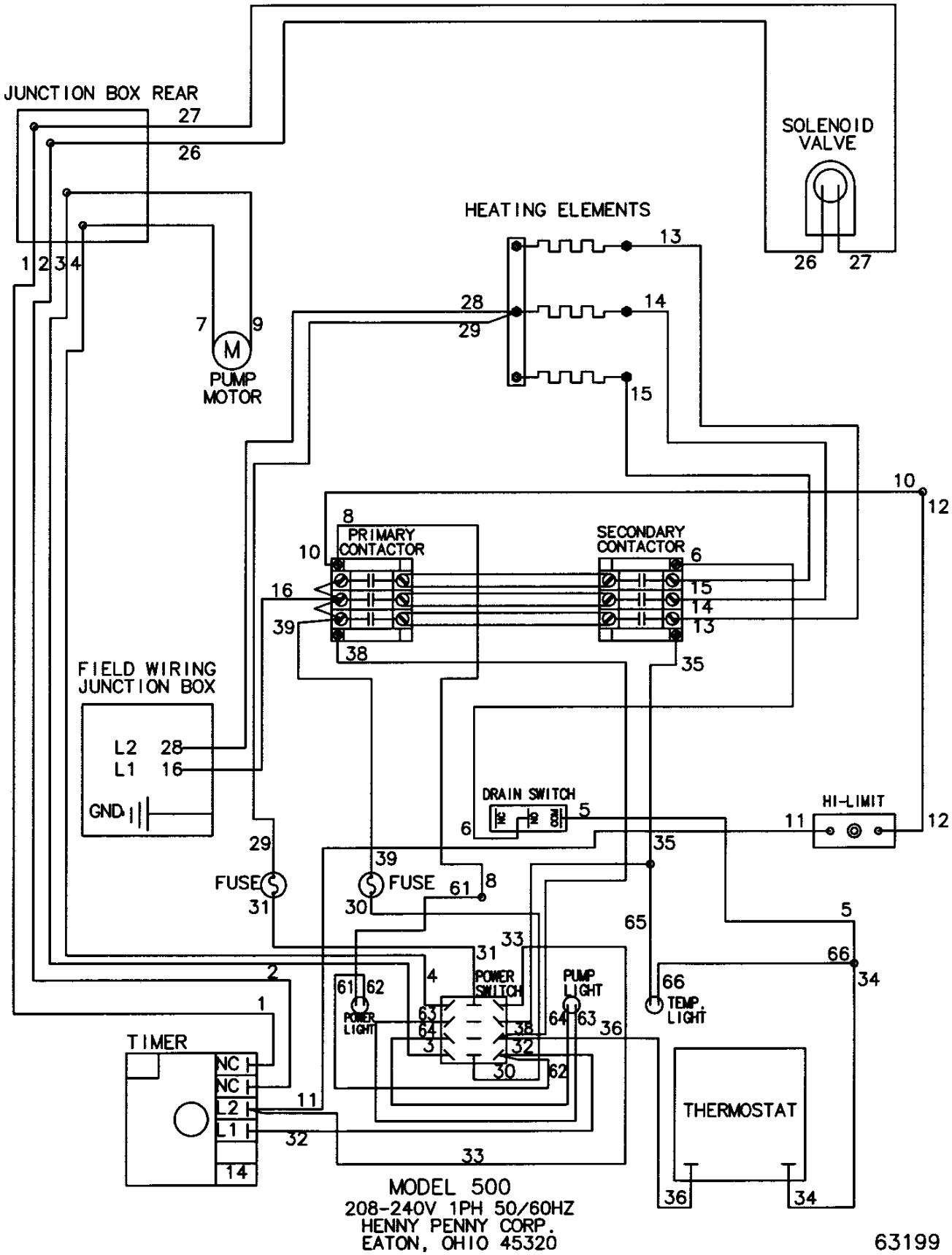
ABBREVIATION	DEFINITION
C	CONTROL
CB	CIRCUIT BREAKER
D	DRAIN
DS	DRAIN SWITCH
F	FUSE
G	GROUND
H	HEAT
HL	HIGH LIMIT
HS	HEAT & SAFETY
L1	LINE 1
L2	LINE 2
L3	LINE 3
M	MOTOR
P	PRESSURE
PB	PROBE
R	RELAY
S	SAFETY
T	TIMER
TH	THERMOSTAT
TR	TRANSFORMER
/	TWO COMPONENTS TOGETHER
-	EXTENSION OF THE SAME SIGNAL



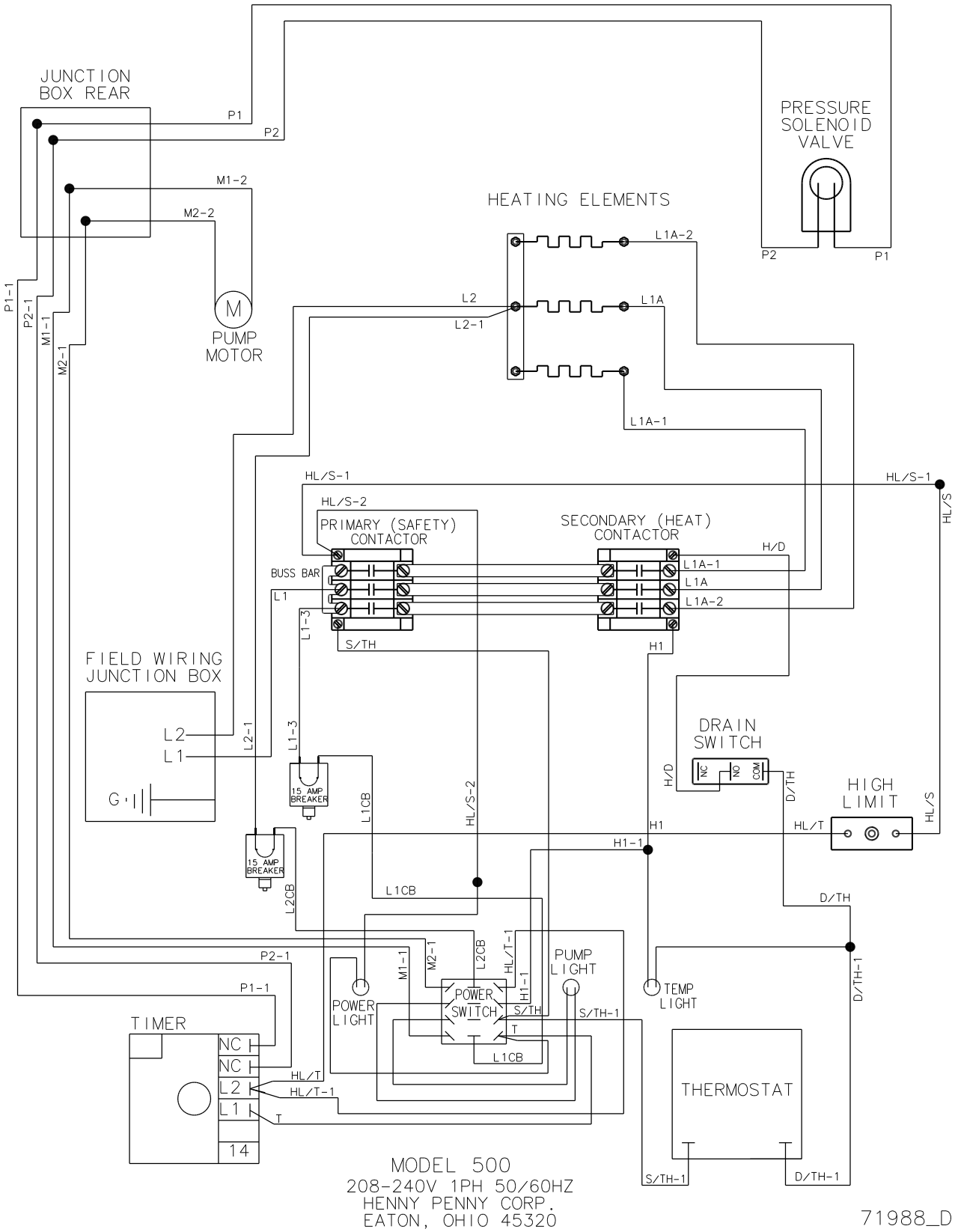
Before April 1, 2006



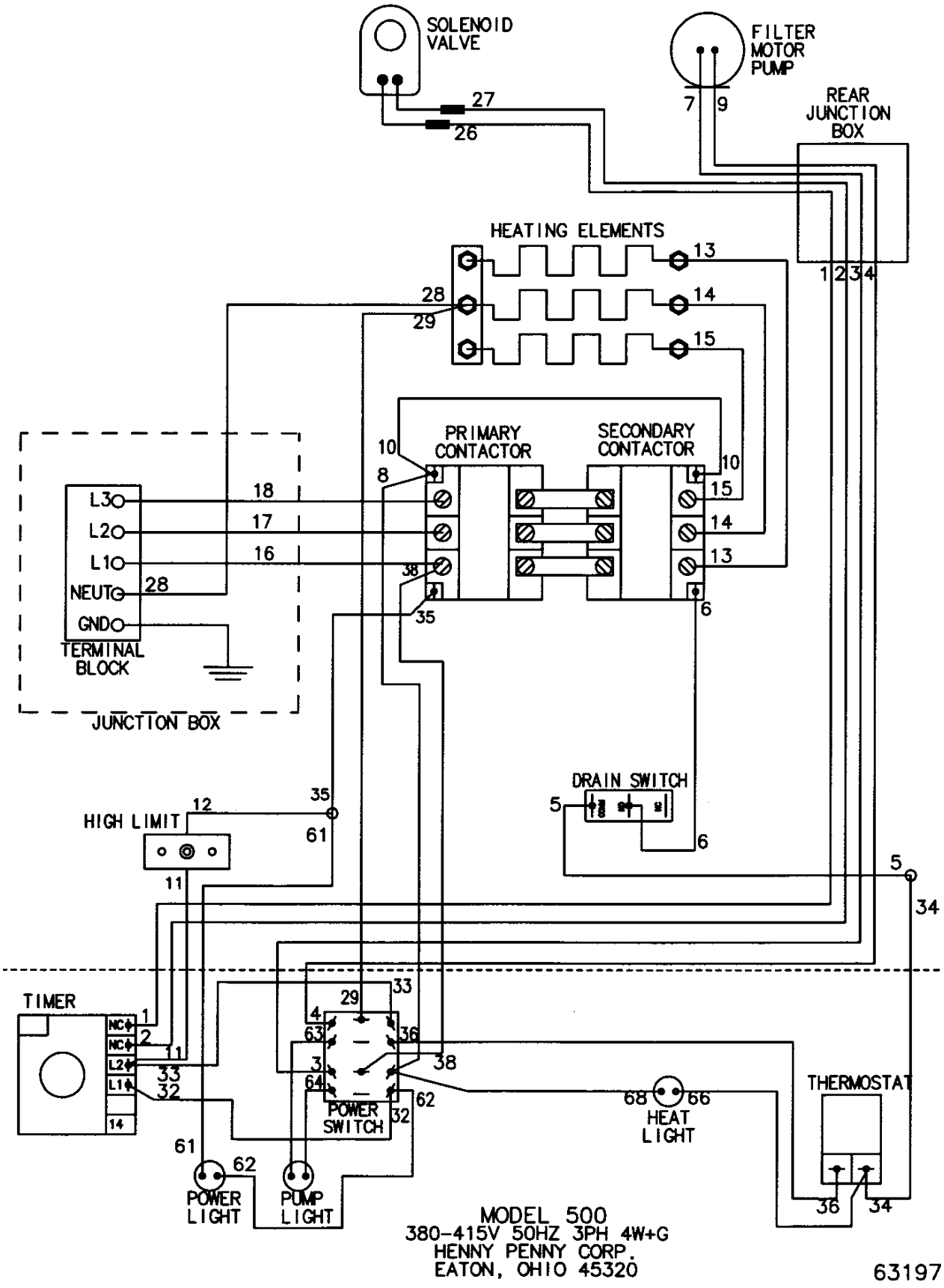
April 1, 2006 & After



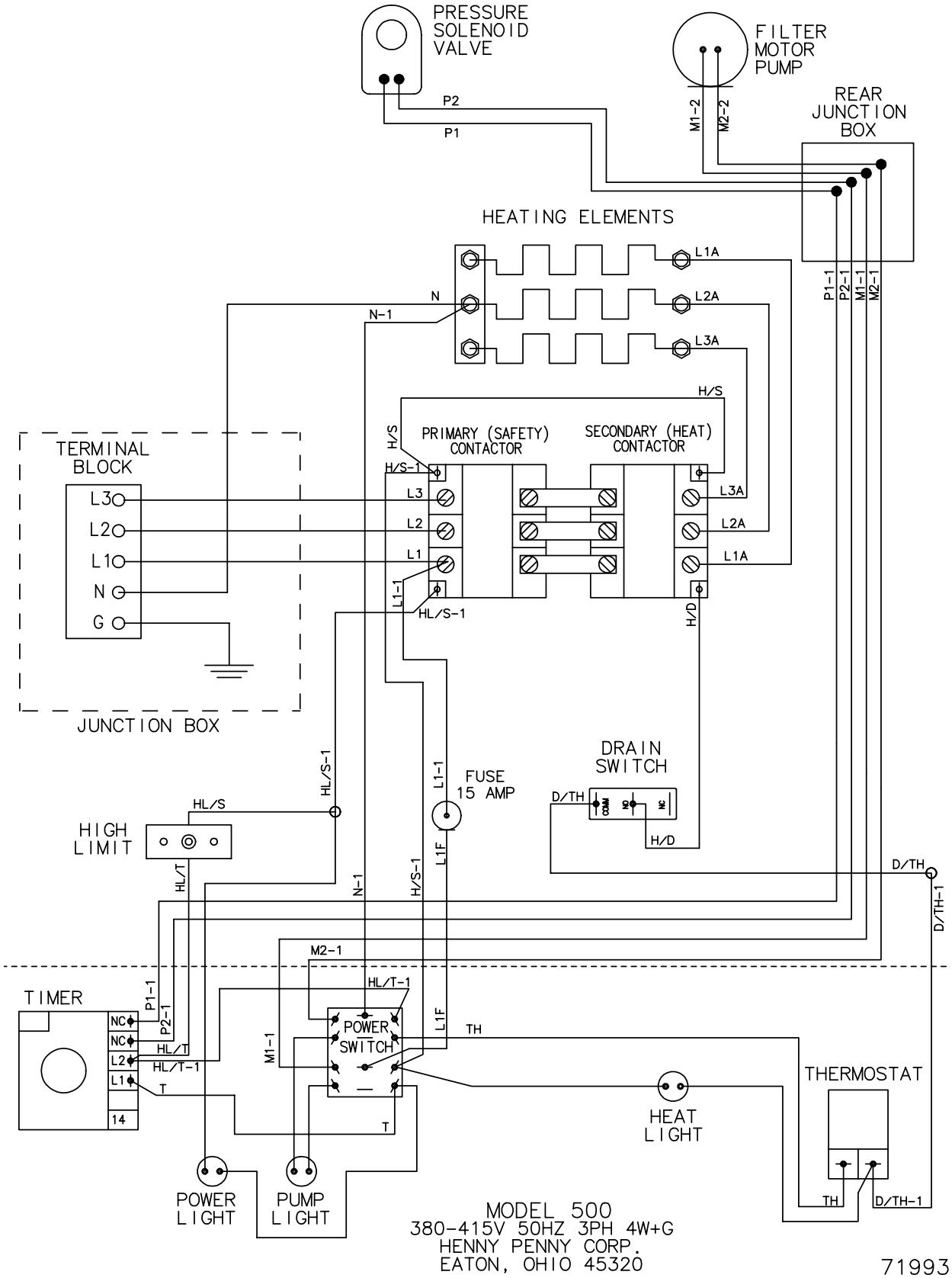
Before April 1, 2006



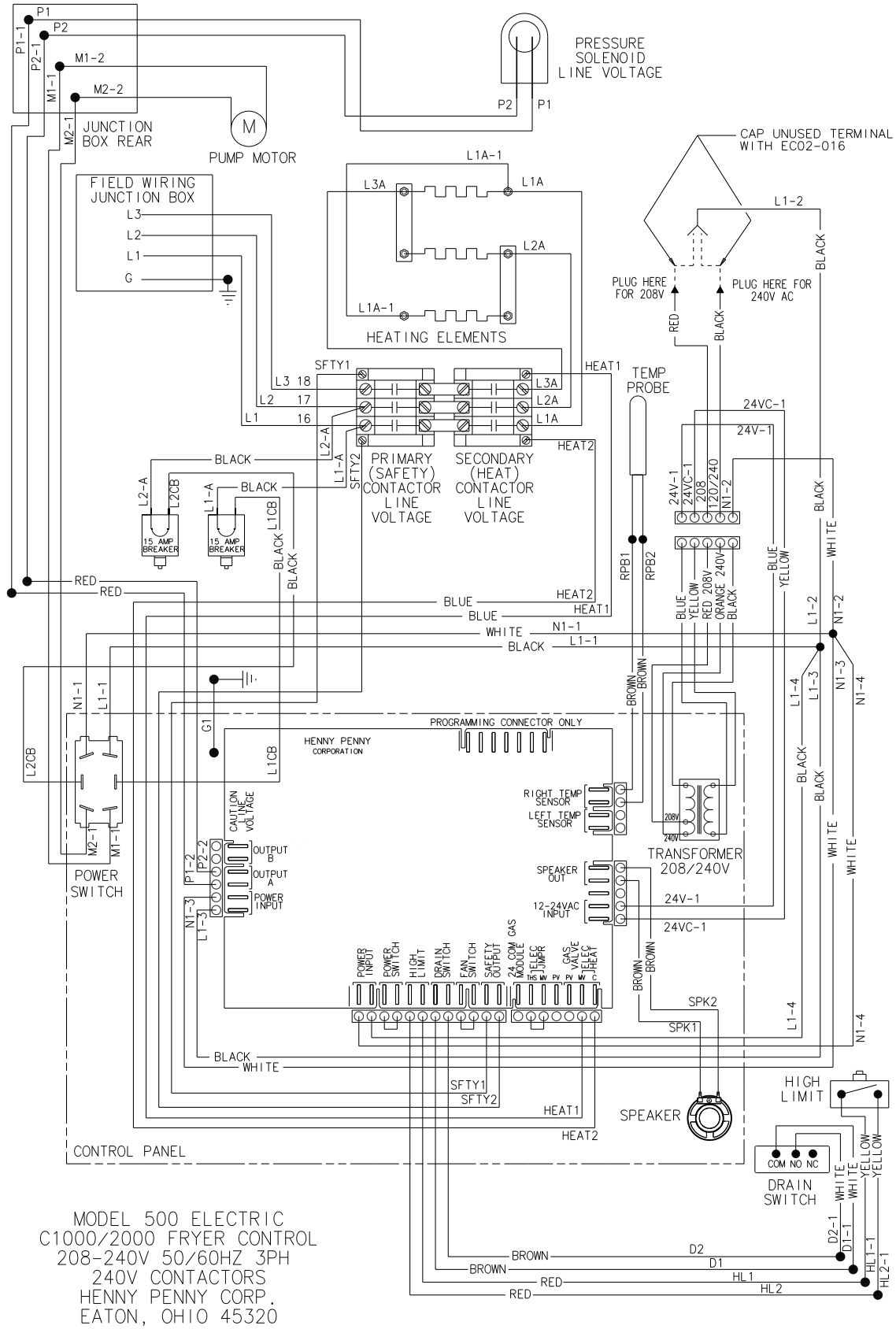
April 1, 2006 & After



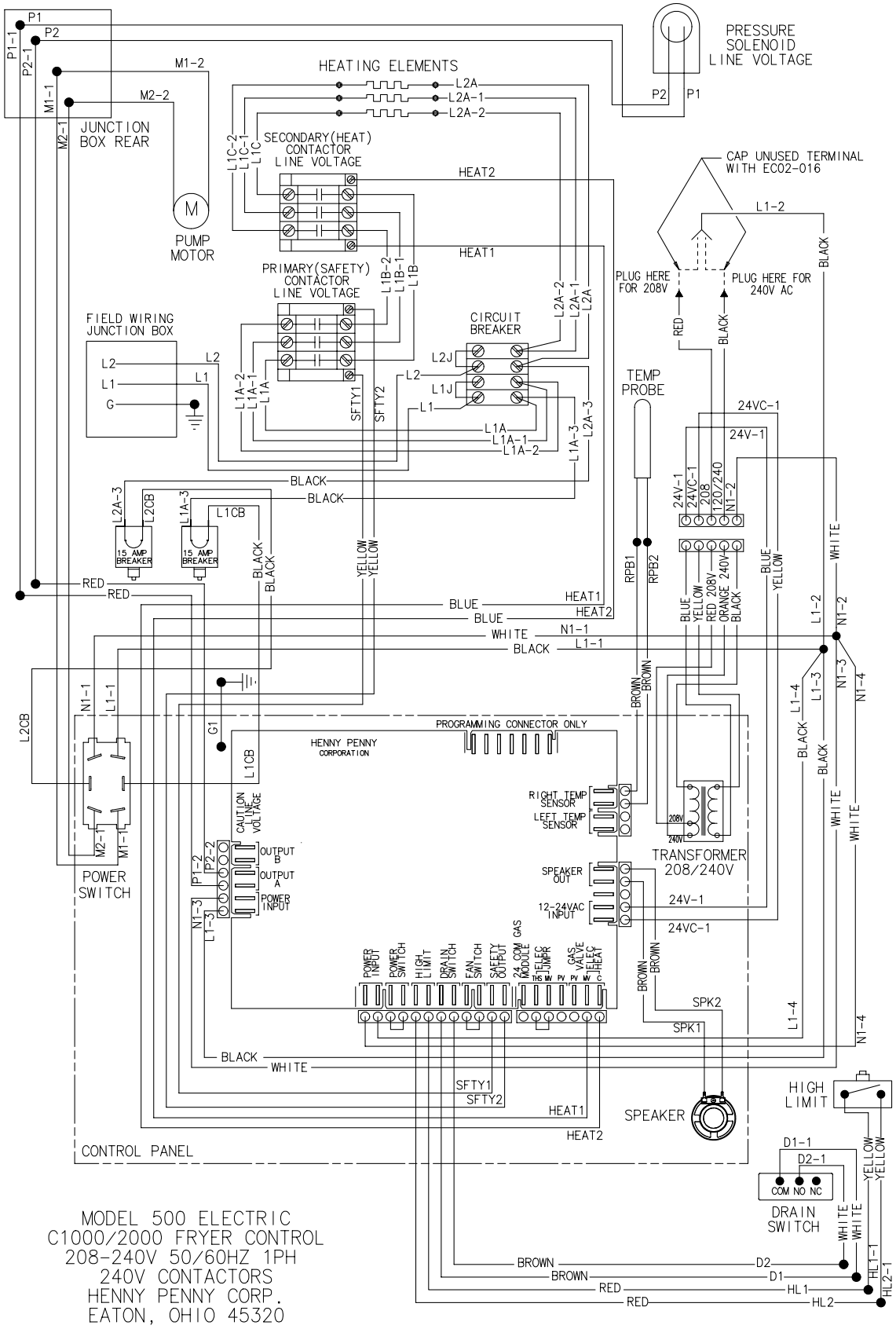
Before April 1, 2006



April 1, 2006 & After

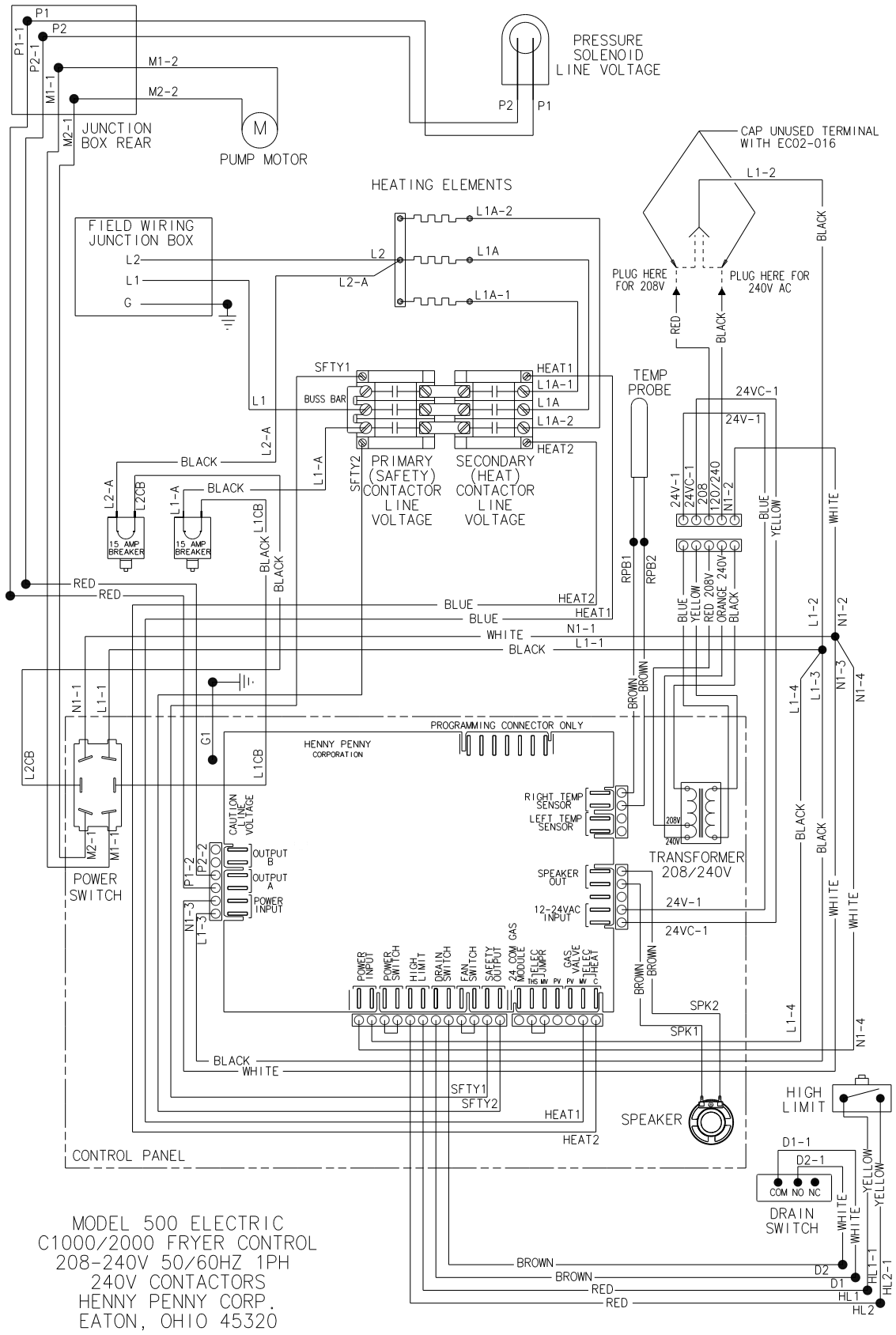


Serial Number AN0807051 & Above



79421

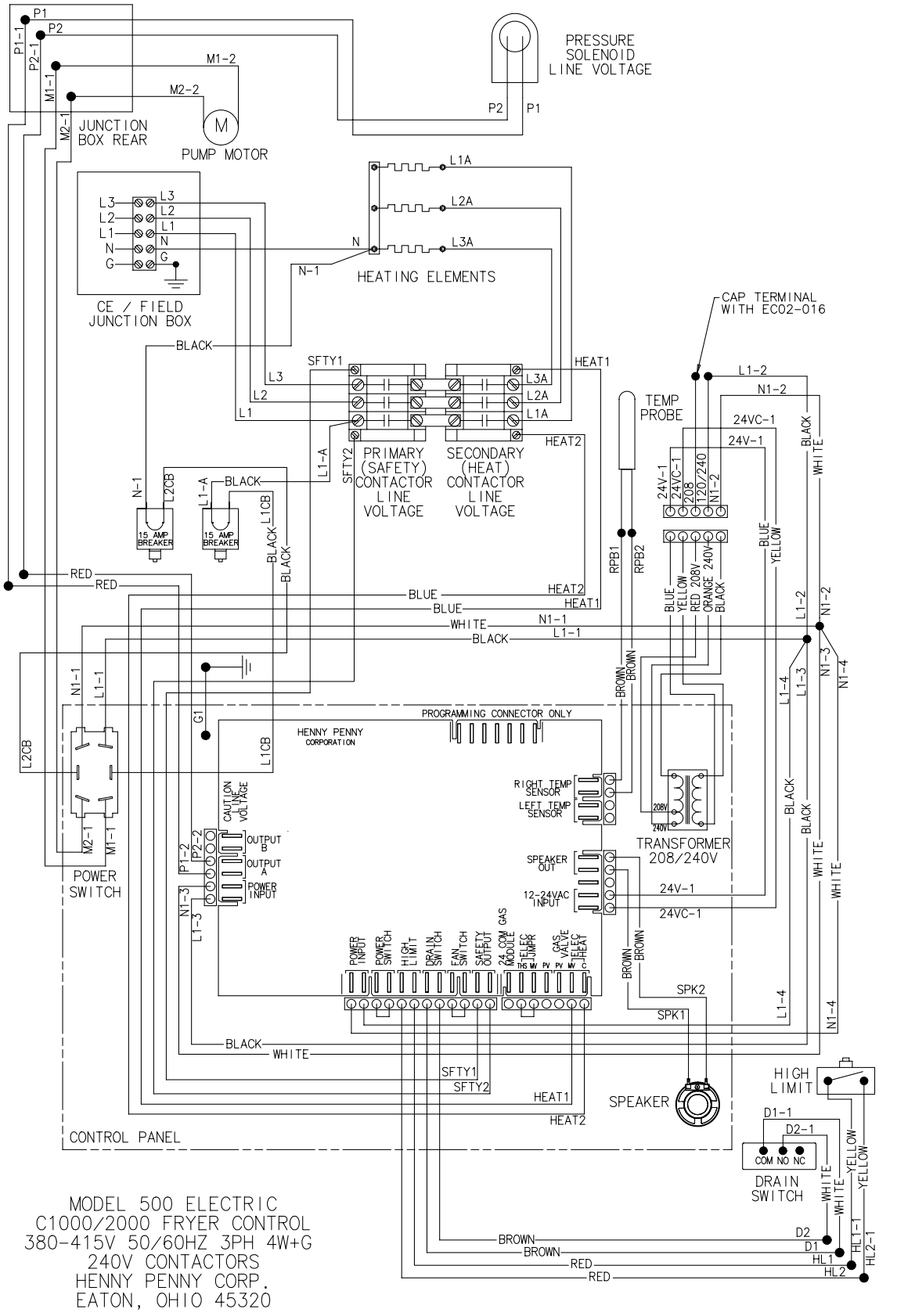
Serial Number AN0807051 & Above



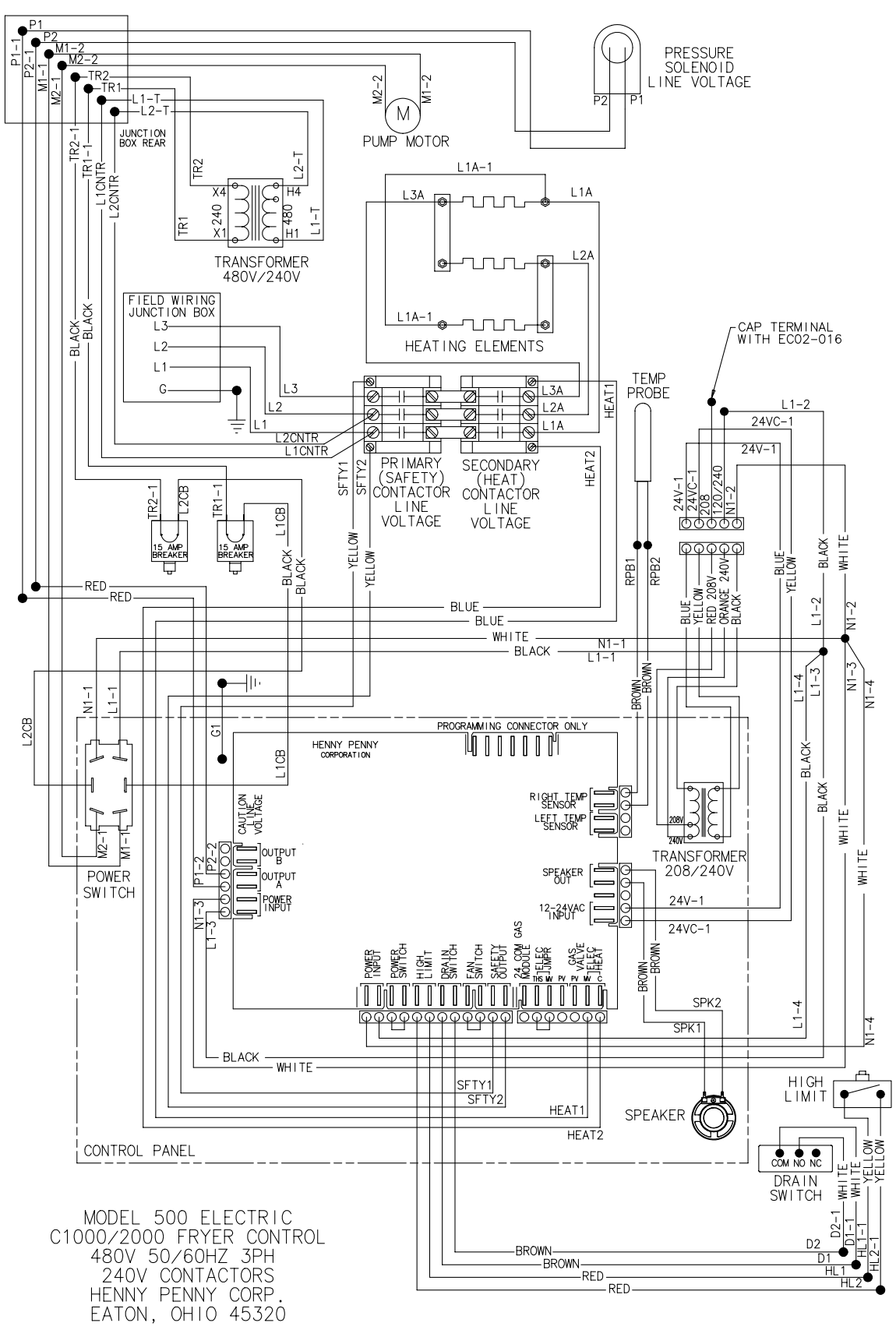
MODEL 500 ELECTRIC
C1000/2000 FRYER CONTROL
208-240V 50/60HZ 1PH
240V CONTACTORS
HENNY PENNY CORP.
EATON, OHIO 45320

79422_B

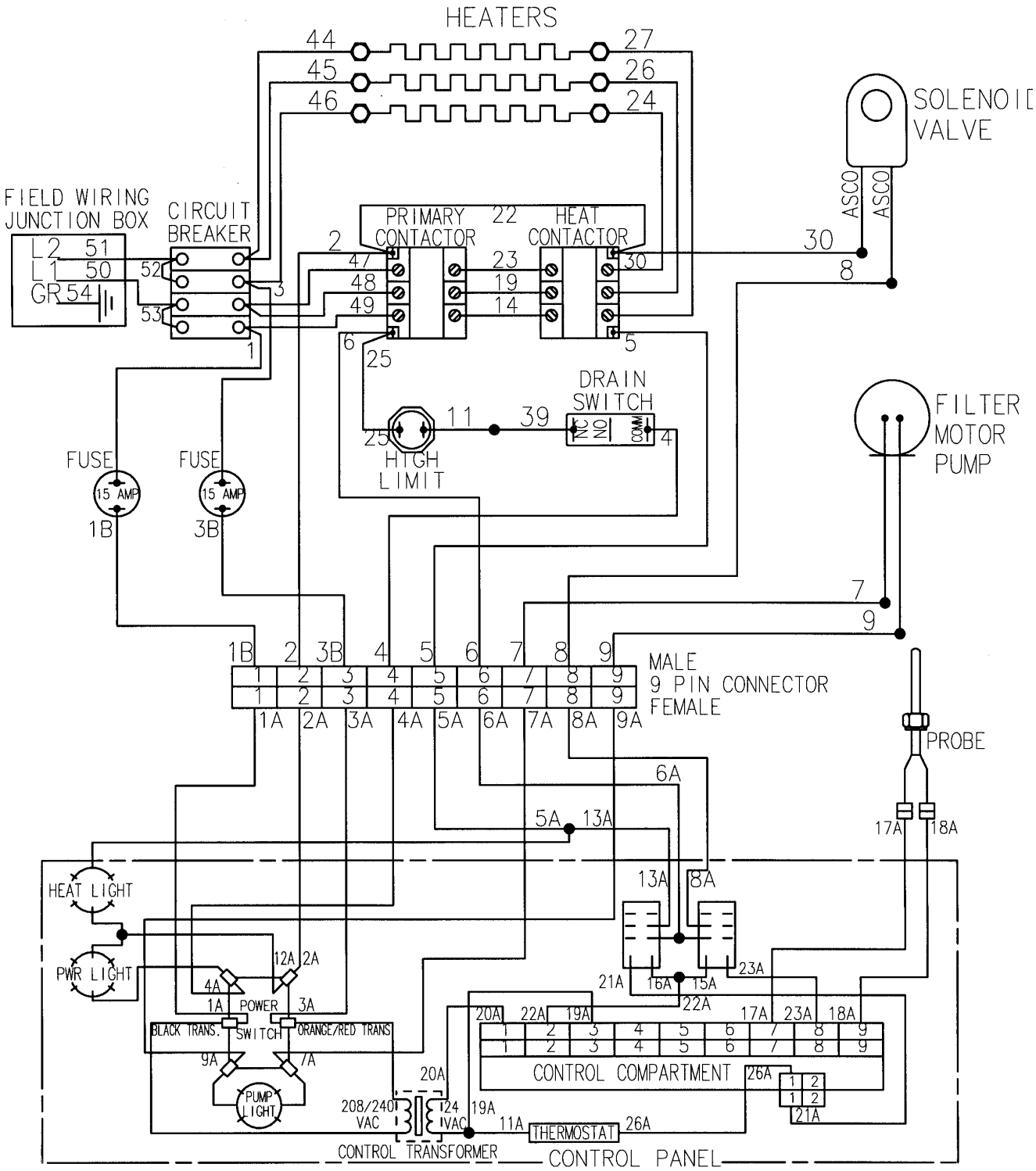
Serial Number AN0807051 & Above



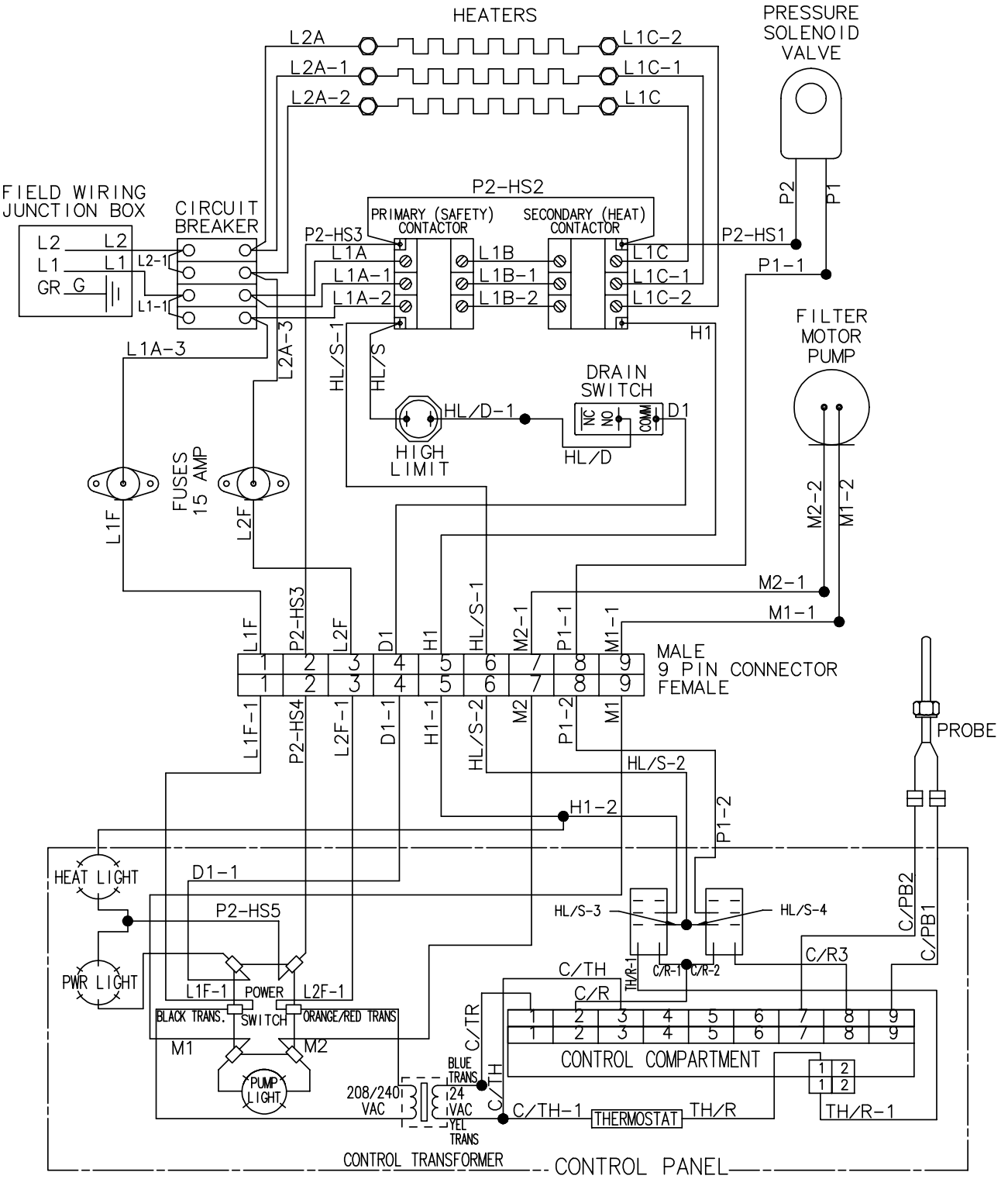
Serial Number AN0807051 & Above



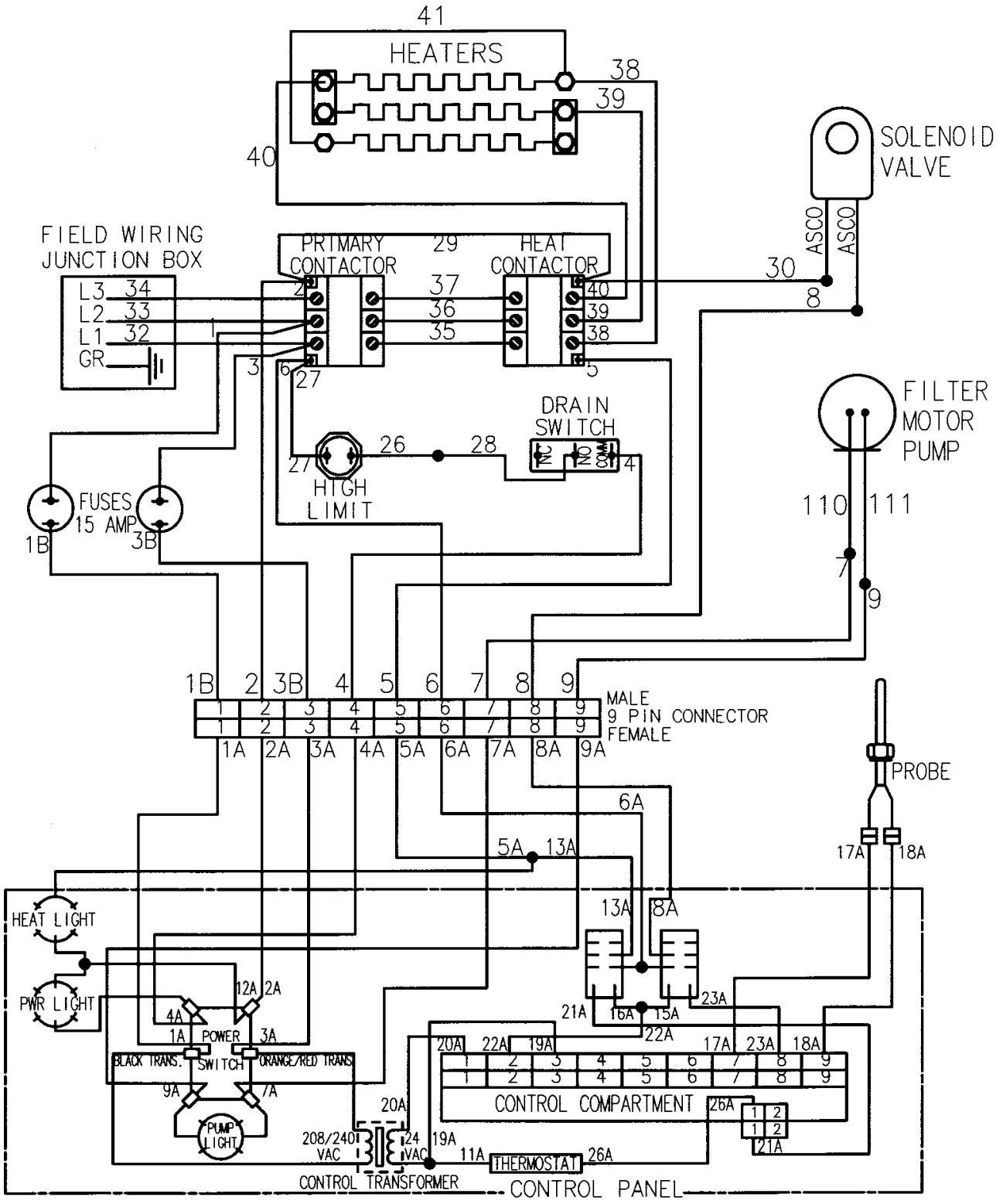
Serial Number AN0807051 & Above



Before April 1, 2006



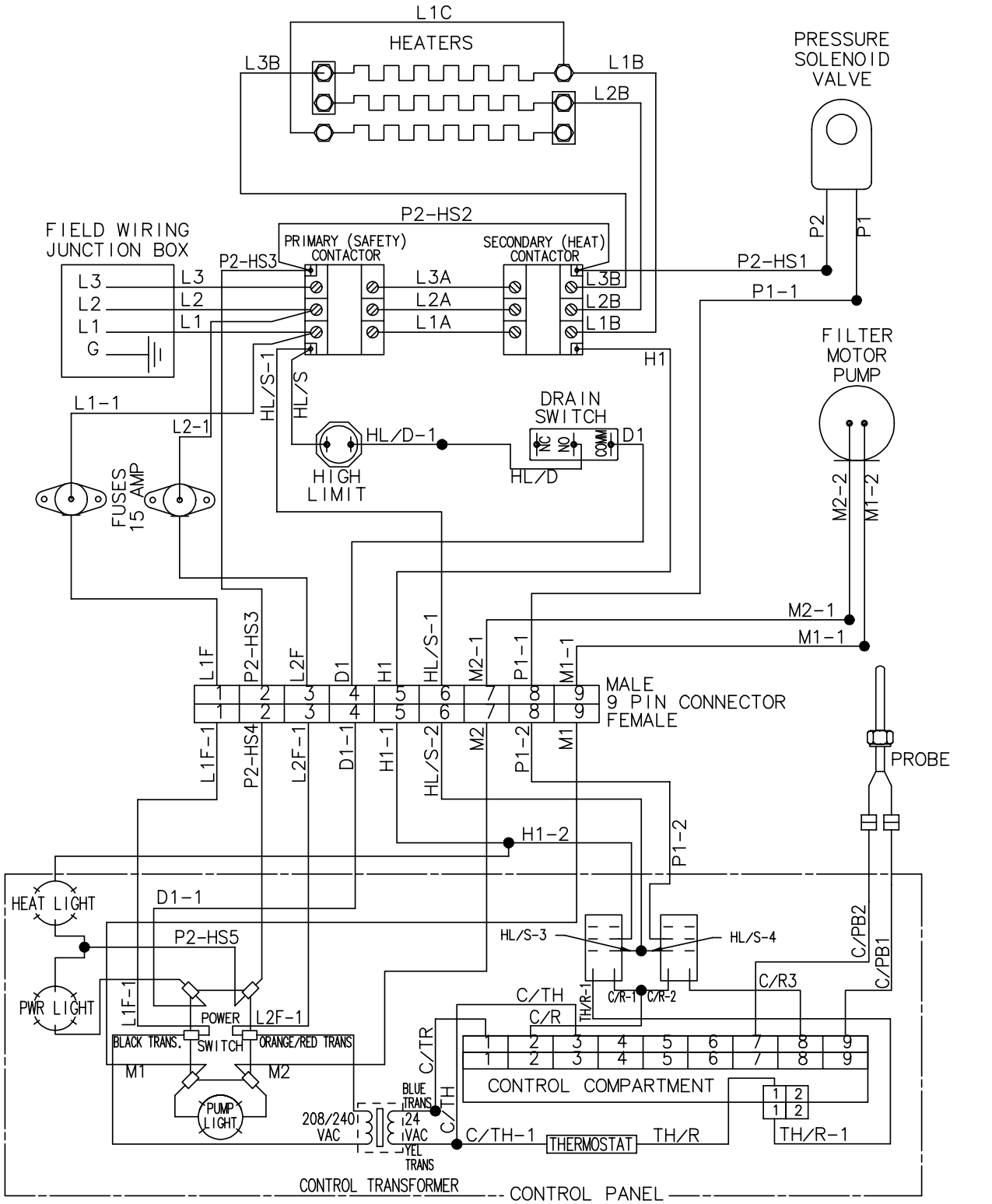
April 1, 2006 & After



MODEL 500F
208-240V 50/60HZ 3PH
HENNY PENNY CORP.
EATON, OHIO 45320

63596

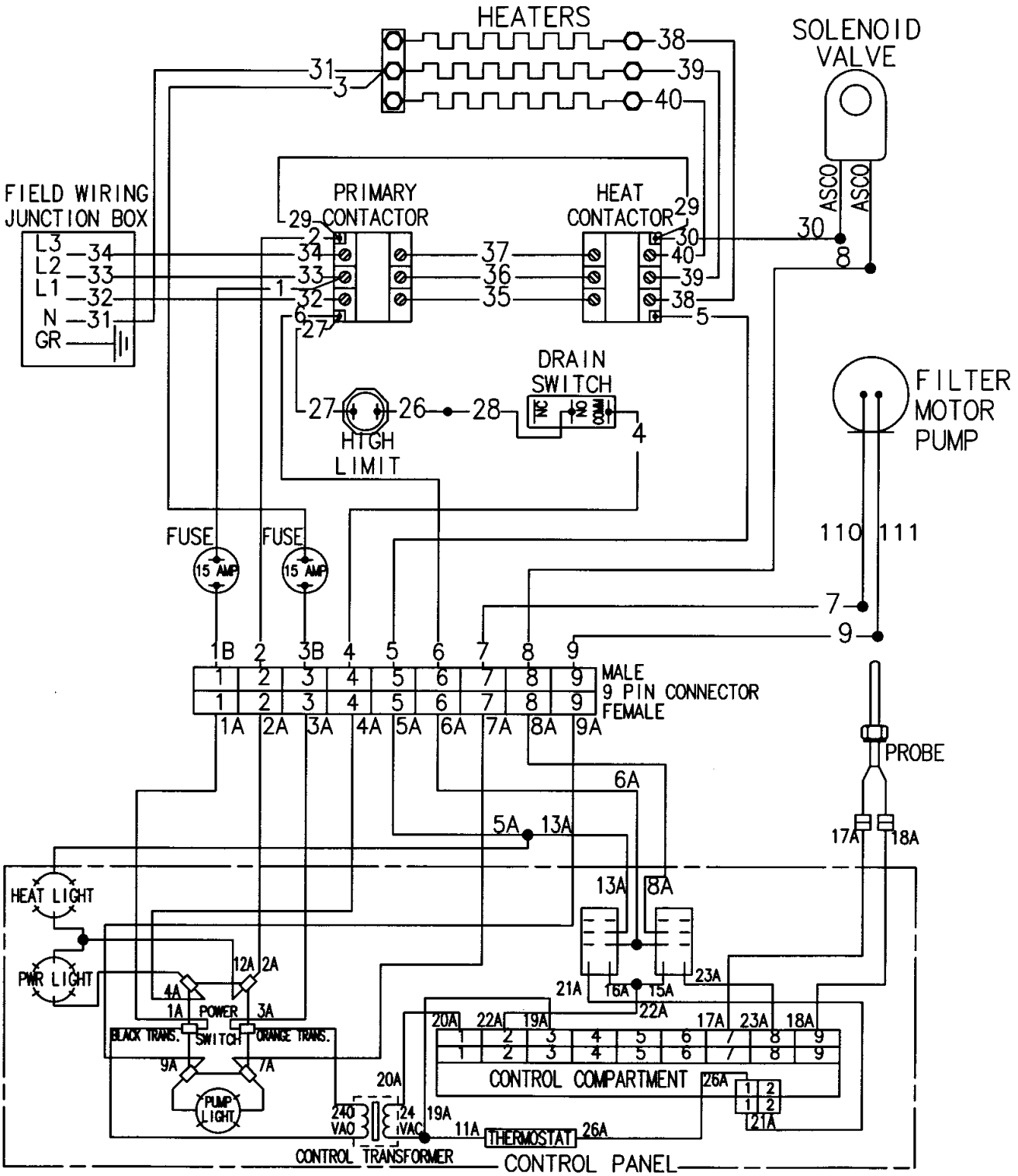
Before April 1, 2006



MODEL 500F
208-240V 50/60HZ 3PH
HENNY PENNY CORP.
EATON, OHIO 45320

69624

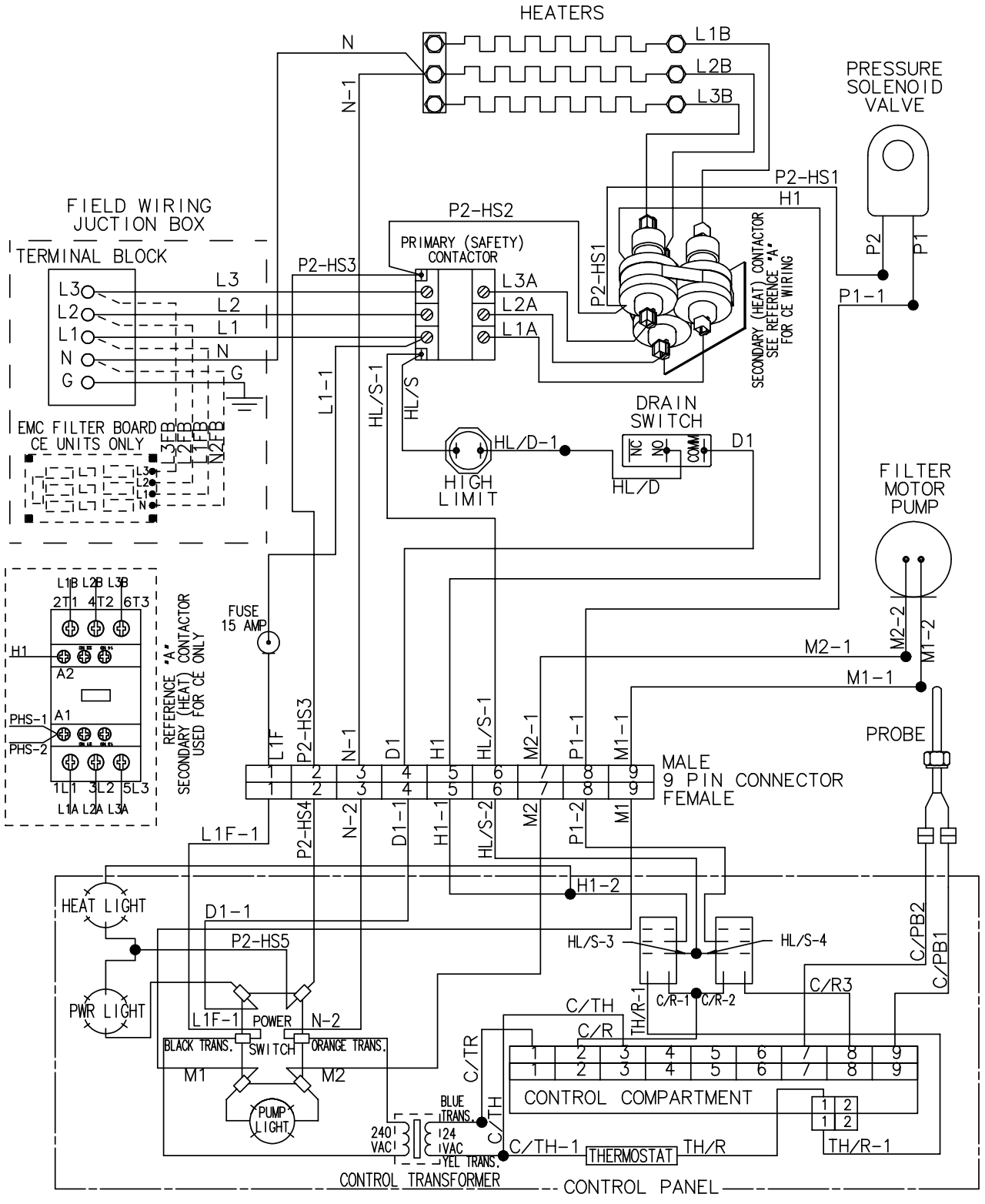
April 1, 2006 & After



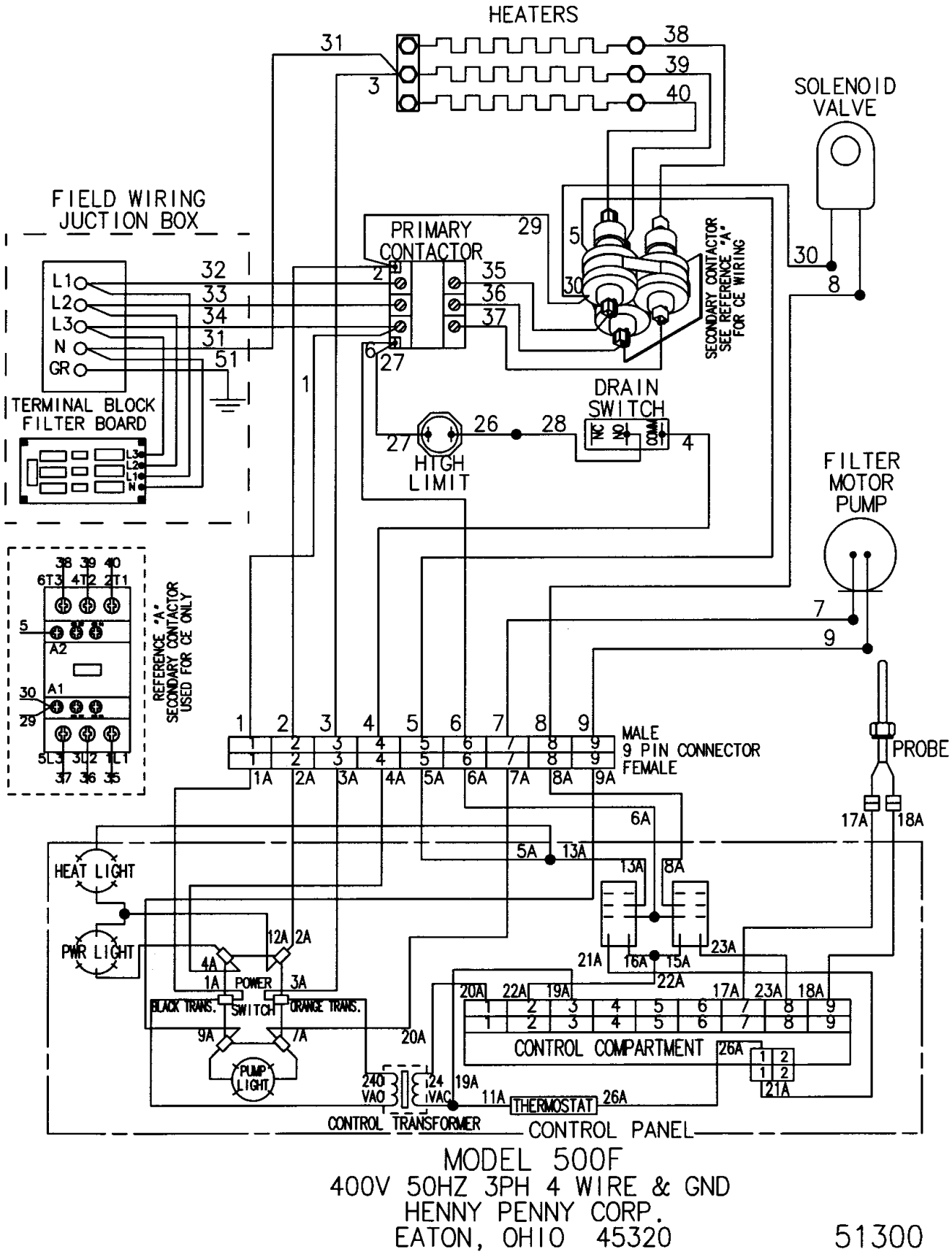
MODEL 500F
380-415 3PH 50/60Hz 4 WIRE + GND
HENNY PENNY CORP., EATON, OHIO 45320

63355

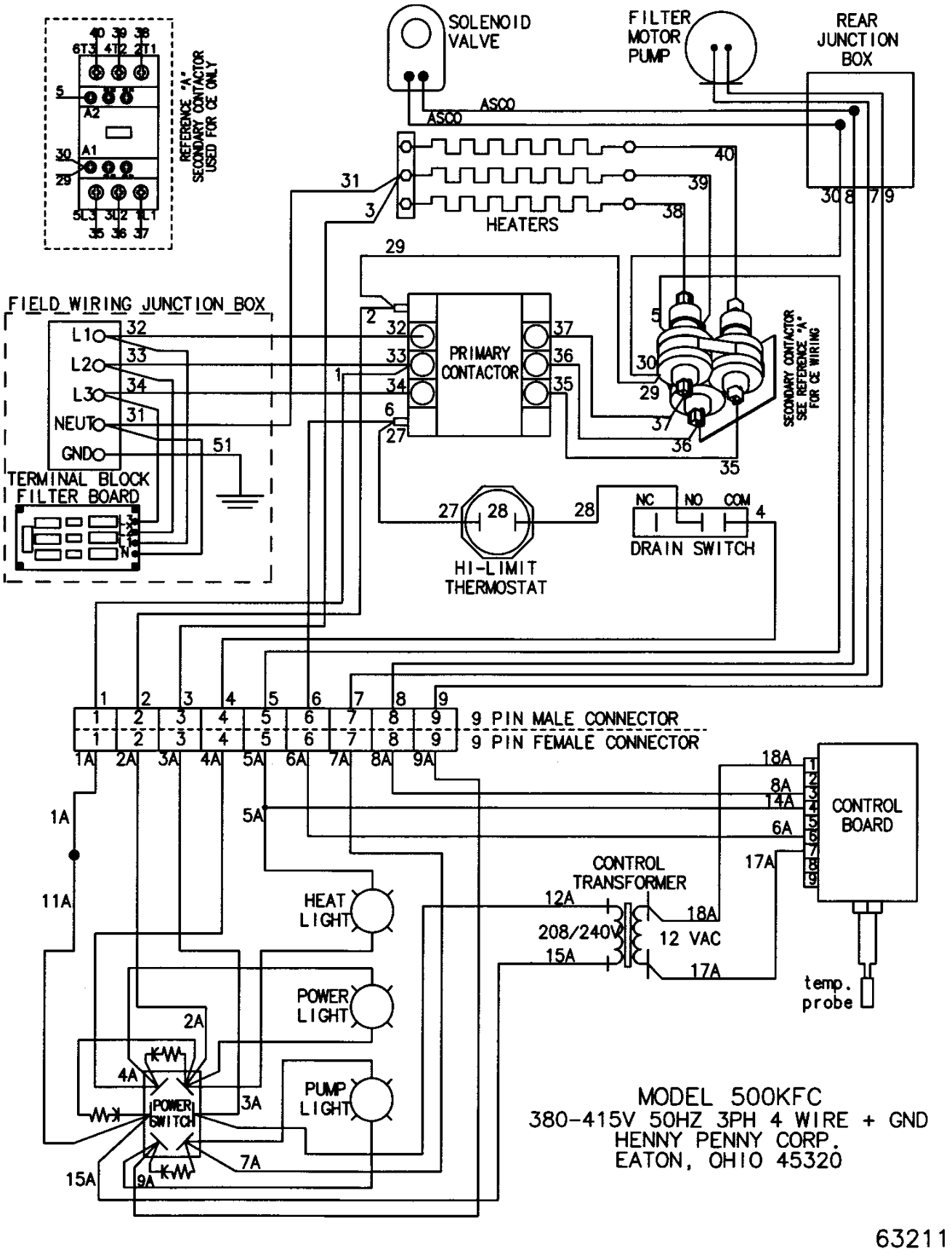
Before April 1, 2006



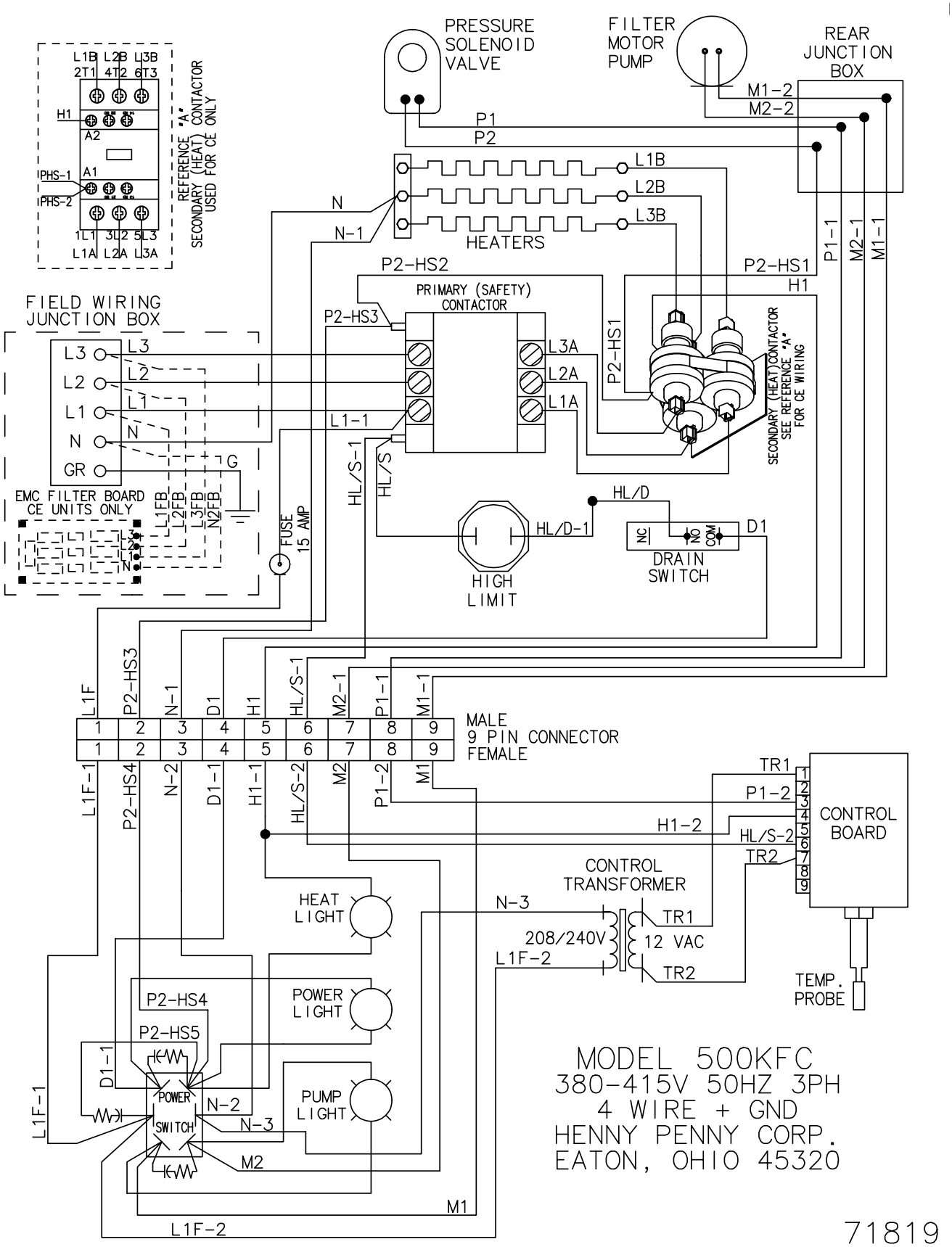
April 1, 2006 & After



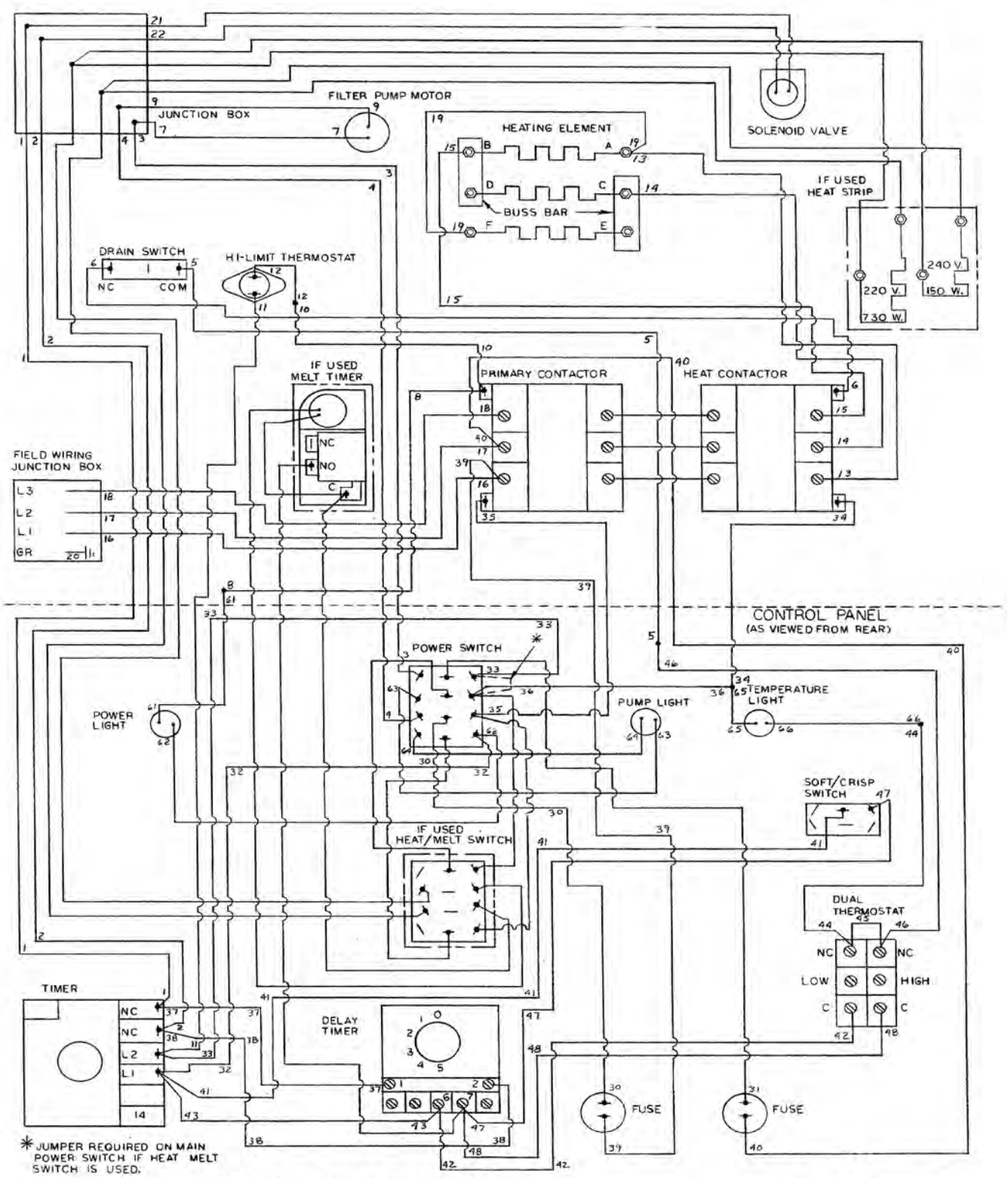
Before April 1, 2006 (See 69449 for April 1, 2006 & After)



Before April 1, 2006

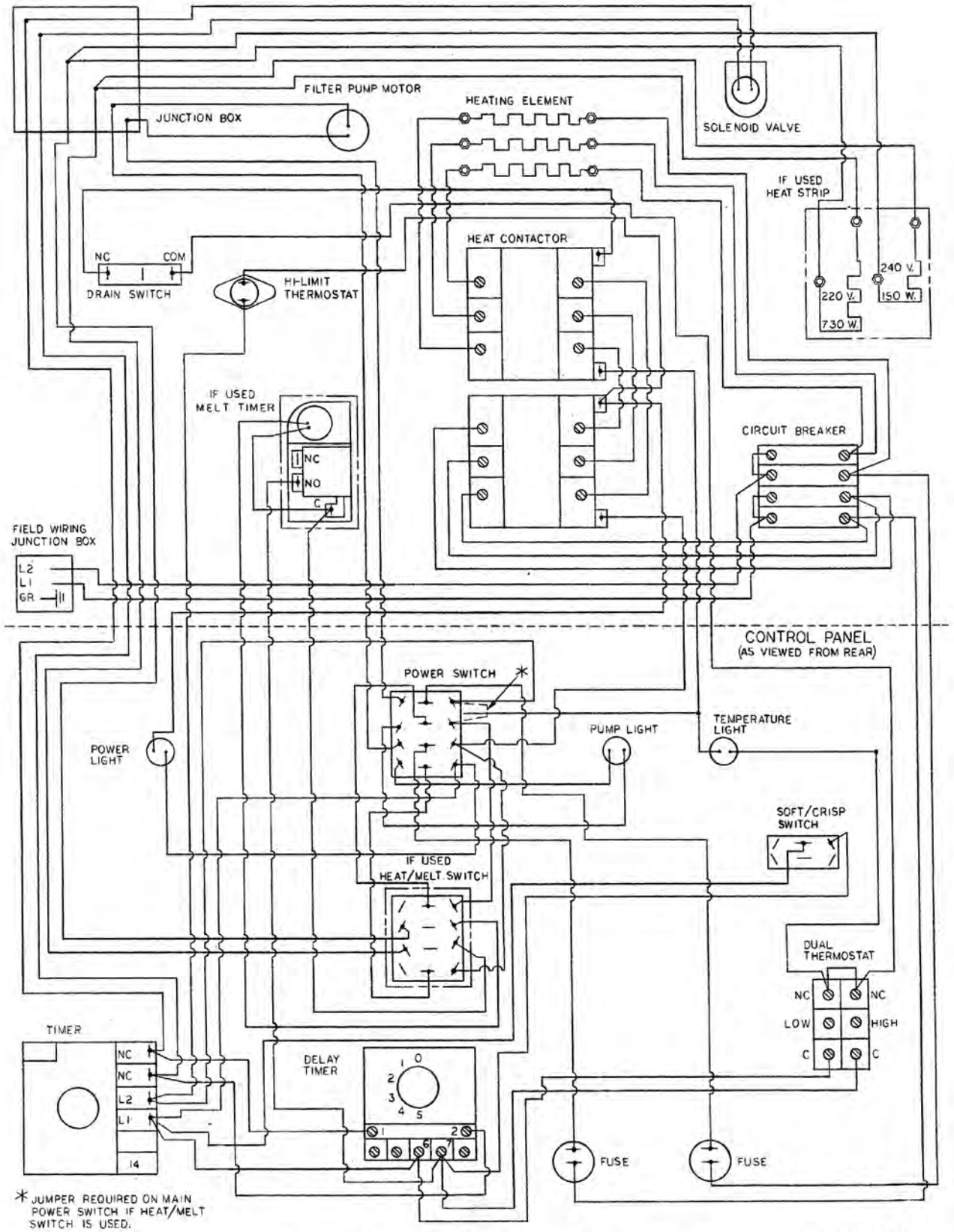


April 1, 2006 & After



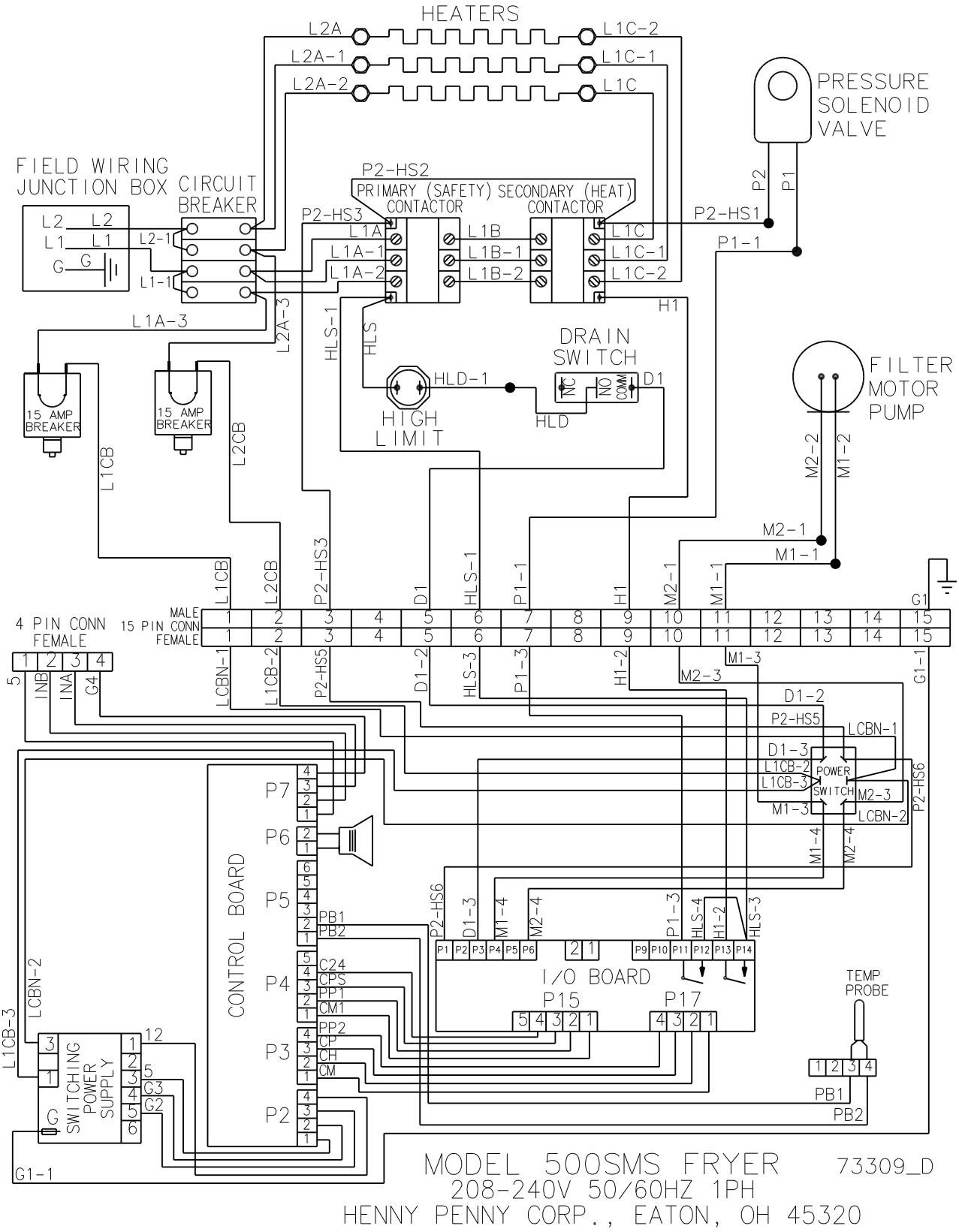
MODEL 500 FRYER SC VARIABLE
208/240 VOLT 50/60 HZ 3 PHASE E55

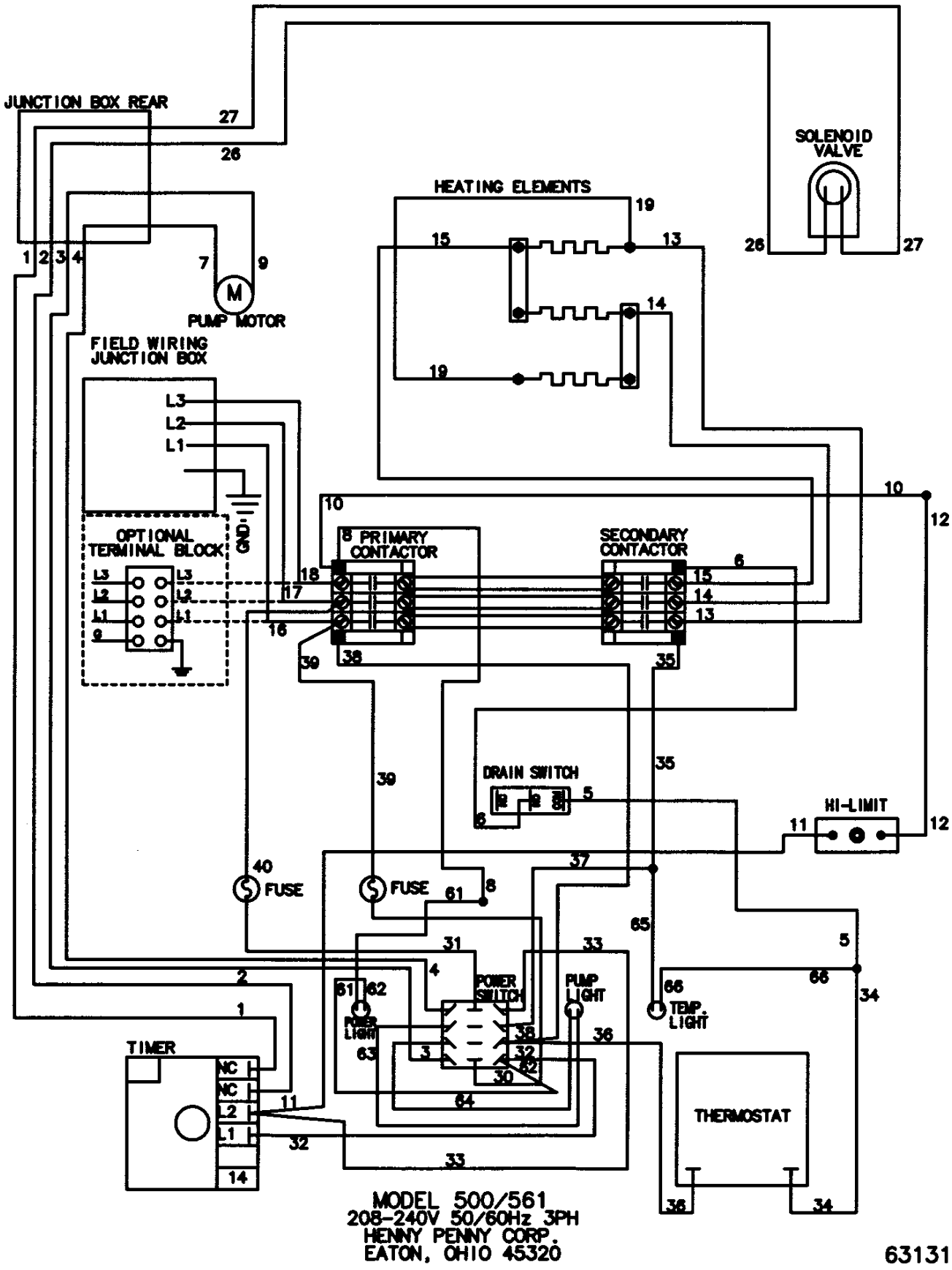
18311



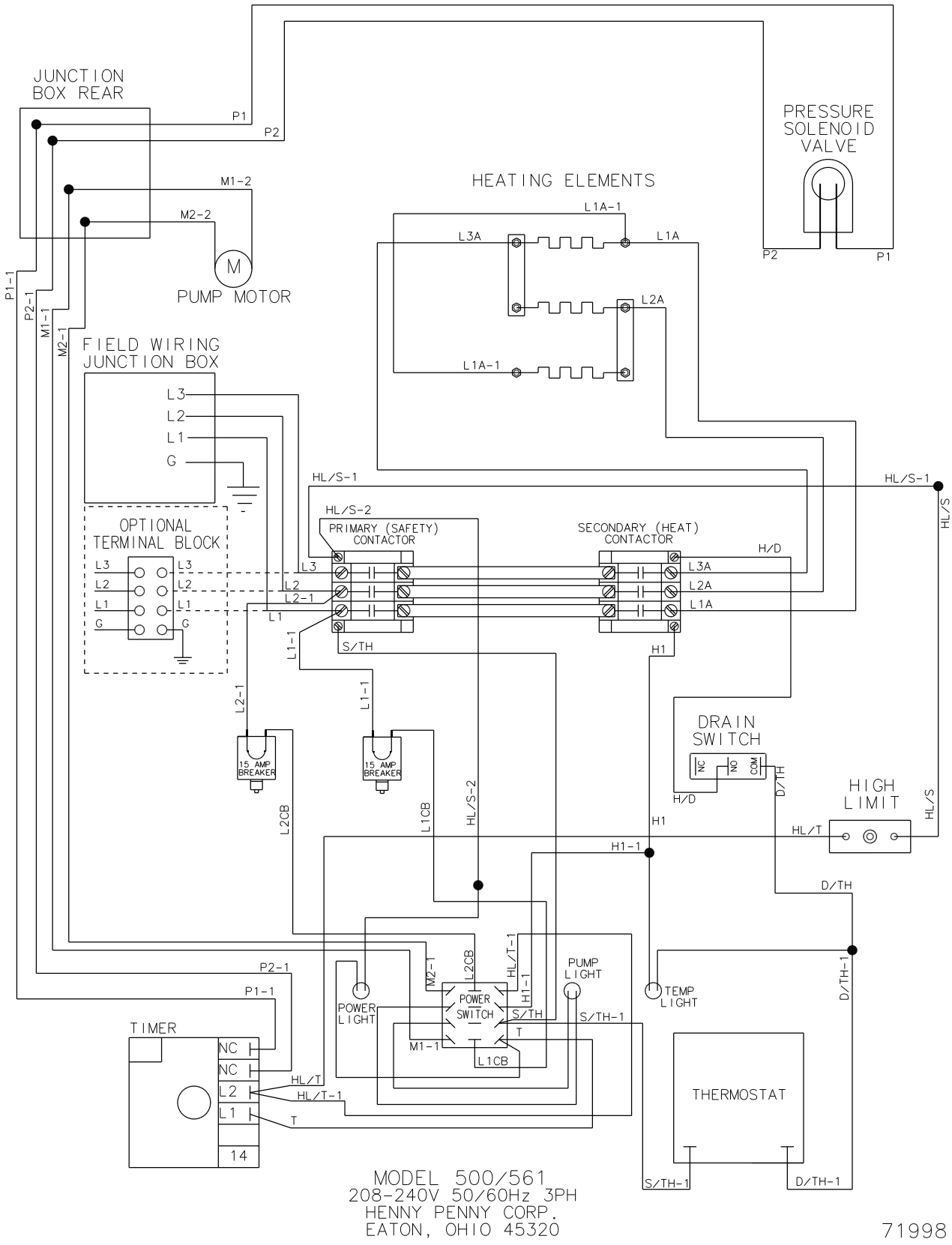
MODEL 500 FRYER SC VARIABLE TEMPERATURE
208/240 VOLT 50/60 HZ SINGLE PHASE E55 THERMOSTAT

18309

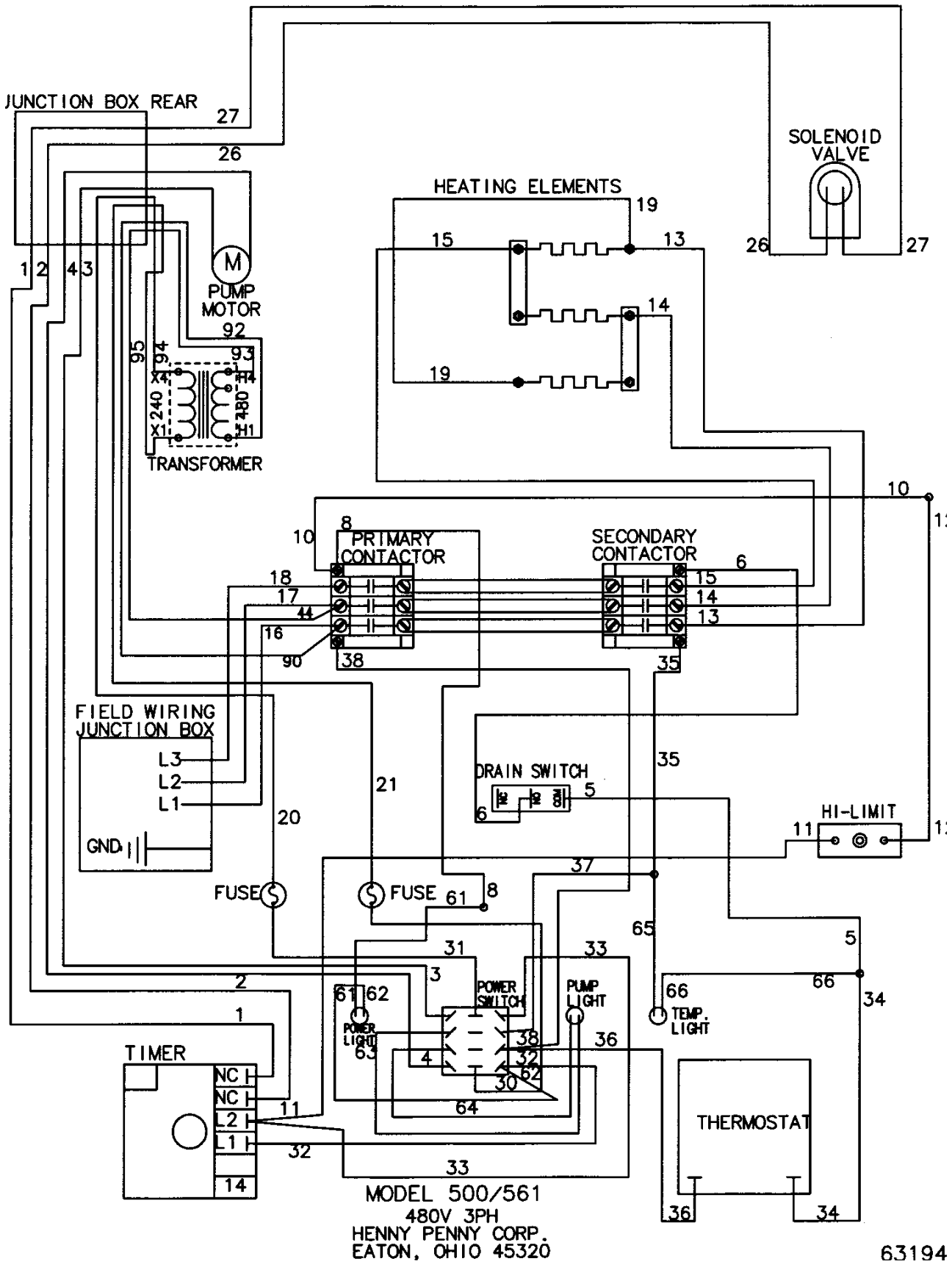

HEATERS
L2A
L2A-1
L2A-2
L1C-2
L1C-1
L1C
PRESSURE SOLENOID VALVE
P2
P1
FIELD WIRING JUNCTION BOX
CIRCUIT BREAKER
L2
L1
G
L2-1
L1-1
P2-HS2
PRIMARY (SAFETY) CONTACTOR
SECONDARY (HEAT) CONTACTOR
P2-HS3
P2-HS1
L1A
L1A-1
L1A-2
L1B
L1B-1
L1B-2
L1C
L1C-1
L1C-2
P1-1
H1
L1A-3
L2A-3
HLS-1
HLS
DRAIN SWITCH
HLD-1
HLD
NC
NO
COMM
D1
HIGH LIMIT
15 AMP BREAKER
15 AMP BREAKER
L1CB
L2CB
FILTER MOTOR PUMP
M2-2
M1-2
M2-1
M1-1
G1
MALE
4 PIN CONN FEMALE
15 PIN CONN FEMALE
INB
INA
G4
LCBN-1
L1CB-2
P2-HS5
D1-2
HLS-3
P1-3
H1-2
M2-3
M1-3
G1-1
D1-3
L1CB-3
POWER SWITCH
LCBN-2
P2-HS6
M1-4
M2-4
P7
P6
P5
P4
P3
P2
CONTROL BOARD
PB1
PB2
C24
CPS
PP1
CM1
PP2
CP
CH
CM
I/O BOARD
P15
P17
TEMP PROBE
SWITCHING POWER SUPPLY
G3
G2
MODEL 500SMS FRYER
208-240V 50/60HZ 1PH
HENNY PENNY CORP., EATON, OH 45320
73309_D



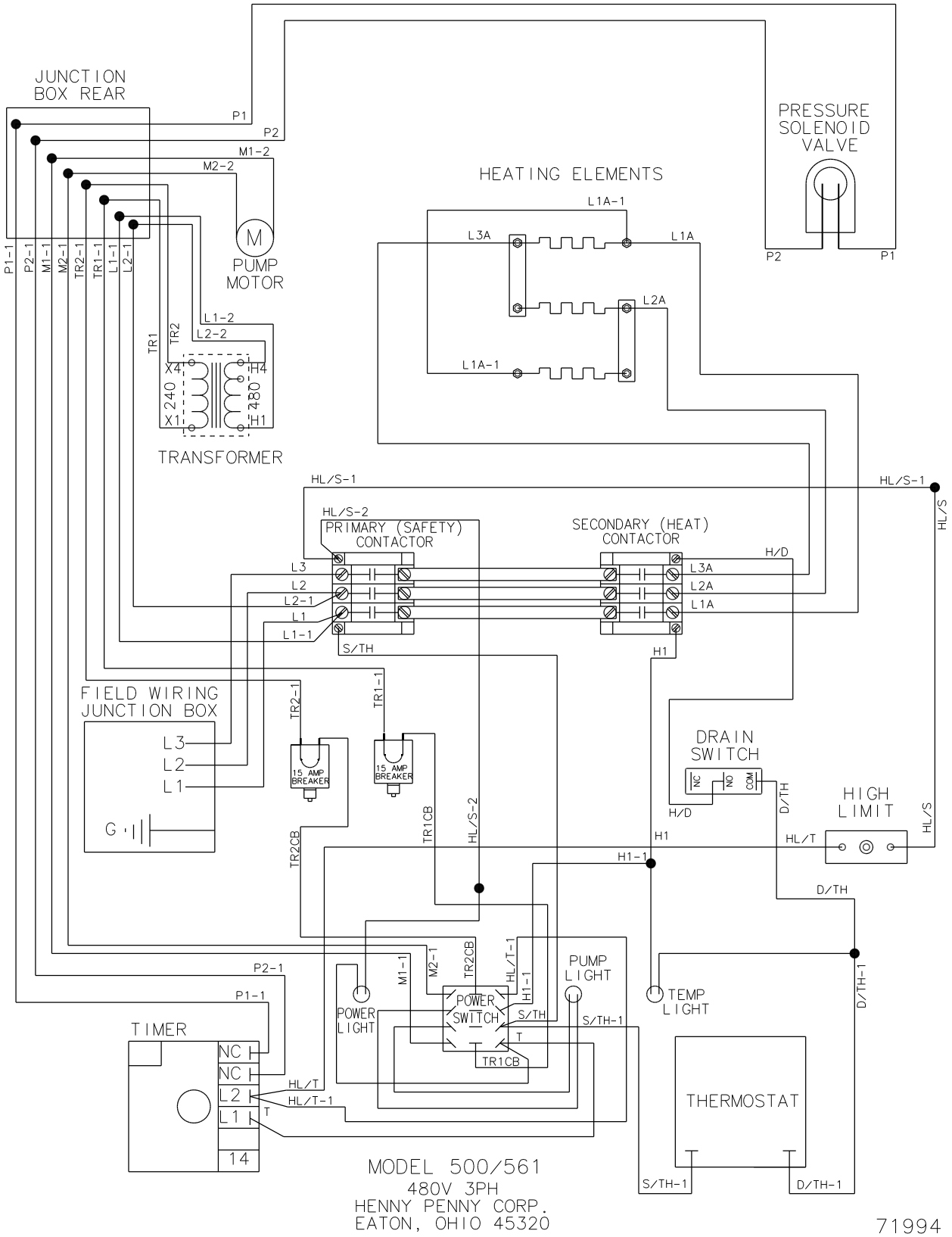
Before April 1, 2006



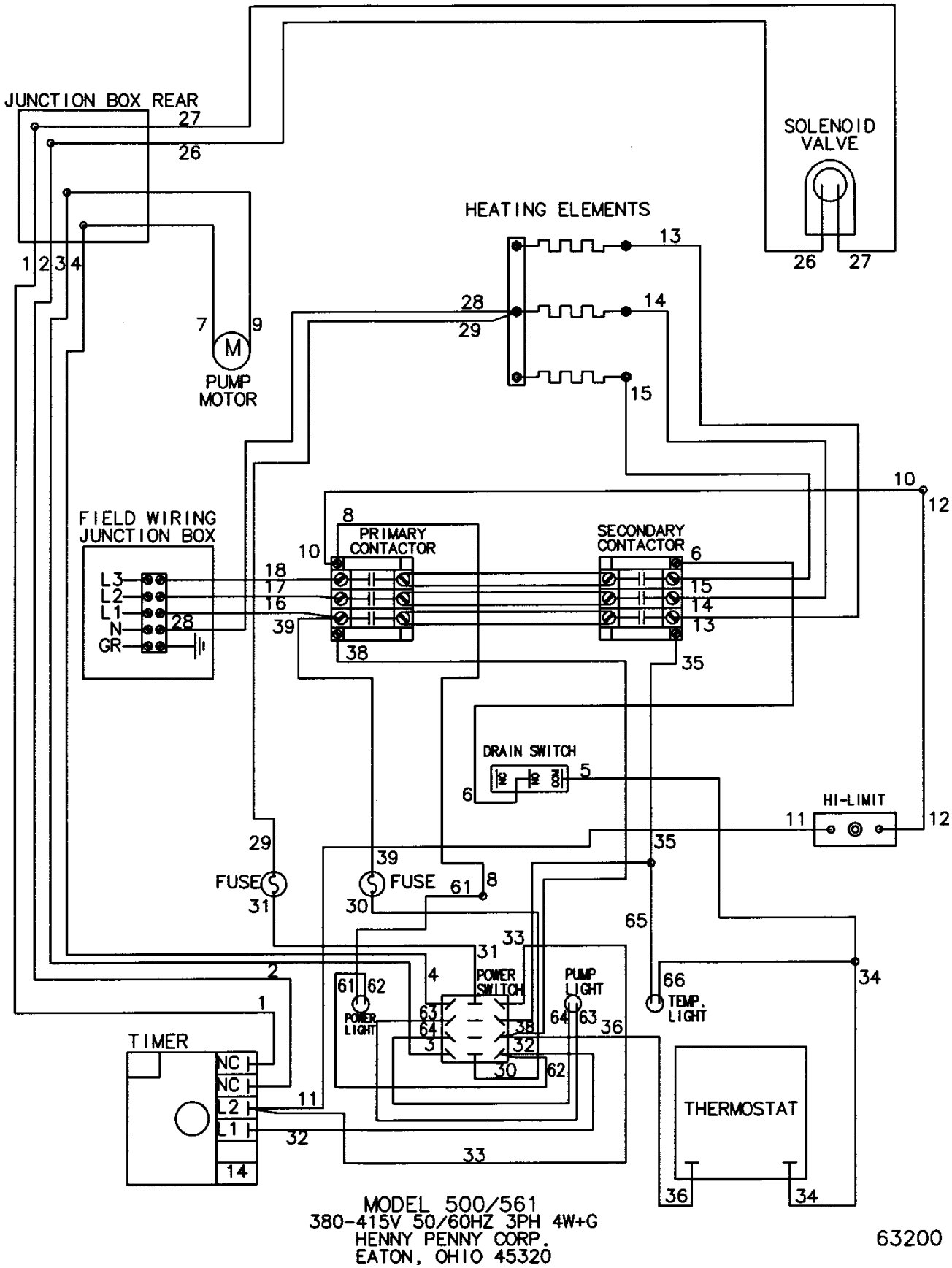
April 1, 2006 & After



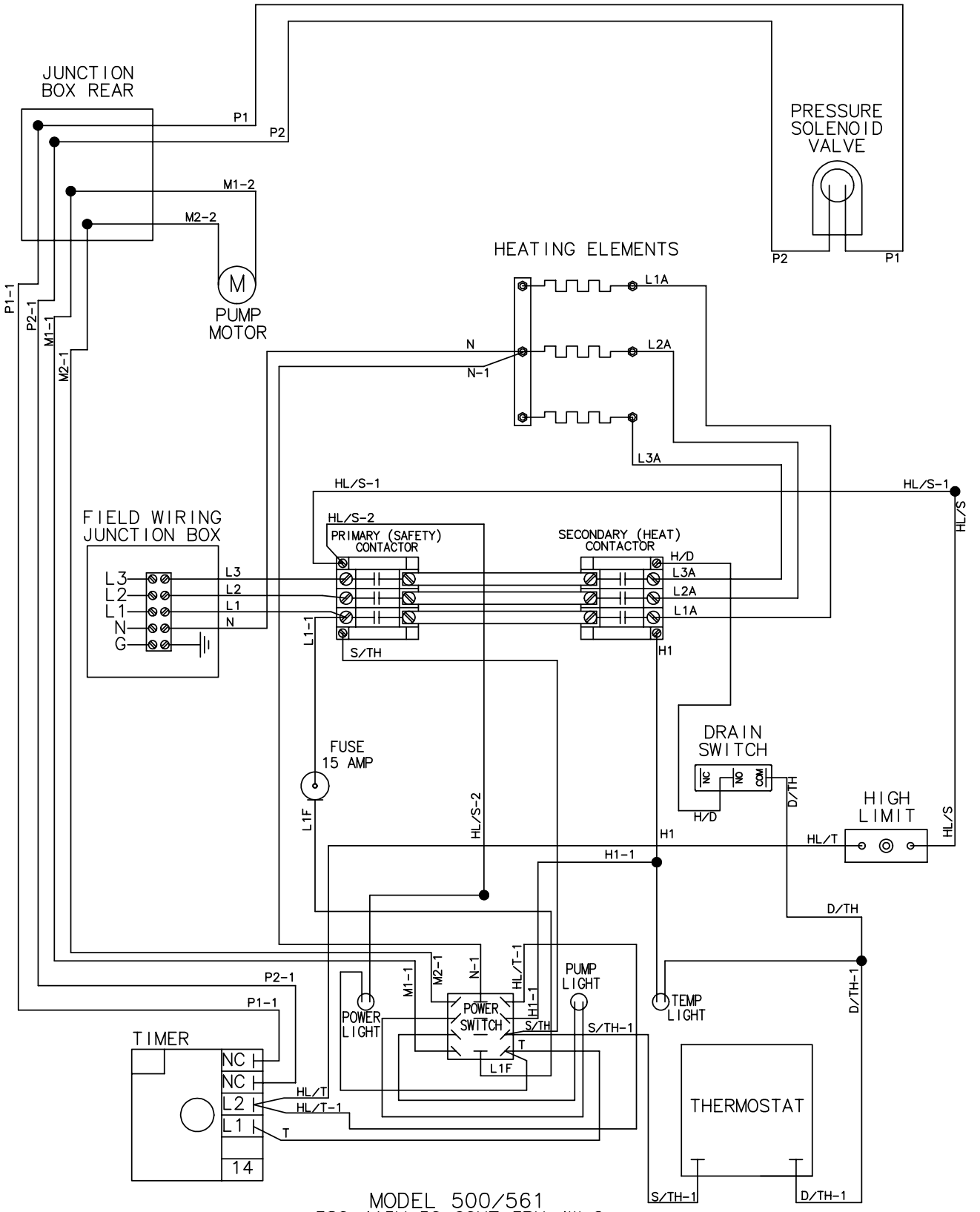
Before April 1, 2006



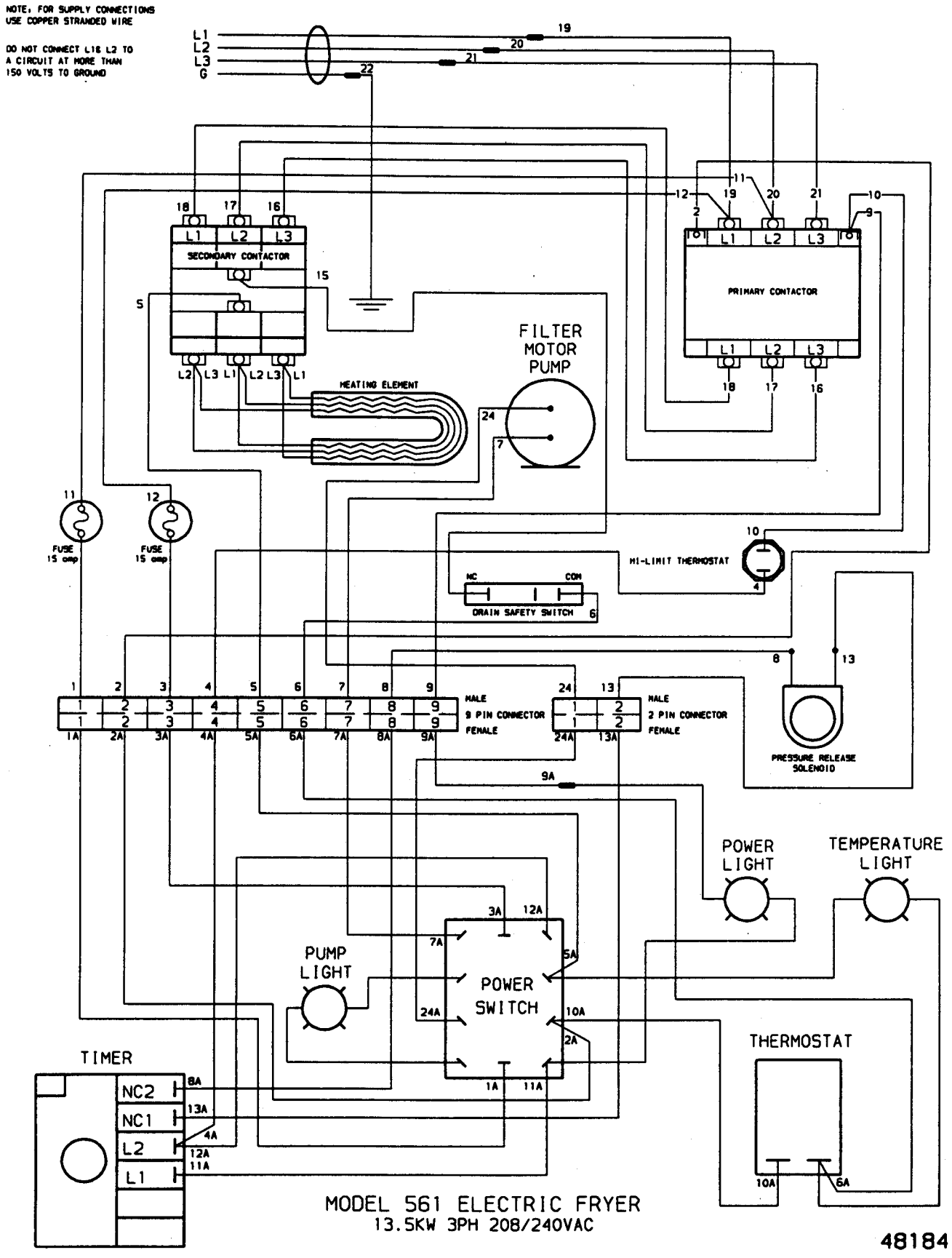
April 1, 2006 & After

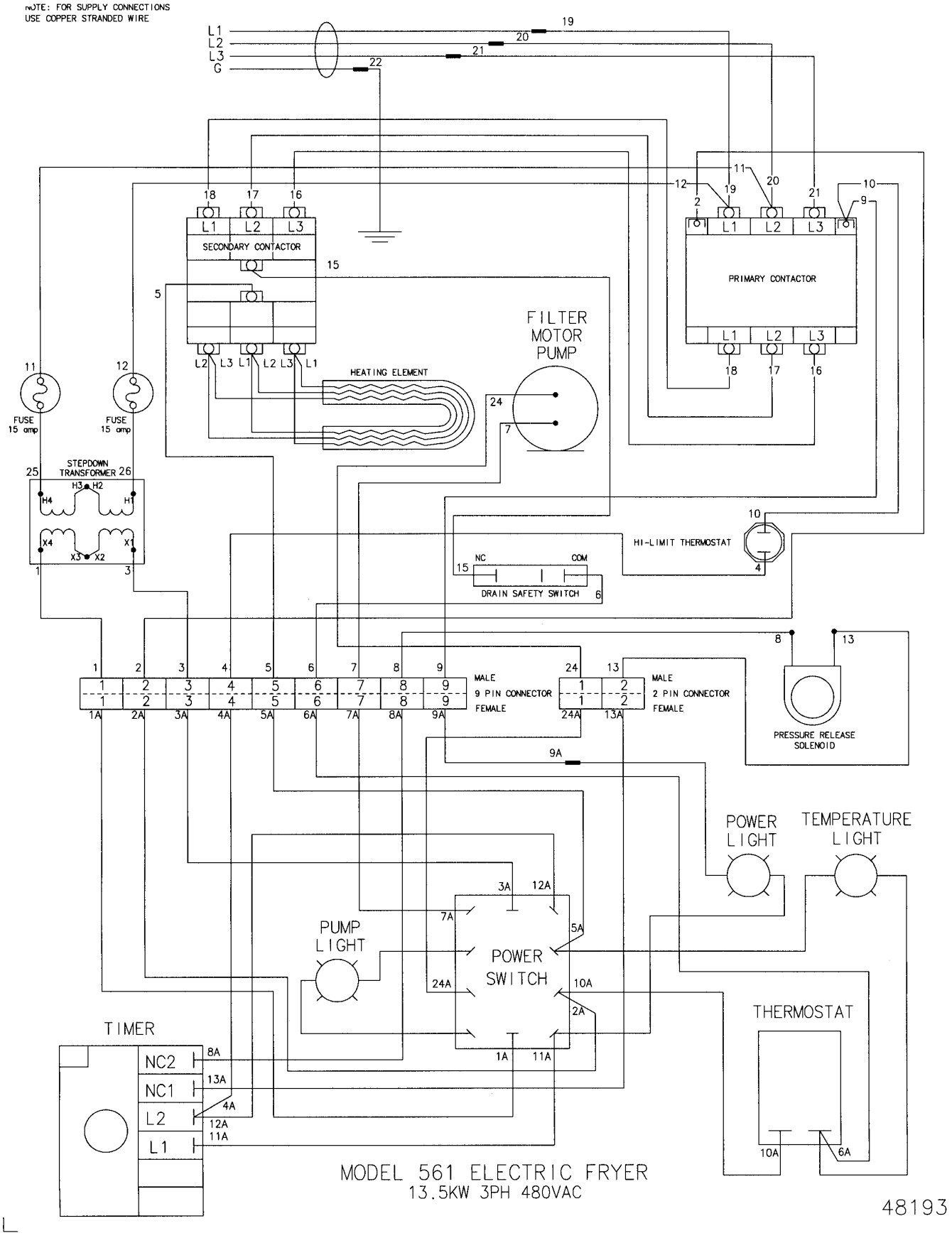


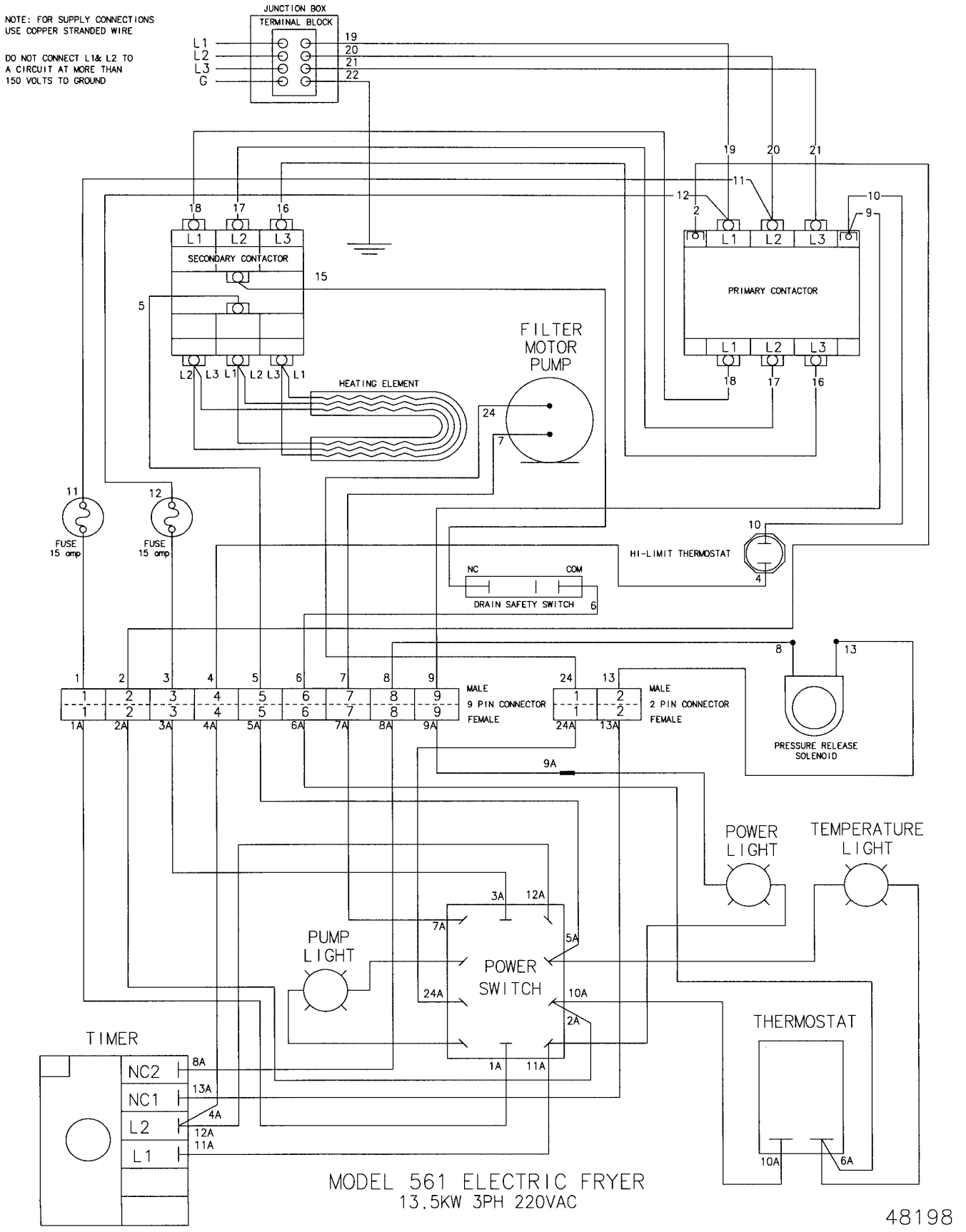
Before April 1, 2006

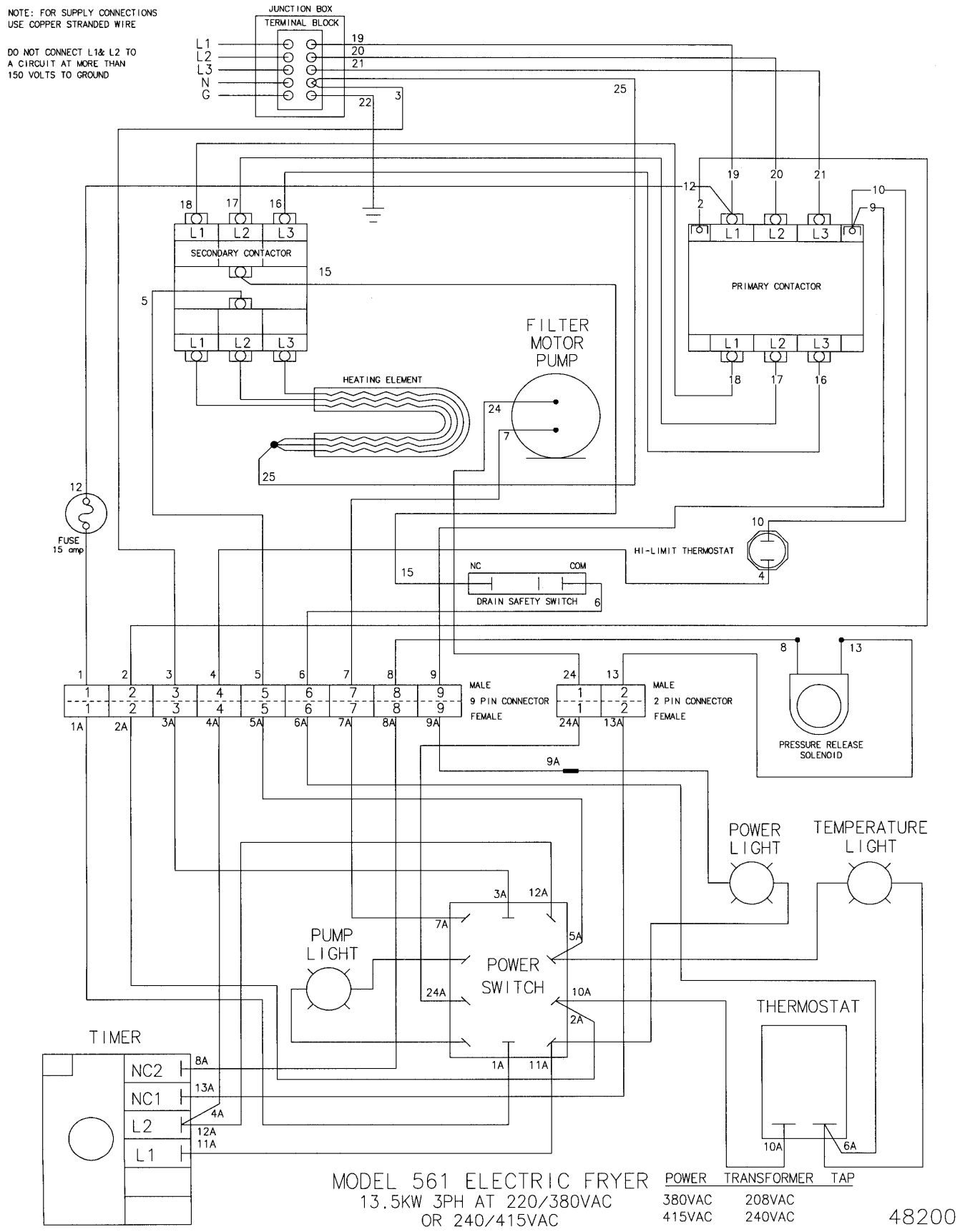


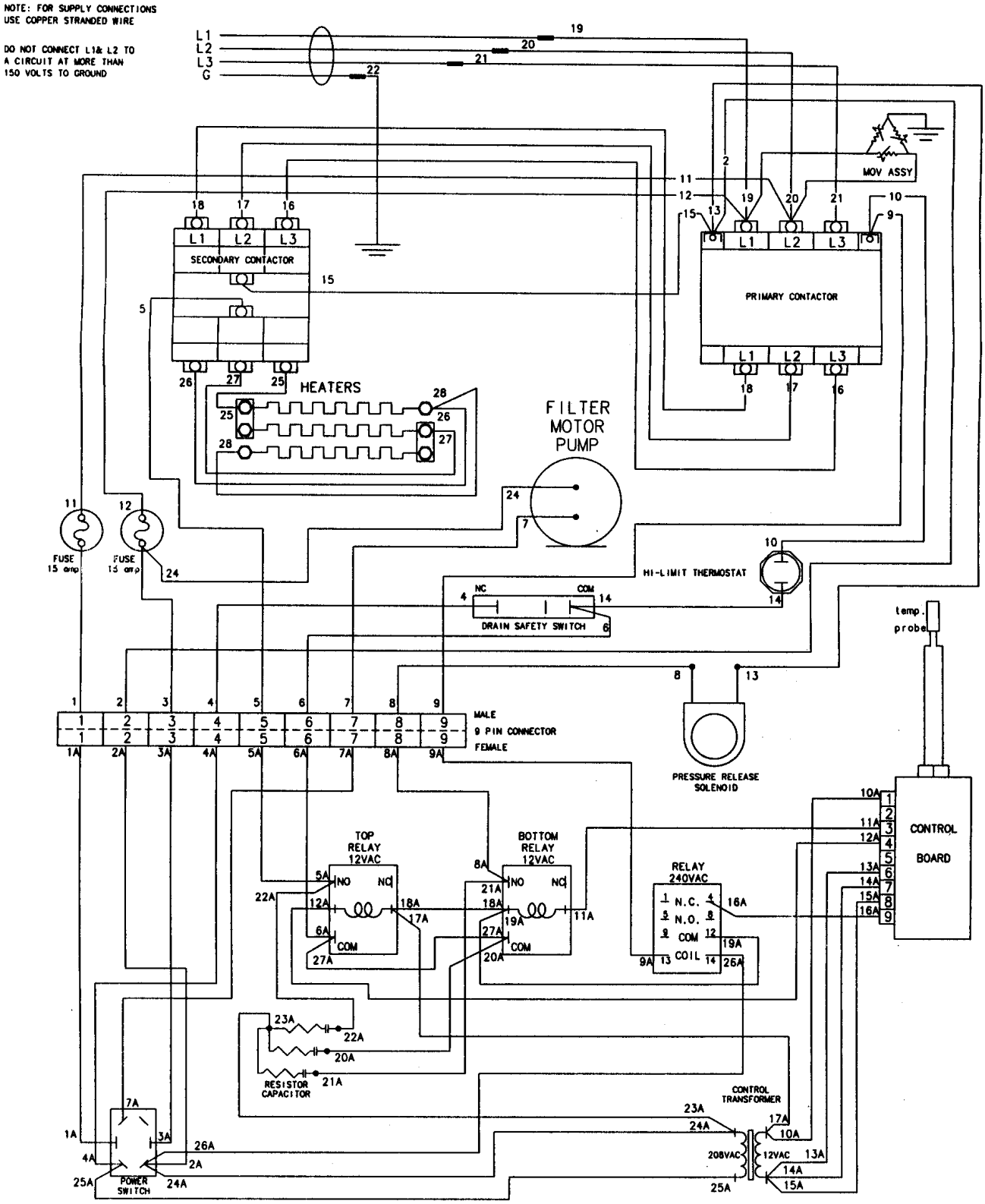
April 1, 2006 & After


NOTE: FOR SUPPLY CONNECTIONS USE COPPER STRANDED WIRE
DO NOT CONNECT L1& L2 TO A CIRCUIT AT MORE THAN 150 VOLTS TO GROUND
L1
L2
L3
G
SECONDARY CONTACTOR
PRIMARY CONTACTOR
HEATING ELEMENT
FILTER MOTOR PUMP
FUSE 15 amp
FUSE 15 amp
HI-LIMIT THERMOSTAT
NC
COM
DRAIN SAFETY SWITCH
MALE 9 PIN CONNECTOR FEMALE
MALE 2 PIN CONNECTOR FEMALE
PRESSURE RELEASE SOLENOID
POWER LIGHT
TEMPERATURE LIGHT
PUMP LIGHT
POWER SWITCH
TIMER
NC2
NC1
L2
L1
THERMOSTAT
MODEL 561 ELECTRIC FRYER
13.5KW 3PH 208/240VAC
48184


NOTE: FOR SUPPLY CONNECTIONS
USE COPPER STRANDED WIRE
L1
L2
L3
G
SECONDARY CONTACTOR
PRIMARY CONTACTOR
FILTER
MOTOR
PUMP
HEATING ELEMENT
FUSE
15 amp
FUSE
15 amp
STEPDOWN
TRANSFORMER
HI-LIMIT THERMOSTAT
NC
COM
DRAIN SAFETY SWITCH
MALE
9 PIN CONNECTOR
FEMALE
MALE
2 PIN CONNECTOR
FEMALE
PRESSURE RELEASE
SOLENOID
POWER
LIGHT
TEMPERATURE
LIGHT
PUMP
LIGHT
POWER
SWITCH
TIMER
NC2
NC1
L2
L1
THERMOSTAT
MODEL 561 ELECTRIC FRYER
13.5KW 3PH 480VAC
48193

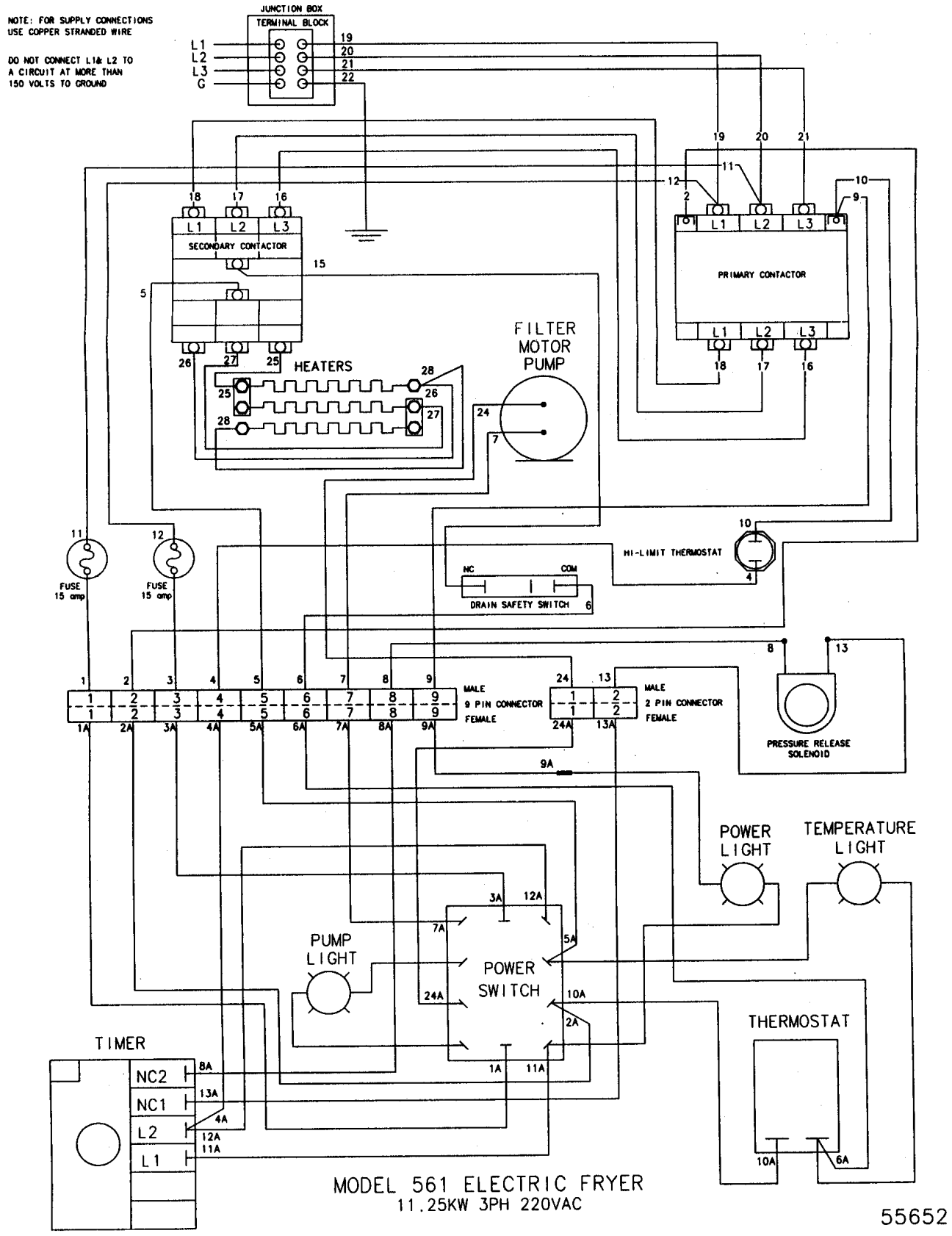

NOTE: FOR SUPPLY CONNECTIONS USE COPPER STRANDED WIRE
DO NOT CONNECT L1& L2 TO A CIRCUIT AT MORE THAN 150 VOLTS TO GROUND
JUNCTION BOX
TERMINAL BLOCK
L1
L2
L3
G
SECONDARY CONTACTOR
PRIMARY CONTACTOR
HEATING ELEMENT
FILTER MOTOR PUMP
FUSE 15 amp
FUSE 15 amp
HI-LIMIT THERMOSTAT
NC
COM
DRAIN SAFETY SWITCH
MALE 9 PIN CONNECTOR FEMALE
MALE 2 PIN CONNECTOR FEMALE
PRESSURE RELEASE SOLENOID
POWER LIGHT
TEMPERATURE LIGHT
PUMP LIGHT
POWER SWITCH
THERMOSTAT
TIMER
NC2
NC1
L2
L1
MODEL 561 ELECTRIC FRYER
13.5KW 3PH 220VAC
48198

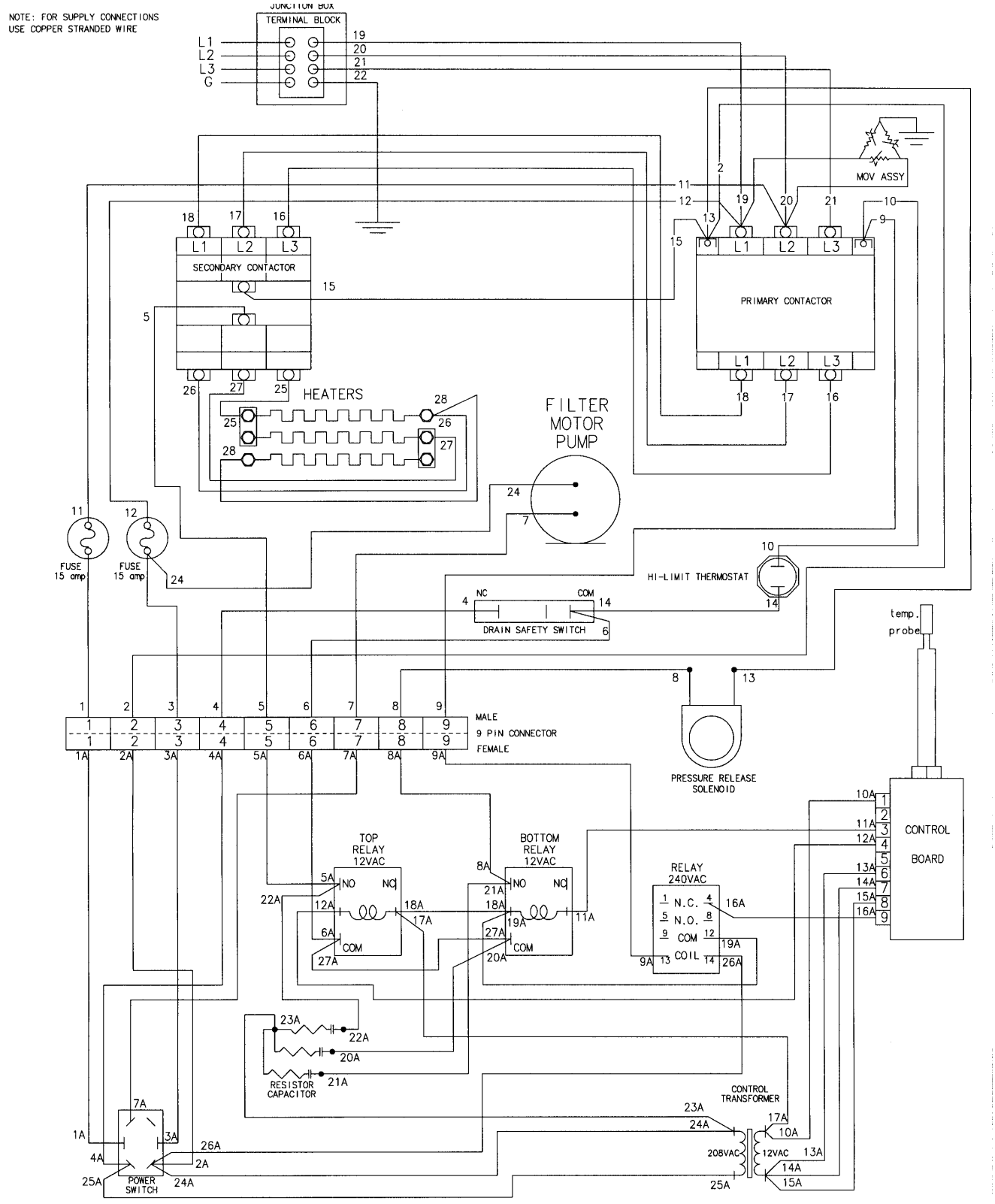

NOTE: FOR SUPPLY CONNECTIONS
USE COPPER STRANDED WIRE
DO NOT CONNECT L1& L2 TO
A CIRCUIT AT MORE THAN
150 VOLTS TO GROUND
JUNCTION BOX
TERMINAL BLOCK
L1
L2
L3
N
G
SECONDARY CONTACTOR
PRIMARY CONTACTOR
FILTER
MOTOR
PUMP
HEATING ELEMENT
FUSE
15 amp
HI-LIMIT THERMOSTAT
NC
COM
DRAIN SAFETY SWITCH
MALE
9 PIN CONNECTOR
FEMALE
MALE
2 PIN CONNECTOR
FEMALE
PRESSURE RELEASE
SOLENOID
POWER
LIGHT
TEMPERATURE
LIGHT
PUMP
LIGHT
POWER
SWITCH
THERMOSTAT
TIMER
NC2
NC1
L2
L1
MODEL 561 ELECTRIC FRYER
13.5KW 3PH AT 220/380VAC
OR 240/415VAC
POWER TRANSFORMER TAP
380VAC 208VAC
415VAC 240VAC
48200



MODEL 561 ELECTRIC FRYER
11.25KW 3PH 208/240VAC

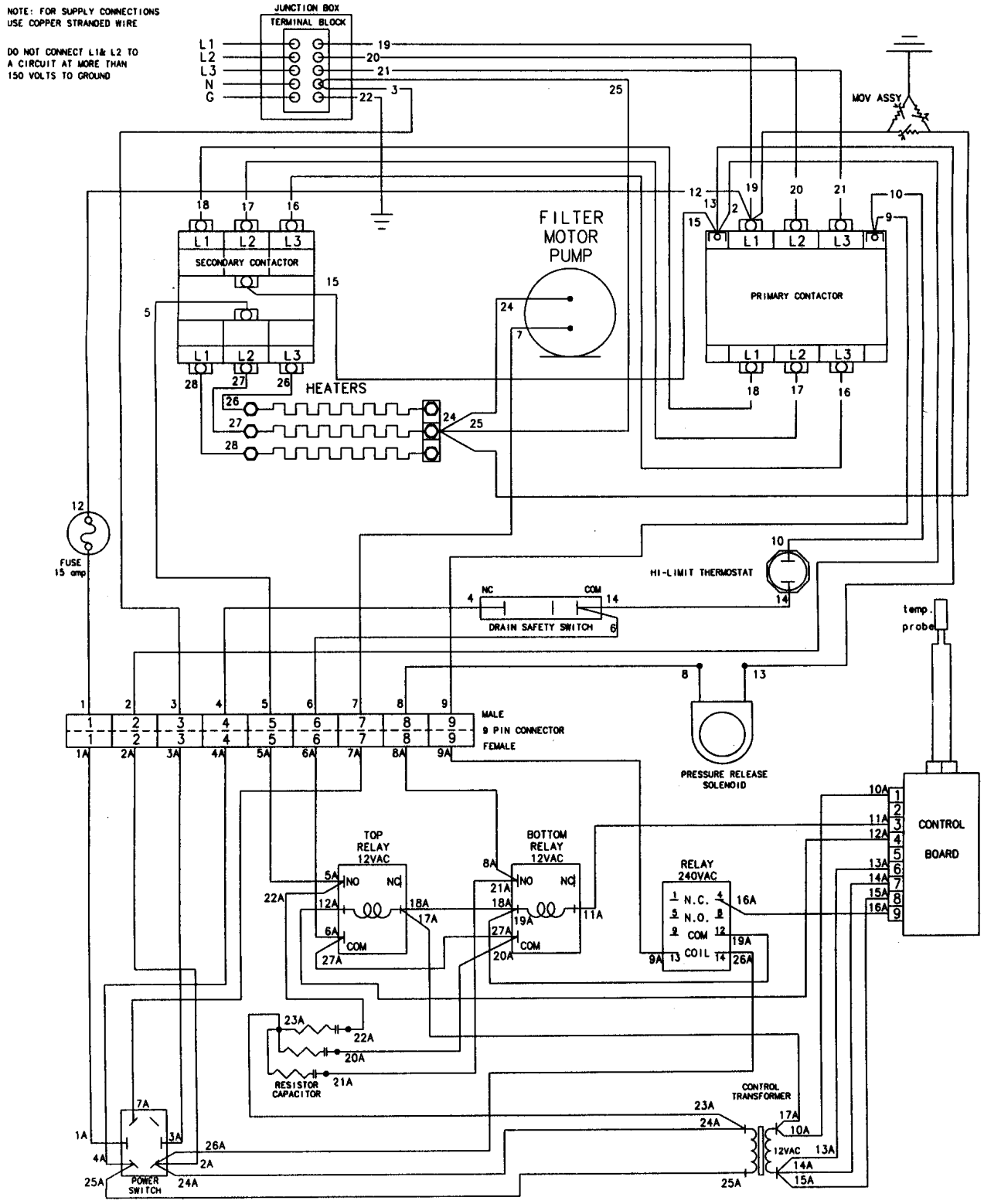
55653


NOTE: FOR SUPPLY CONNECTIONS USE COPPER STRANDED WIRE
DO NOT CONNECT L1& L2 TO A CIRCUIT AT MORE THAN 150 VOLTS TO GROUND
JUNCTION BOX
TERMINAL BLOCK
L1
L2
L3
G
SECONDARY CONTACTOR
PRIMARY CONTACTOR
HEATERS
FILTER MOTOR PUMP
FUSE 15 amp
FUSE 15 amp
HI-LIMIT THERMOSTAT
NC
COM
DRAIN SAFETY SWITCH
MALE 9 PIN CONNECTOR FEMALE
MALE 2 PIN CONNECTOR FEMALE
PRESSURE RELEASE SOLENOID
POWER LIGHT
TEMPERATURE LIGHT
PUMP LIGHT
POWER SWITCH
THERMOSTAT
TIMER
NC2
NC1
L2
L1
MODEL 561 ELECTRIC FRYER
11.25KW 3PH 220VAC
55652



MODEL 561 ELECTRIC FRYER
11.25KW 3PH 220VAC

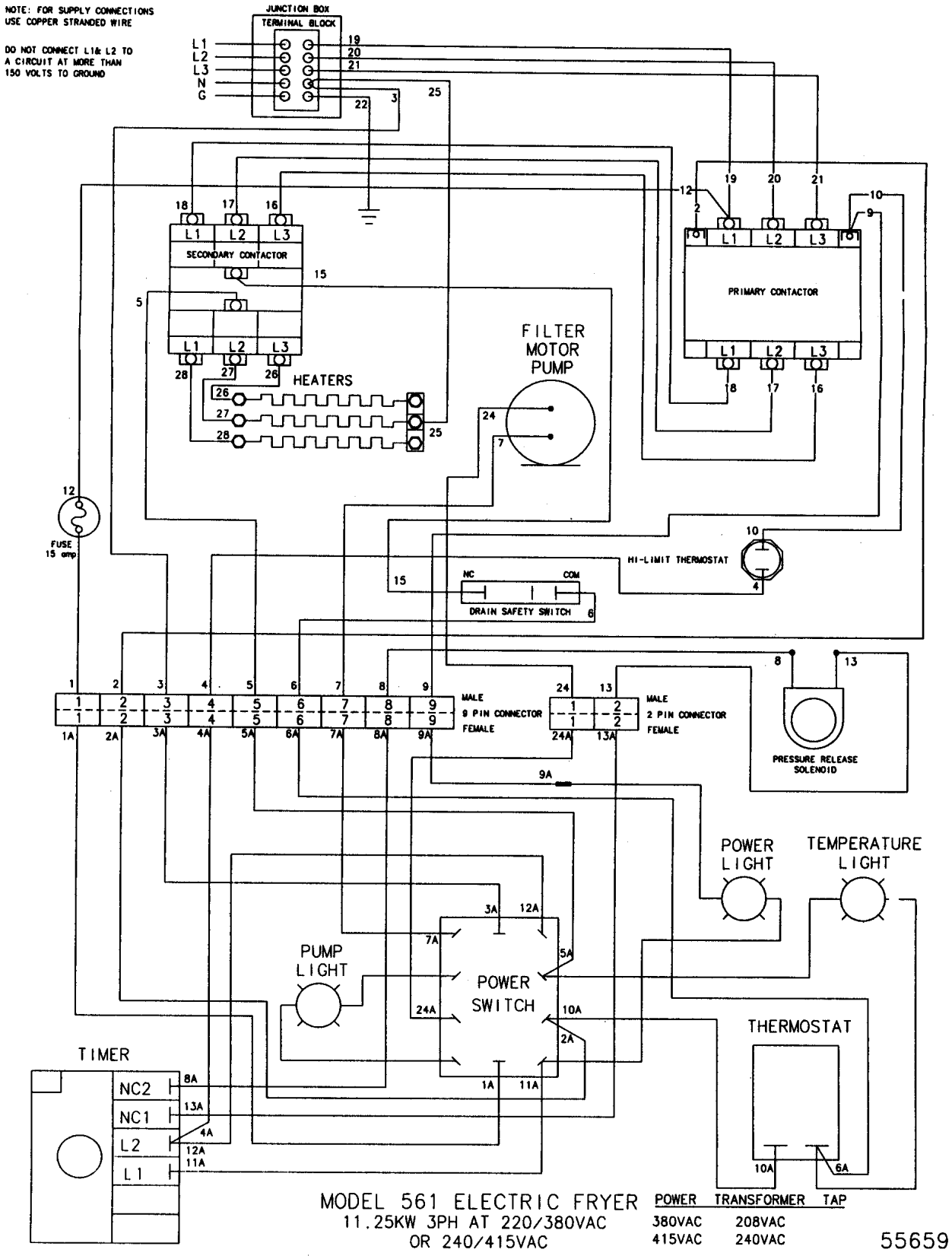
55650

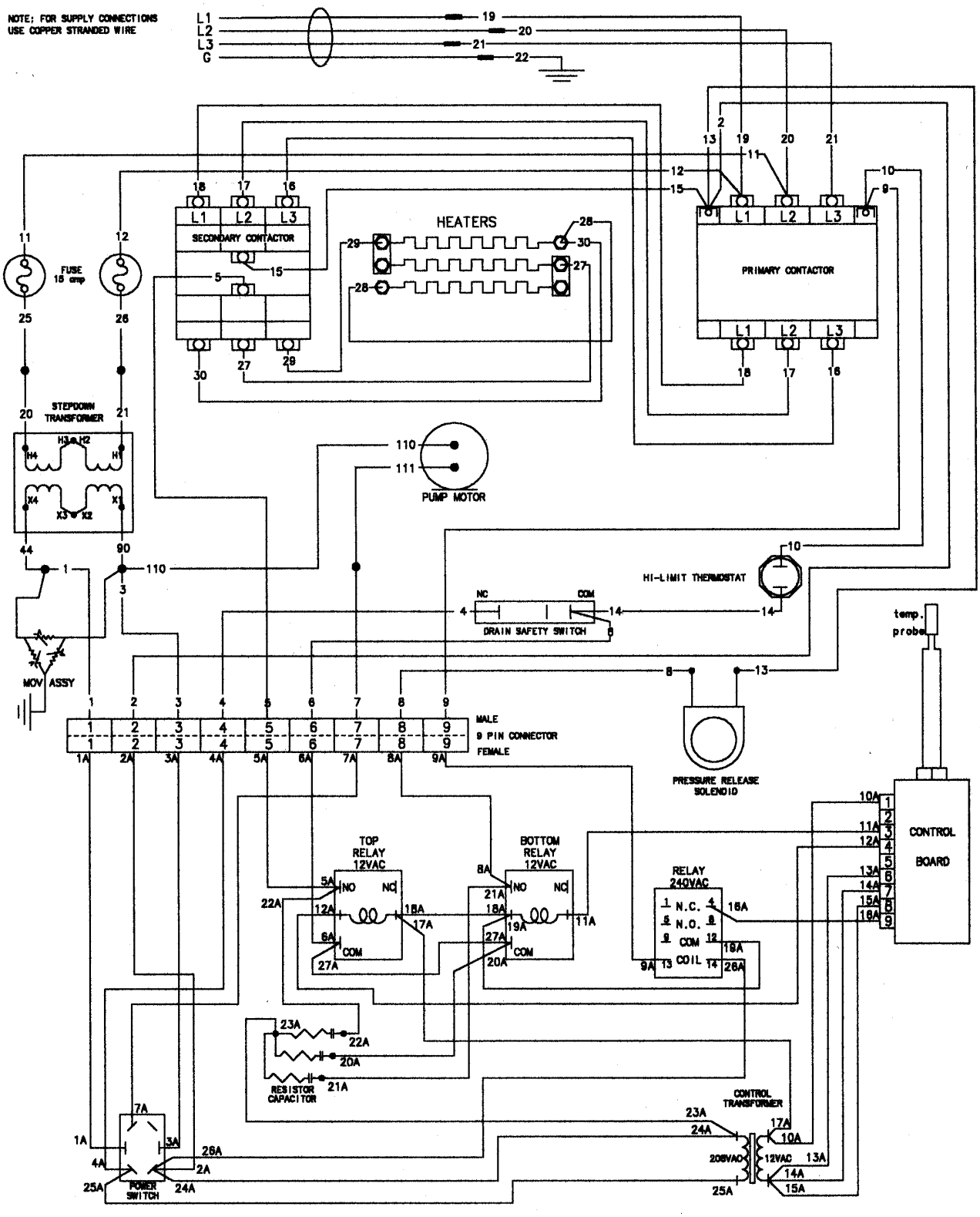


MODEL 561 ELECTRIC FRYER
11.25KW 3PH AT 220/380VAC
OR 240/415VAC

POWER TRANSFORMER TAP	
380VAC	208VAC
415VAC	240VAC

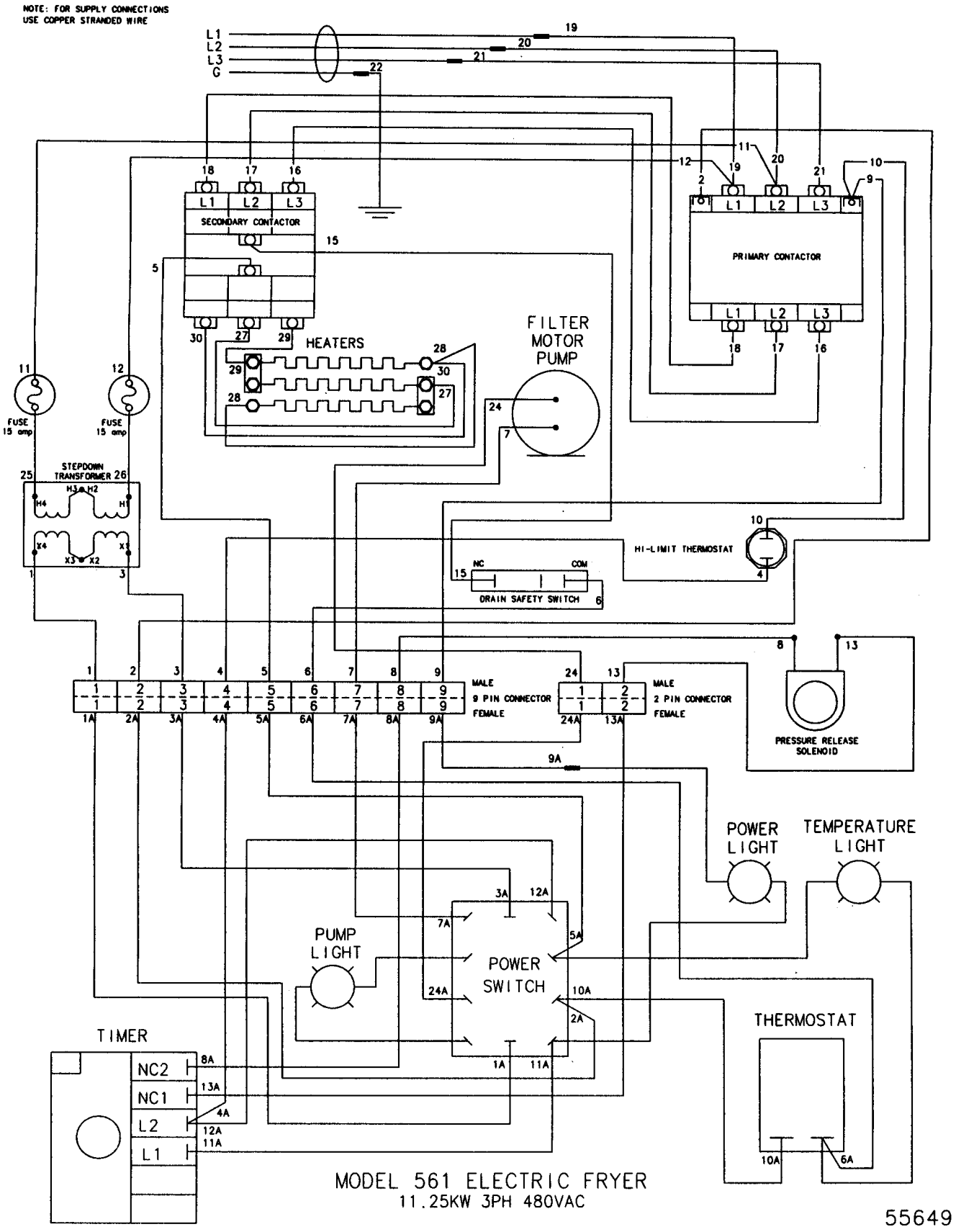
55661

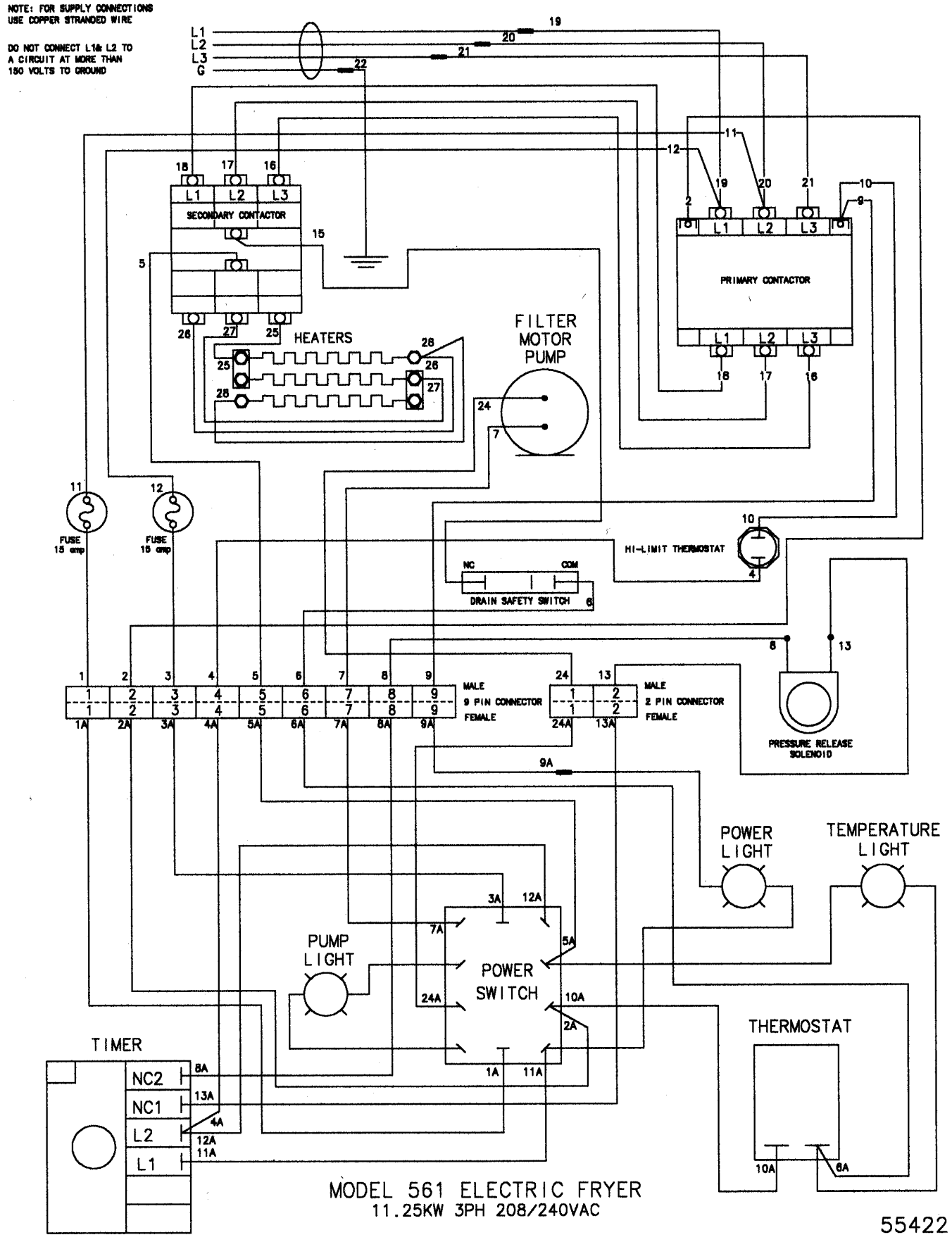

NOTE: FOR SUPPLY CONNECTIONS USE COPPER STRANDED WIRE
DO NOT CONNECT L1& L2 TO A CIRCUIT AT MORE THAN 150 VOLTS TO GROUND
JUNCTION BOX
TERMINAL BLOCK
L1
L2
L3
N
G
SECONDARY CONTACTOR
PRIMARY CONTACTOR
HEATERS
FILTER MOTOR PUMP
FUSE 15 amp
HI-LIMIT THERMOSTAT
NC
COM
DRAIN SAFETY SWITCH
MALE 9 PIN CONNECTOR FEMALE
MALE 2 PIN CONNECTOR FEMALE
PRESSURE RELEASE SOLENOID
POWER LIGHT
TEMPERATURE LIGHT
PUMP LIGHT
POWER SWITCH
THERMOSTAT
TIMER
NC2
NC1
L2
L1
MODEL 561 ELECTRIC FRYER
11.25KW 3PH AT 220/380VAC
OR 240/415VAC
POWER TRANSFORMER TAP
380VAC 208VAC
415VAC 240VAC
55659

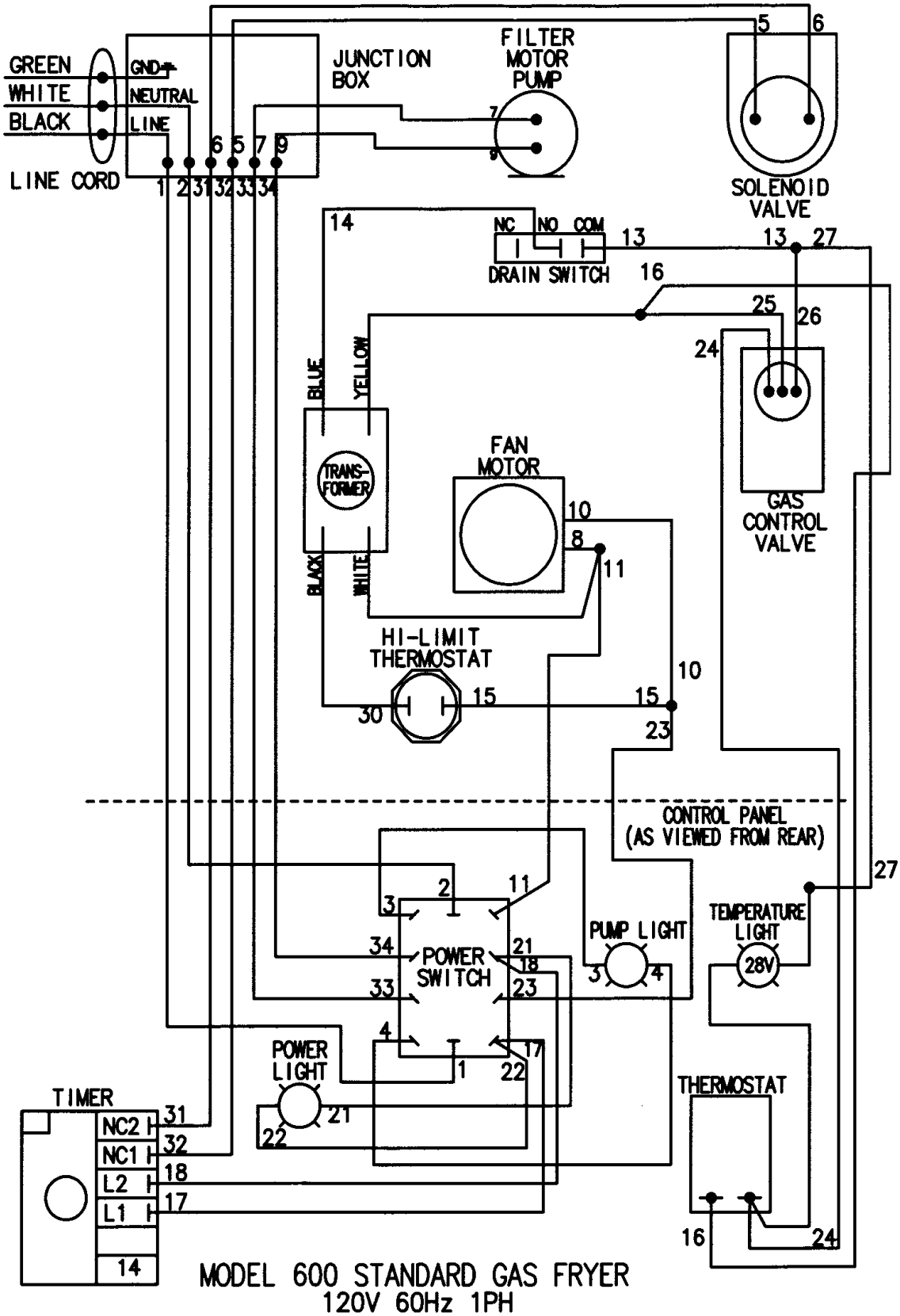


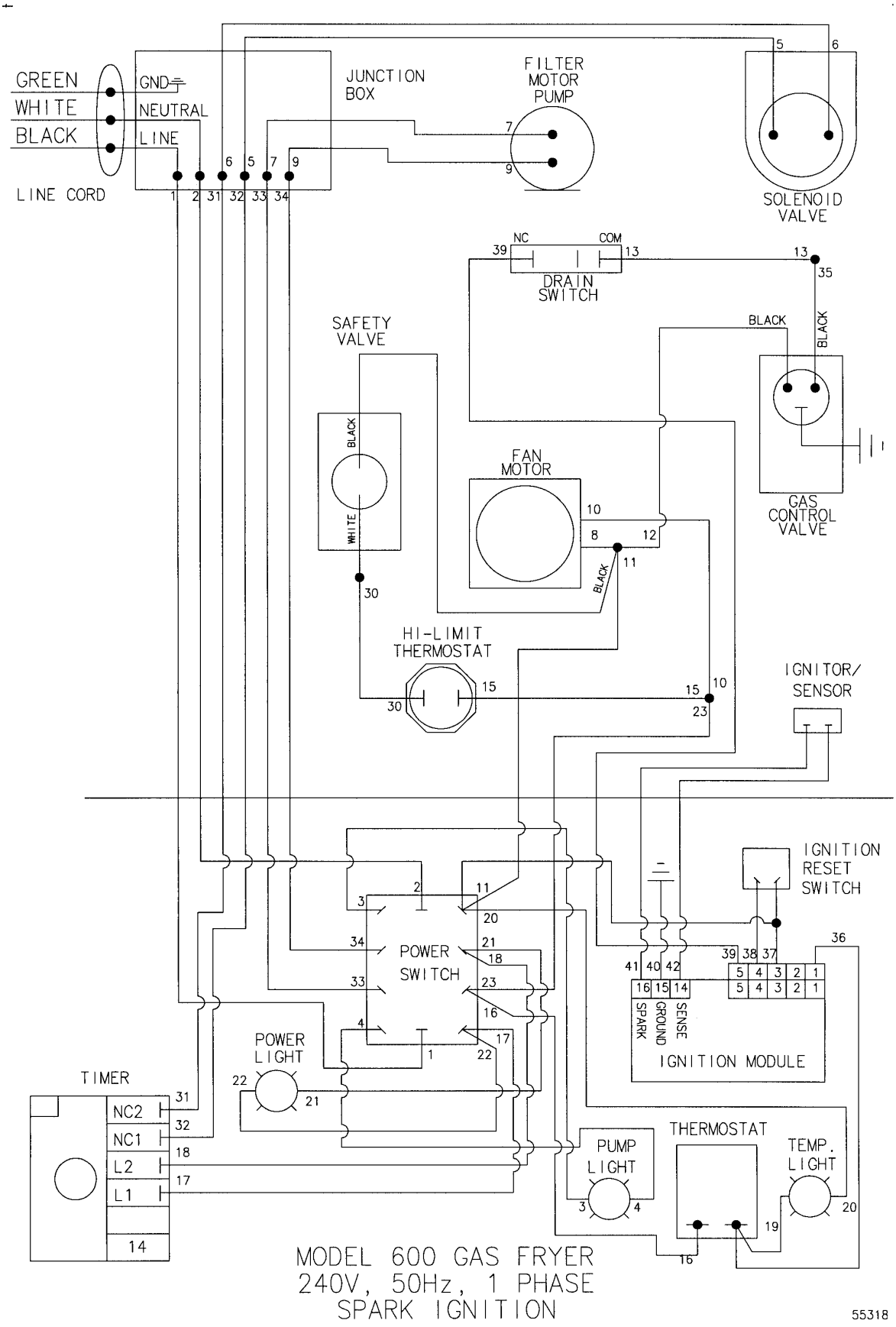
MODEL 561 ELECTRIC FRYER
11.25KW 3PH 480VAC

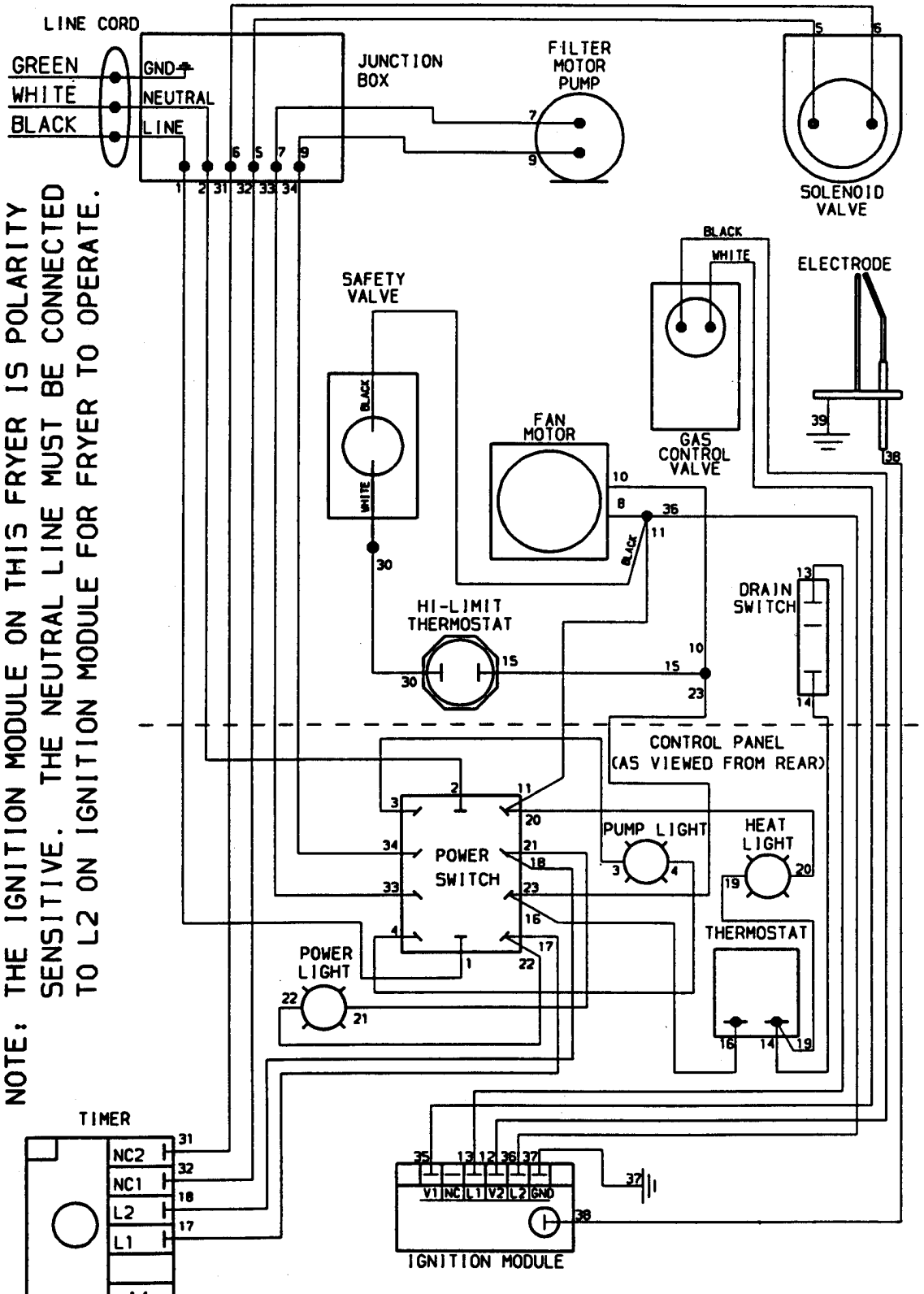
55651


NOTE: FOR SUPPLY CONNECTIONS
USE COPPER STRANDED WIRE
L1
L2
L3
G
SECONDARY CONTACTOR
PRIMARY CONTACTOR
HEATERS
FILTER
MOTOR
PUMP
FUSE
15 amp
FUSE
15 amp
STEPDOWN
TRANSFORMER
HI-LIMIT THERMOSTAT
NC
COM
DRAIN SAFETY SWITCH
MALE
9 PIN CONNECTOR
FEMALE
MALE
2 PIN CONNECTOR
FEMALE
PRESSURE RELEASE
SOLENOID
POWER
LIGHT
TEMPERATURE
LIGHT
PUMP
LIGHT
POWER
SWITCH
TIMER
NC2
NC1
L2
L1
THERMOSTAT
MODEL 561 ELECTRIC FRYER
11.25KW 3PH 480VAC
55649


NOTE: FOR SUPPLY CONNECTIONS USE COPPER STRANDED WIRE
DO NOT CONNECT L1& L2 TO A CIRCUIT AT MORE THAN 150 VOLTS TO GROUND
L1
L2
L3
G
SECONDARY CONTACTOR
PRIMARY CONTACTOR
HEATERS
FILTER MOTOR PUMP
FUSE 15 amp
FUSE 15 amp
HI-LIMIT THERMOSTAT
NC
COM
DRAIN SAFETY SWITCH
MALE 9 PIN CONNECTOR FEMALE
MALE 2 PIN CONNECTOR FEMALE
PRESSURE RELEASE SOLENOID
POWER LIGHT
TEMPERATURE LIGHT
PUMP LIGHT
POWER SWITCH
TIMER
NC2
NC1
L2
L1
THERMOSTAT
MODEL 561 ELECTRIC FRYER
11.25KW 3PH 208/240VAC
55422

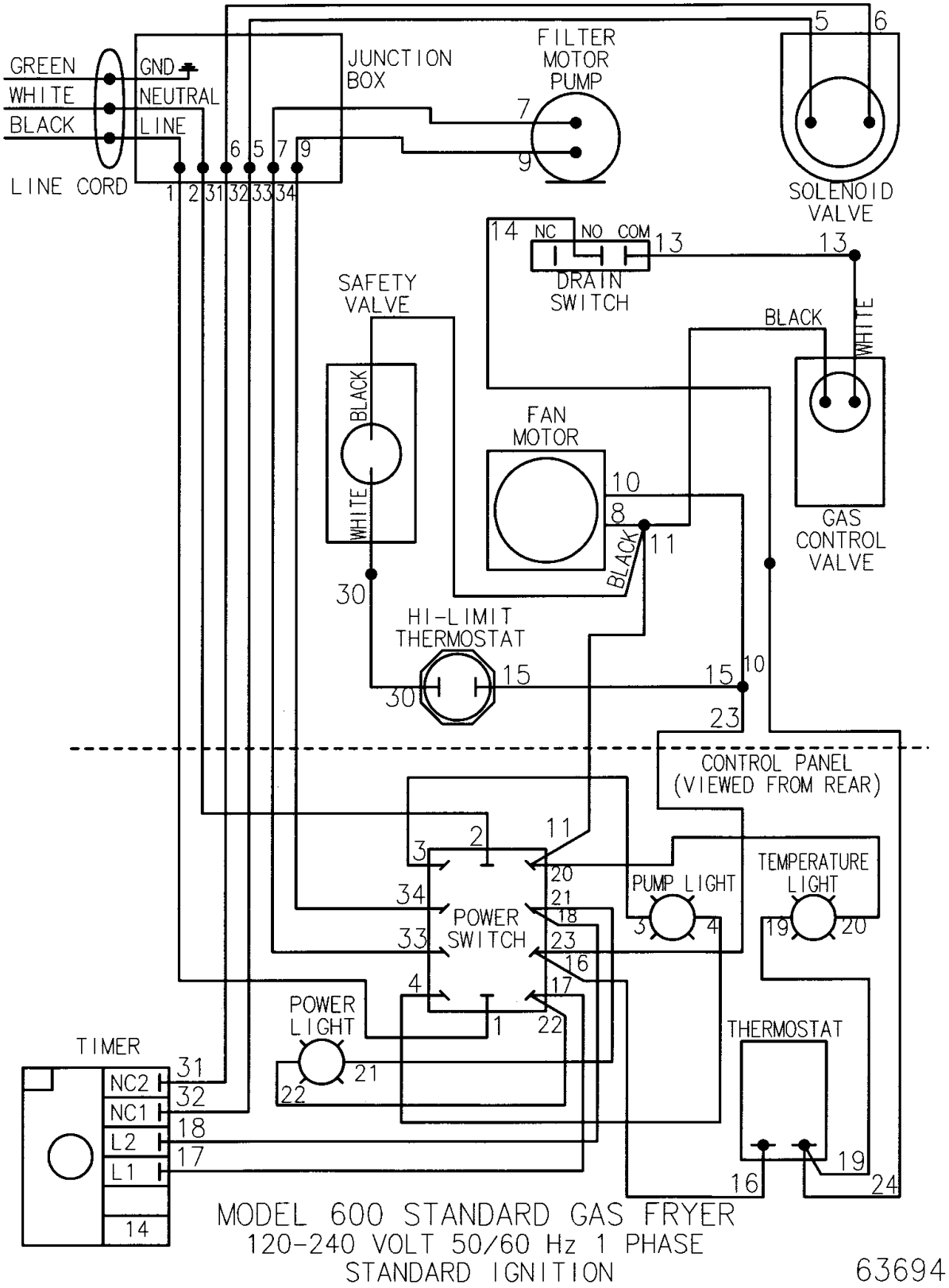

GREEN
WHITE
BLACK
GND
NEUTRAL
LINE
LINE CORD
JUNCTION BOX
FILTER MOTOR PUMP
SOLENOID VALVE
NC NO COM
DRAIN SWITCH
BLUE
YELLOW
TRANS-FORMER
FAN MOTOR
GAS CONTROL VALVE
BLACK
WHITE
HI-LIMIT THERMOSTAT
CONTROL PANEL (AS VIEWED FROM REAR)
POWER SWITCH
PUMP LIGHT
TEMPERATURE LIGHT
28V
POWER LIGHT
TIMER
NC2
NC1
L2
L1
THERMOSTAT
MODEL 600 STANDARD GAS FRYER
120V 60Hz 1PH
STANDARD IGNITION
HENNY PENNY CORP., EATON, OHIO 45320
63240


GREEN
WHITE
BLACK
GND
NEUTRAL
LINE
LINE CORD
JUNCTION BOX
FILTER MOTOR PUMP
SOLENOID VALVE
DRAIN SWITCH
NC
COM
SAFETY VALVE
FAN MOTOR
GAS CONTROL VALVE
HI-LIMIT THERMOSTAT
IGNITOR/ SENSOR
IGNITION RESET SWITCH
POWER SWITCH
POWER LIGHT
TIMER
NC2
NC1
L2
L1
IGNITION MODULE
SPARK
GROUND
SENSE
PUMP LIGHT
THERMOSTAT
TEMP. LIGHT
MODEL 600 GAS FRYER
240V, 50Hz, 1 PHASE
SPARK IGNITION
55318

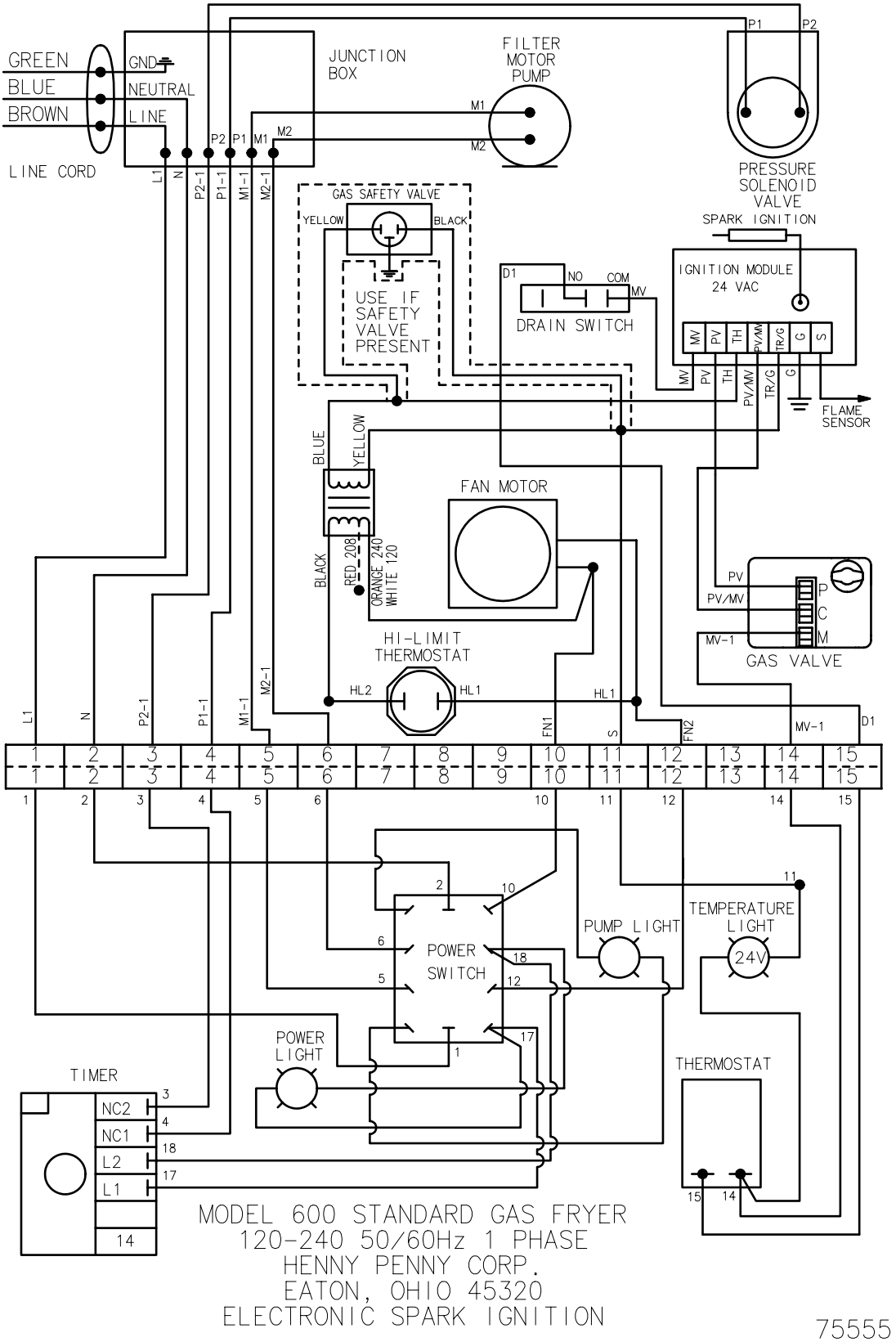


MODEL 600 STANDARD GAS FRYER
120 VOLT 60 HZ 1 PHASE
ELECTRONIC IGNITION

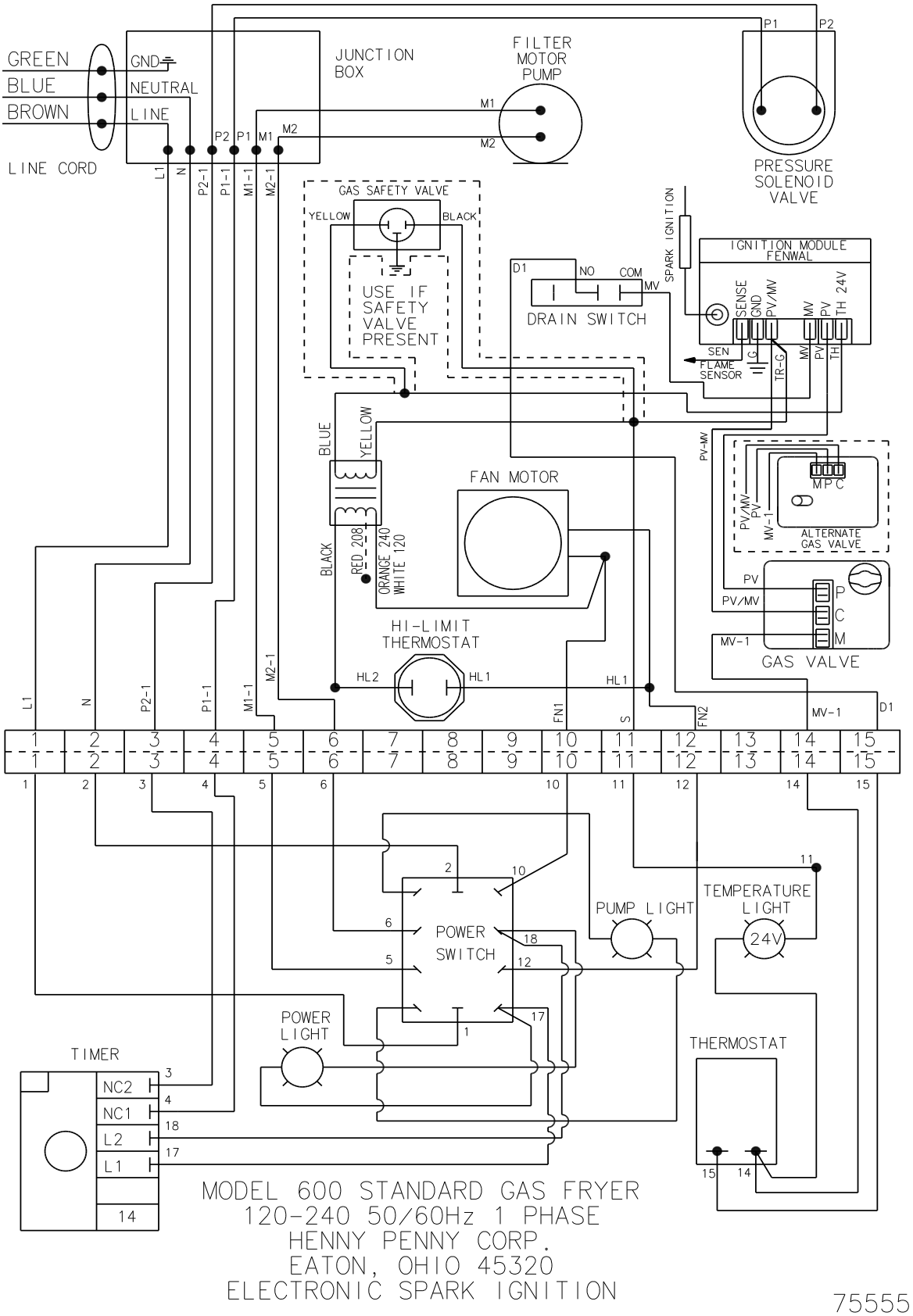
34389



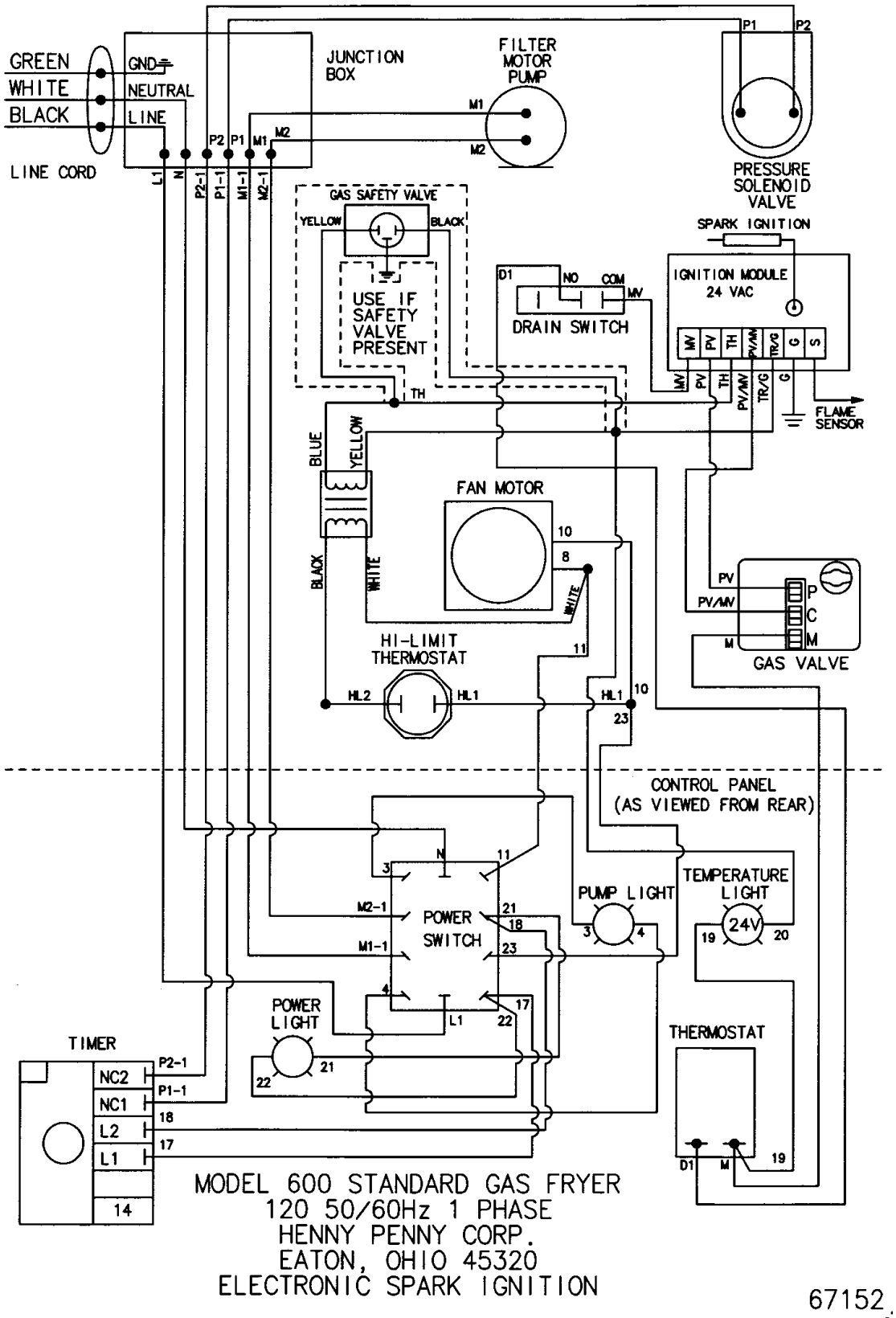
SN: AN0702112 & below



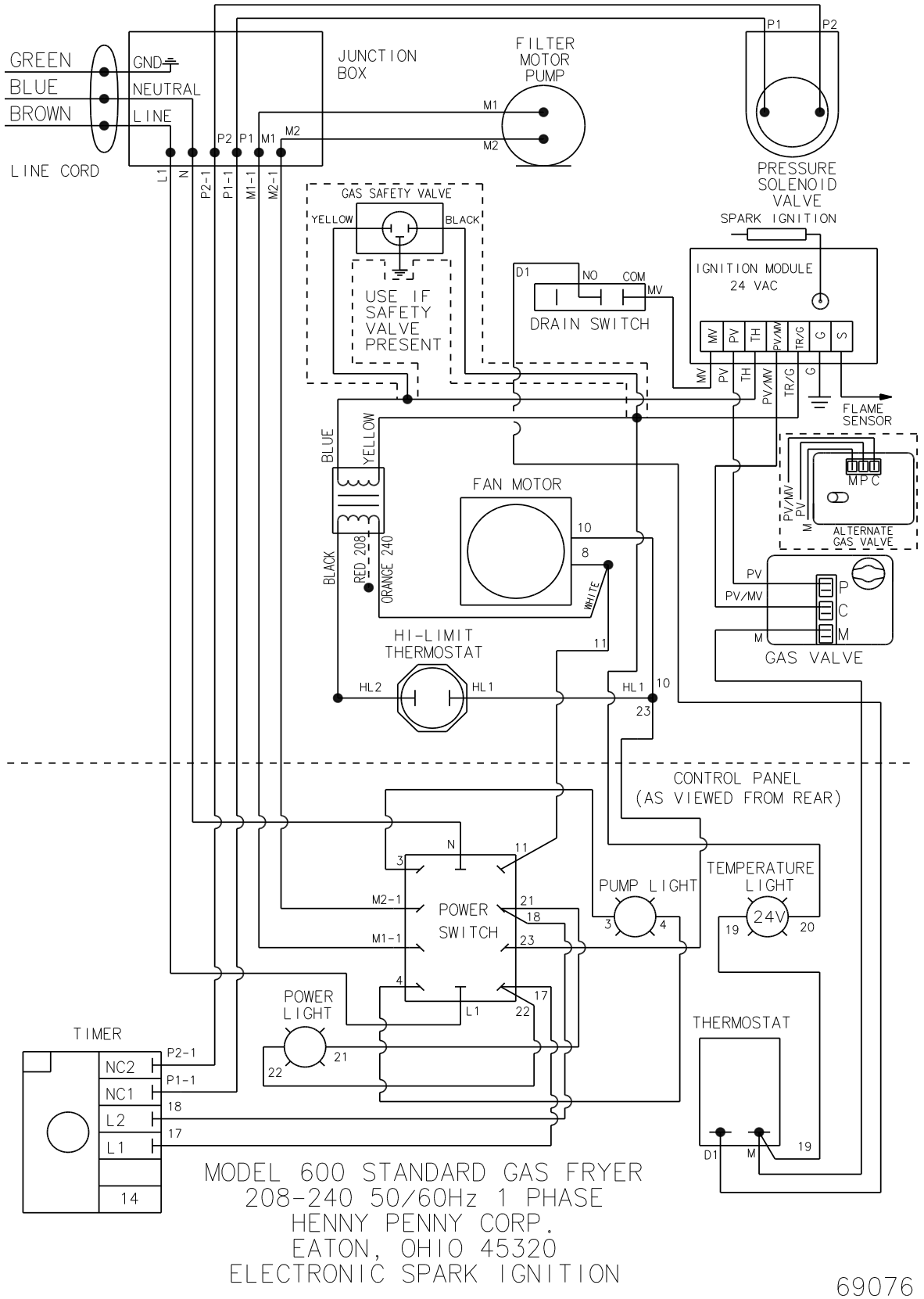
SN: AN0703021 to AN0711029 (Robertshaw Module)



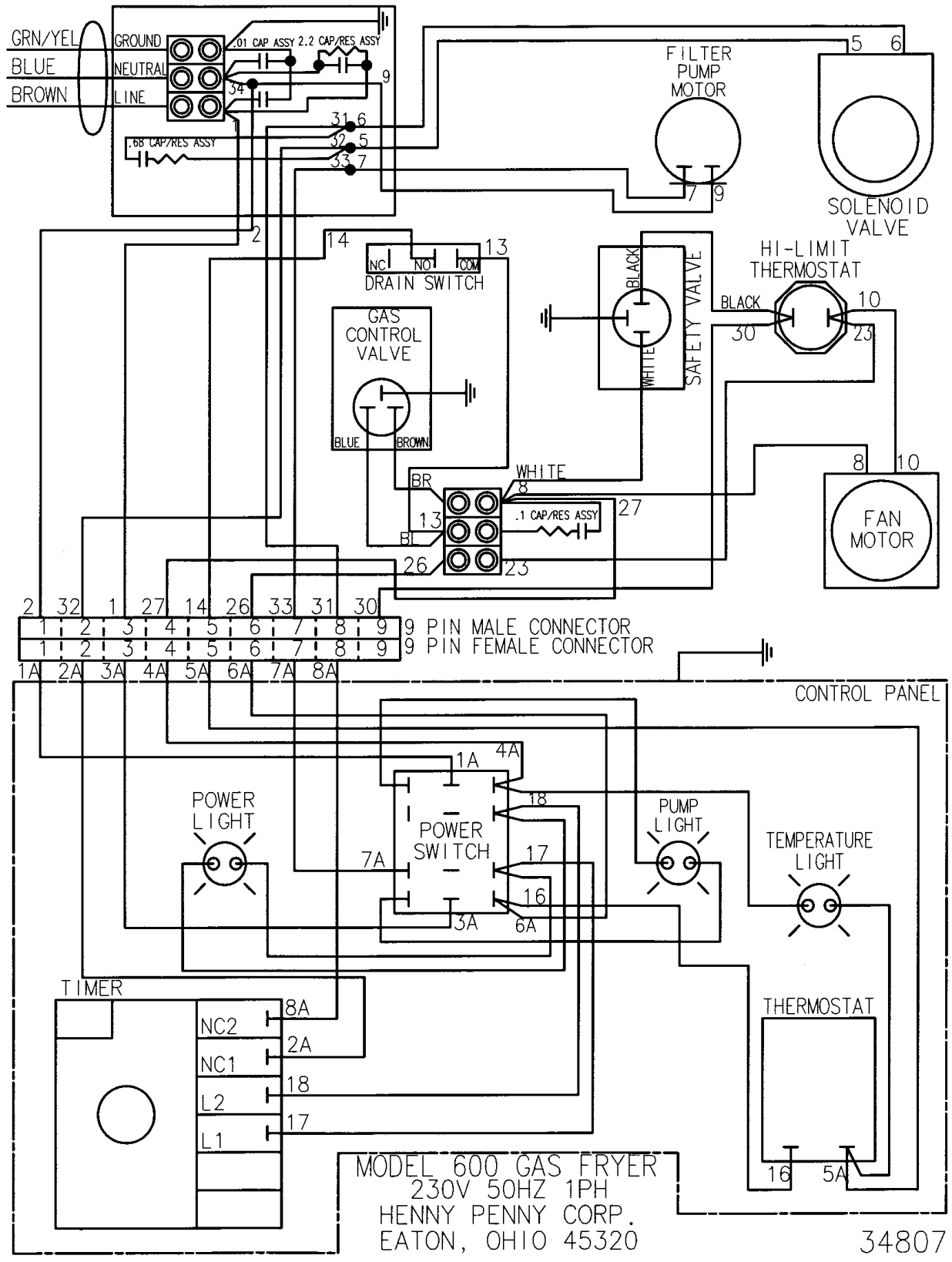
SN: AN0711030 & Above (Fenwal Module)



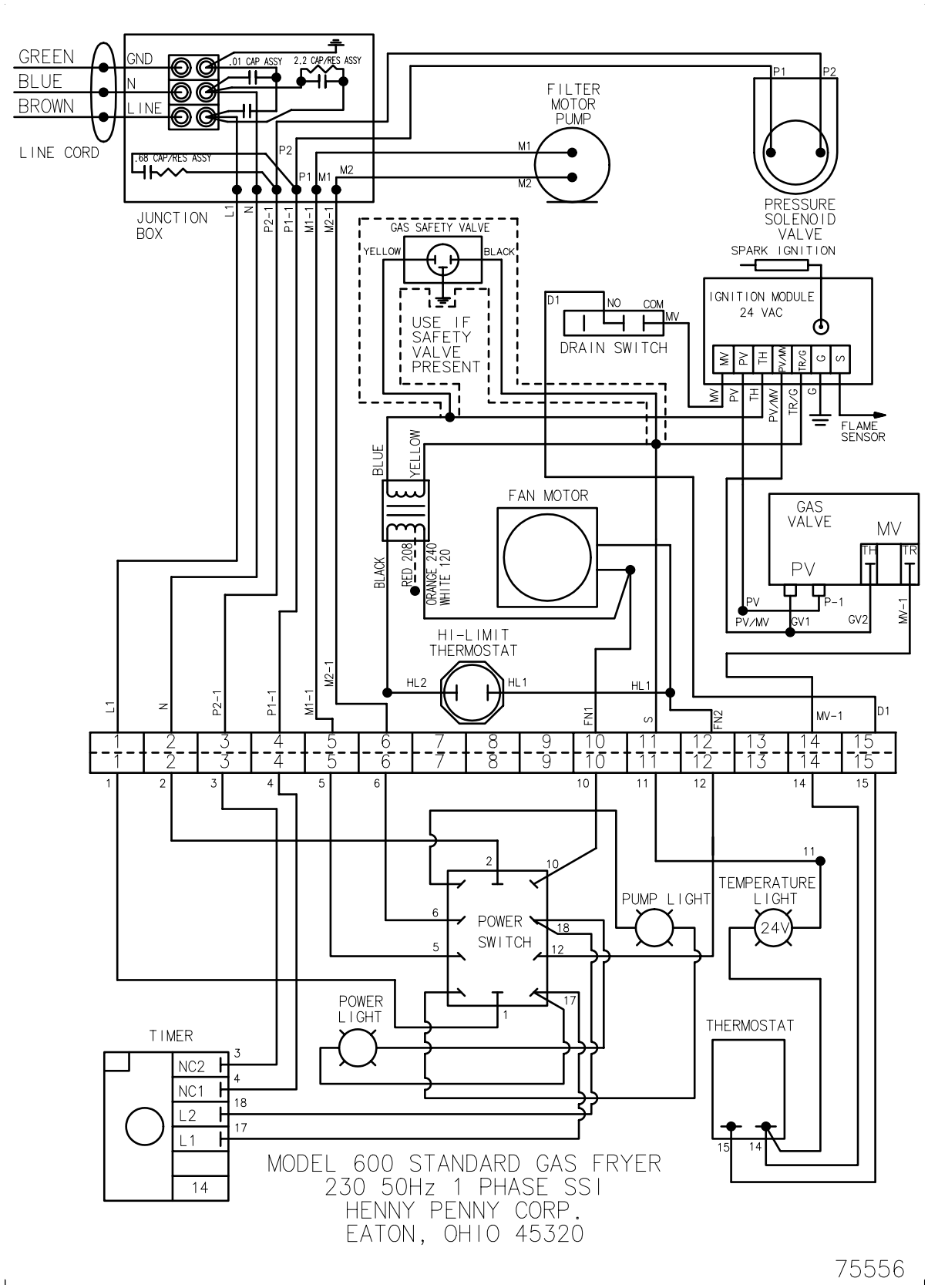
SN: AN0702112 & below
(SN: AN0703021 & above use 75555)



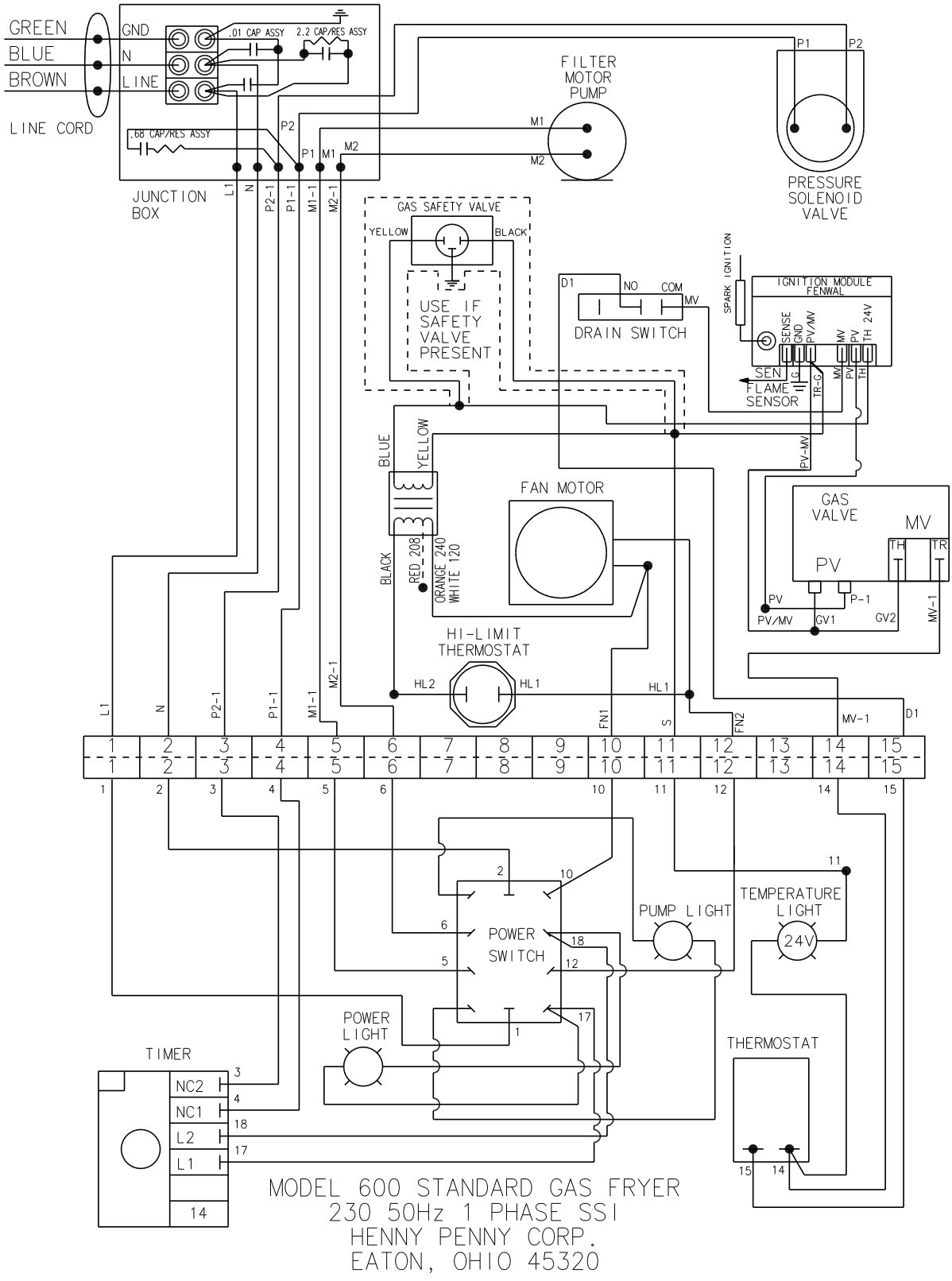
SN: AN0702112 & below
(SN: AN0703021 & above use 75555)



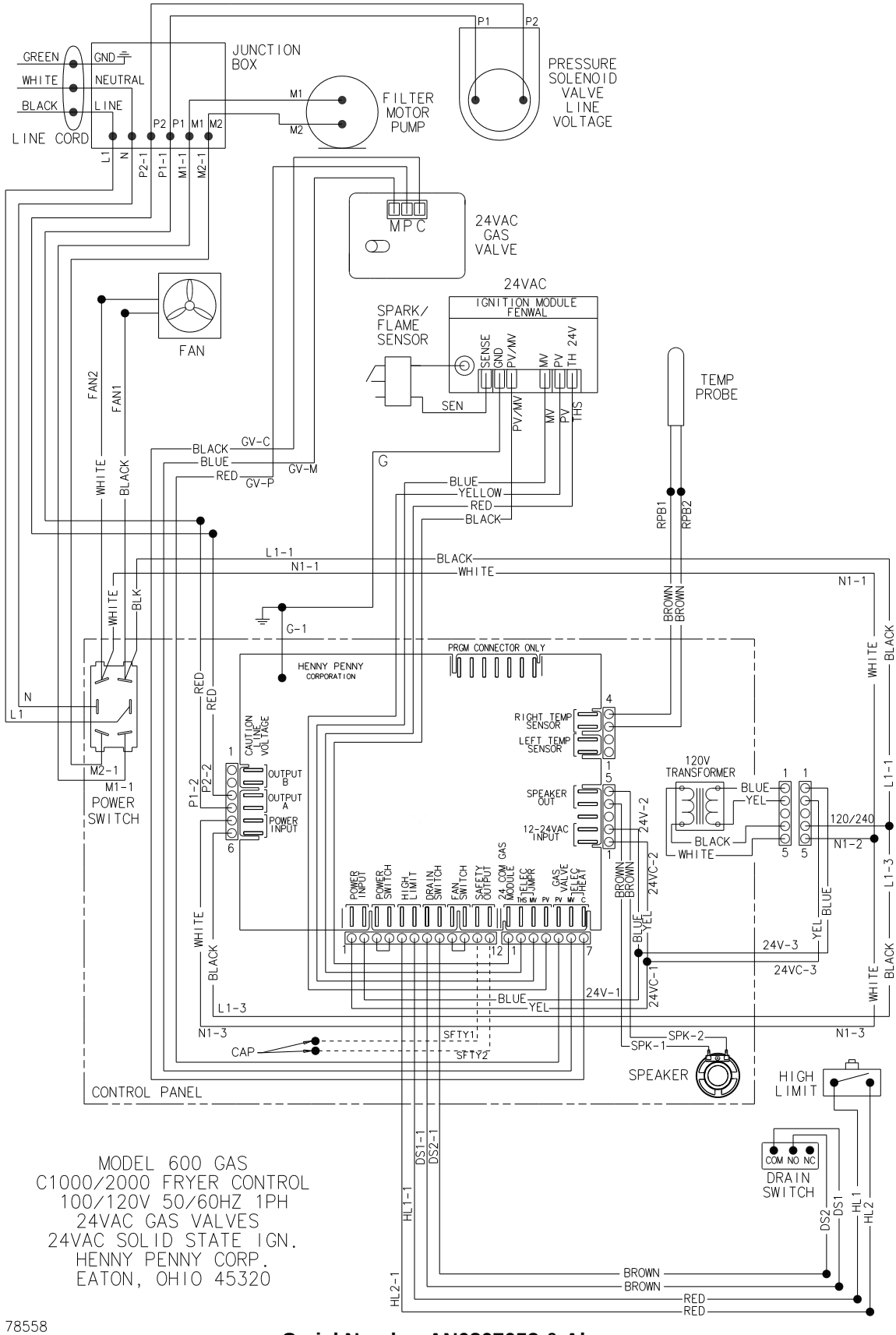
SN: AN0702112 & below



SN: AN0703021 to AN0711029 (Robertshaw Module)

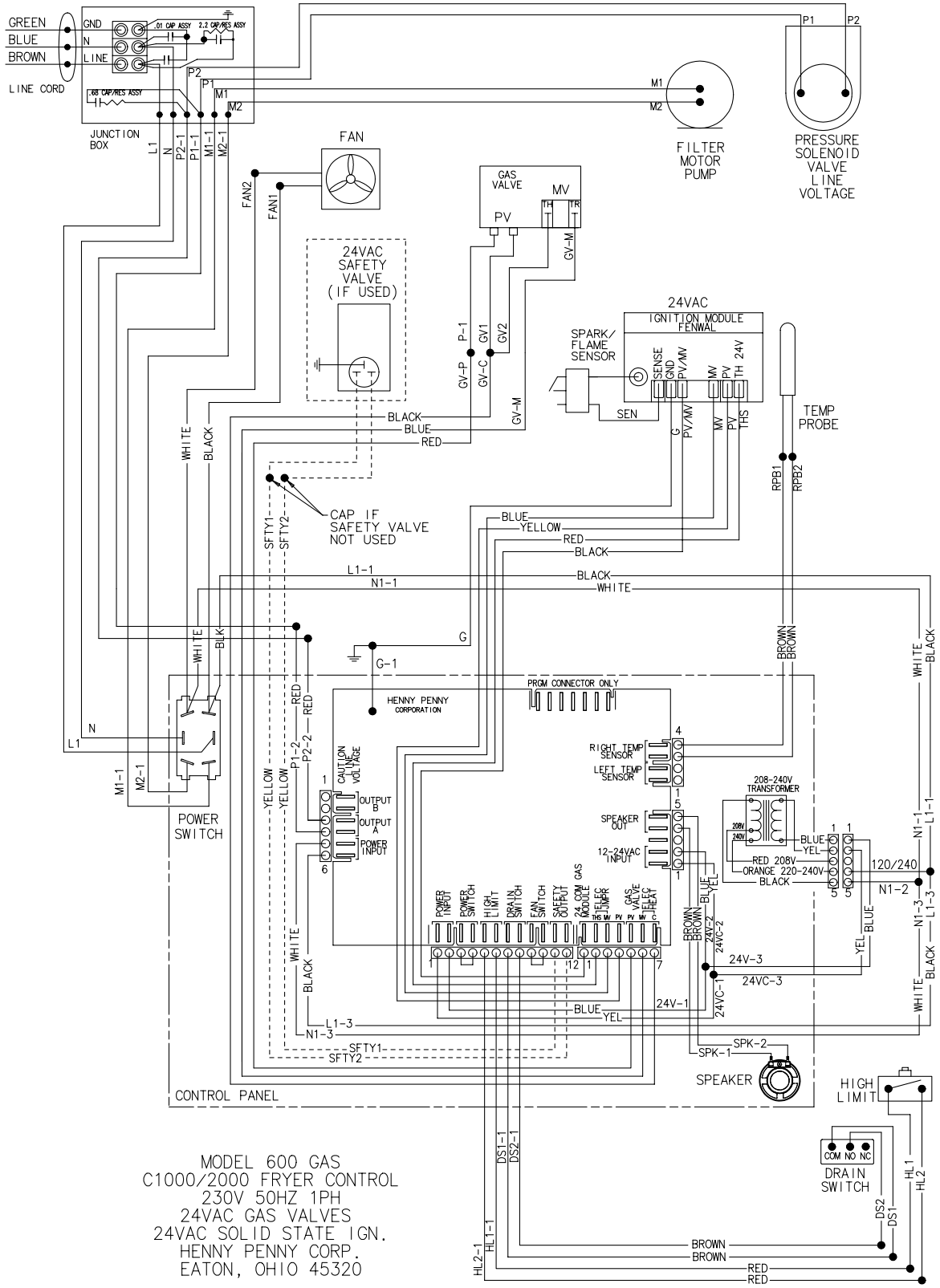


SN: AN0711030 & Above (Fenwal Module)



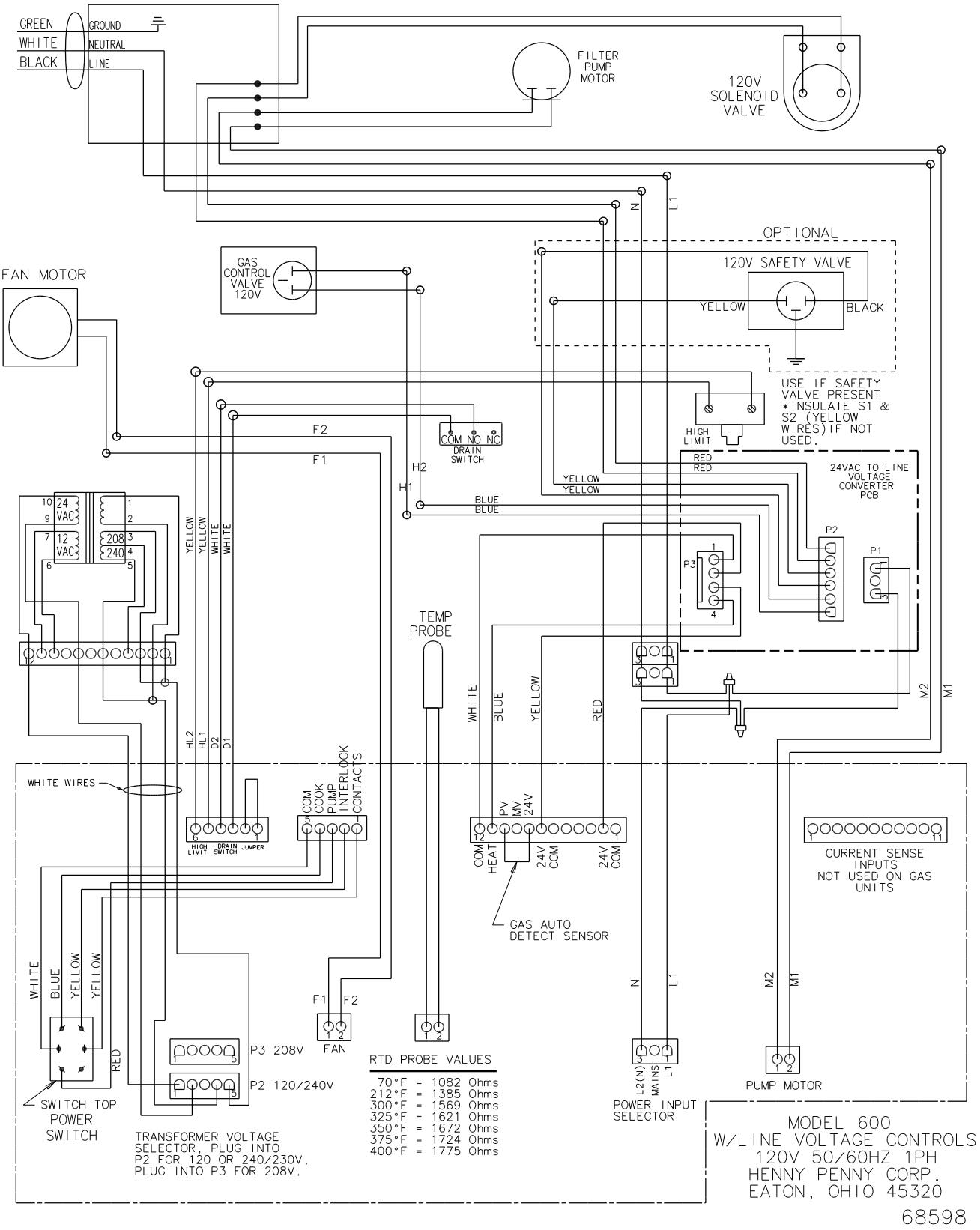
78558

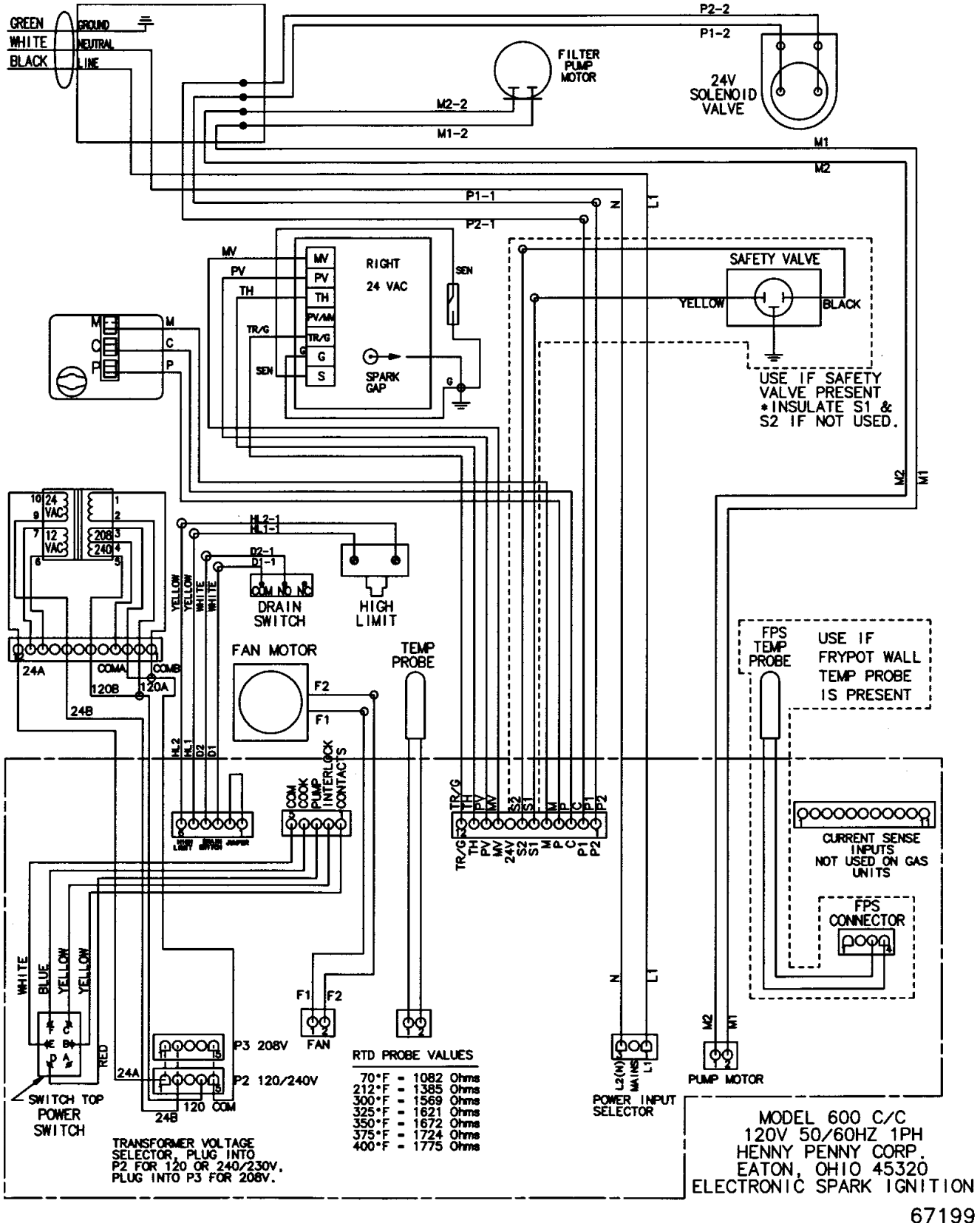
Serial Number AN0807053 & Above



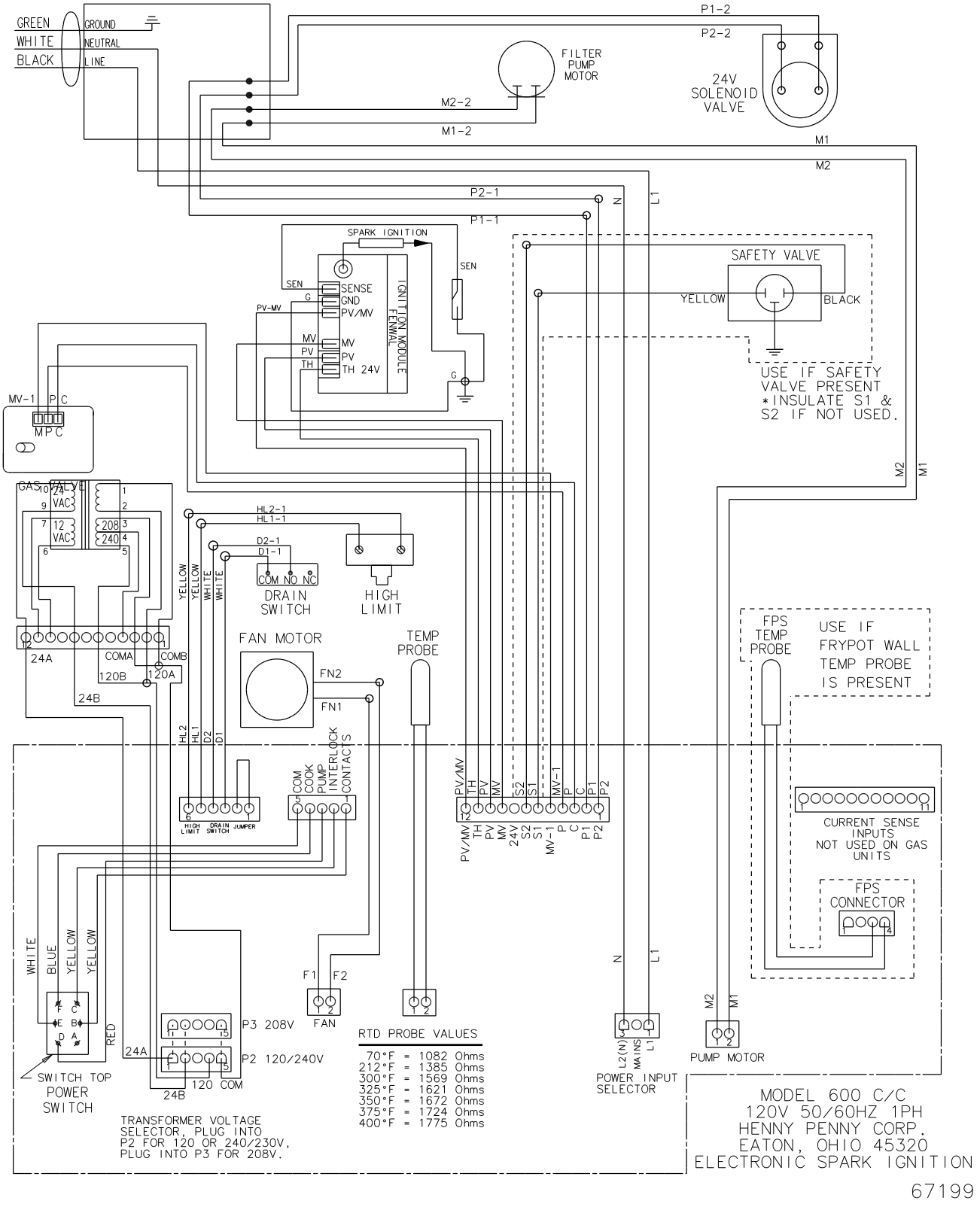
80221

Serial Number AN0807053 & Above

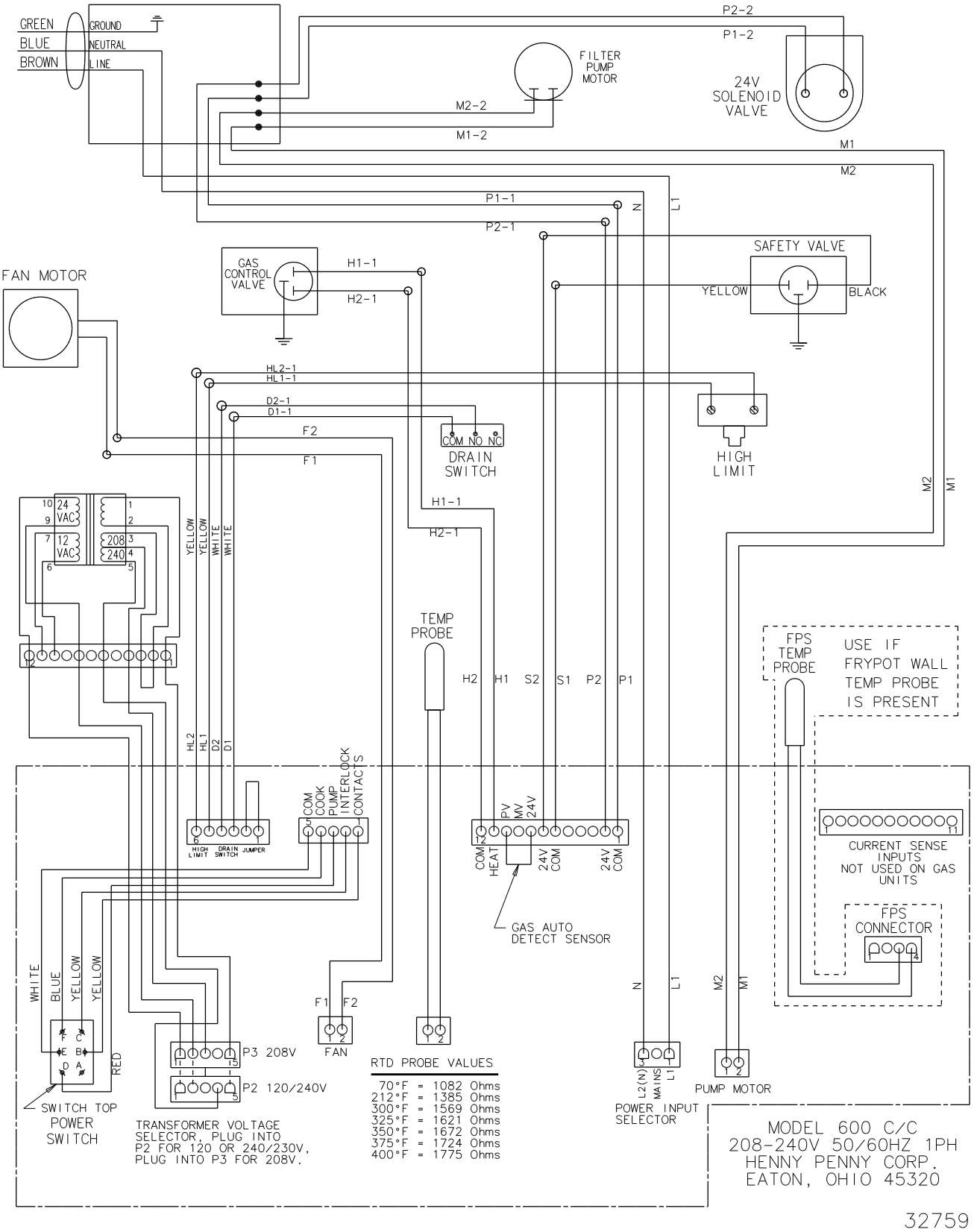

GREEN
WHITE
BLACK
GROUND
NEUTRAL
LINE
FILTER PUMP MOTOR
120V SOLENOID VALVE
N
L1
OPTIONAL
120V SAFETY VALVE
YELLOW
BLACK
FAN MOTOR
GAS CONTROL VALVE 120V
USE IF SAFETY VALVE PRESENT *INSULATE S1 & S2 (YELLOW WIRES) IF NOT USED.
HIGH LIMIT
COM NO NC
DRAIN SWITCH
F2
F1
H2
H1
RED
RED
YELLOW
YELLOW
BLUE
BLUE
24VAC TO LINE VOLTAGE CONVERTER PCB
P1
P2
P3
24 VAC
12 VAC
208
240
YELLOW
YELLOW
WHITE
WHITE
TEMP PROBE
WHITE
BLUE
YELLOW
RED
M2
M1
HL2
HL1
D2
D1
WHITE WIRES
HIGH LIMIT
DRAIN SWITCH
JUMPER
COM
COOK
PUMP
INTERLOCK
CONTACTS
PV
MV
24V
COM
HEAT
24V COM
24V COM
GAS AUTO DETECT SENSOR
CURRENT SENSE INPUTS NOT USED ON GAS UNITS
WHITE
BLUE
YELLOW
YELLOW
RED
F1
F2
FAN
P3 208V
P2 120/240V
SWITCH TOP POWER SWITCH
TRANSFORMER VOLTAGE SELECTOR, PLUG INTO P2 FOR 120 OR 240/230V, PLUG INTO P3 FOR 208V.
RTD PROBE VALUES
70°F = 1082 Ohms
212°F = 1385 Ohms
300°F = 1569 Ohms
325°F = 1621 Ohms
350°F = 1672 Ohms
375°F = 1724 Ohms
400°F = 1775 Ohms
L2(N)
MAINS
L1
POWER INPUT SELECTOR
PUMP MOTOR
MODEL 600
W/LINE VOLTAGE CONTROLS
120V 50/60HZ 1PH
HENNY PENNY CORP.
EATON, OHIO 45320
68598

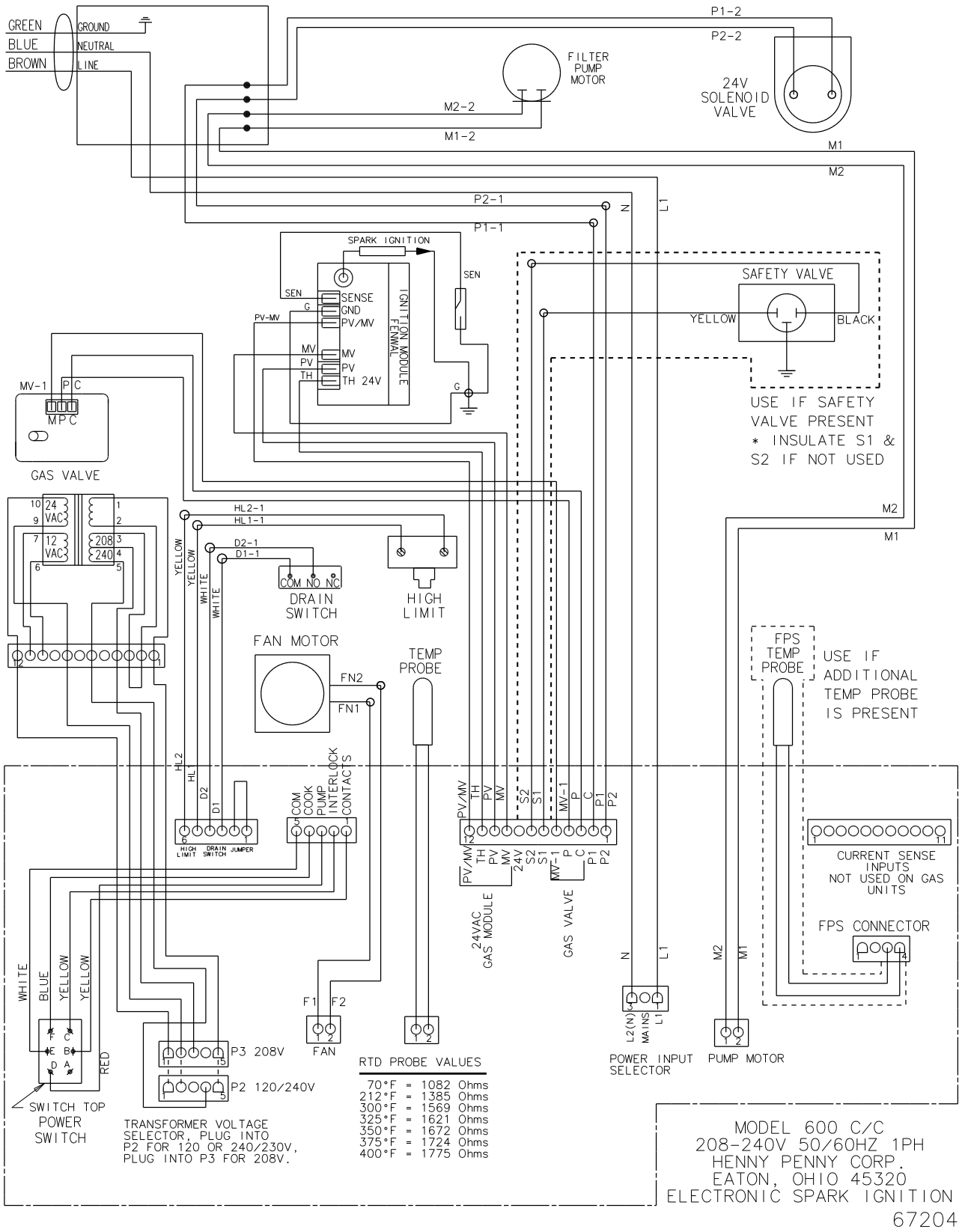


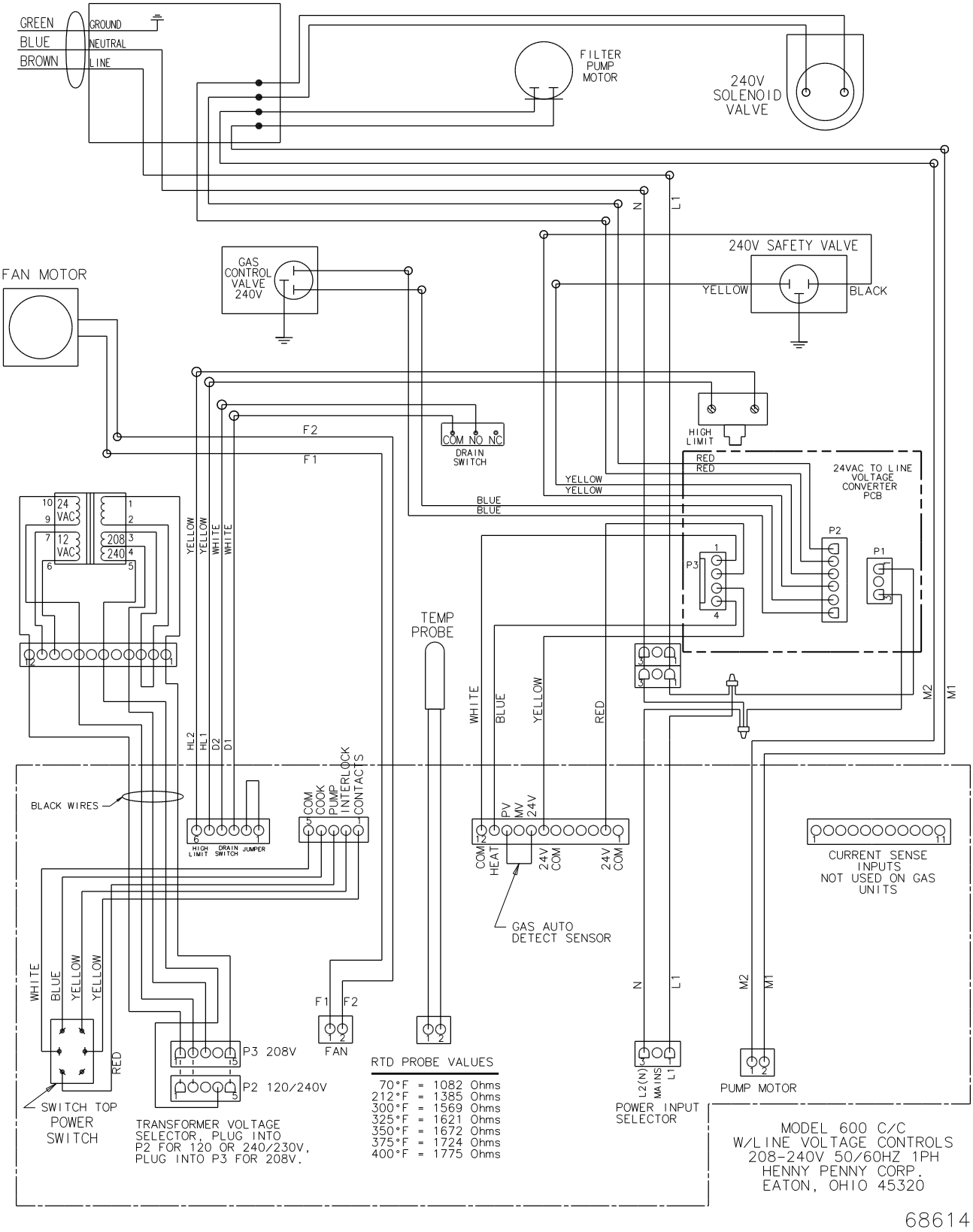
SN: AN0703021 to AN0711029 (Robertshaw Module)

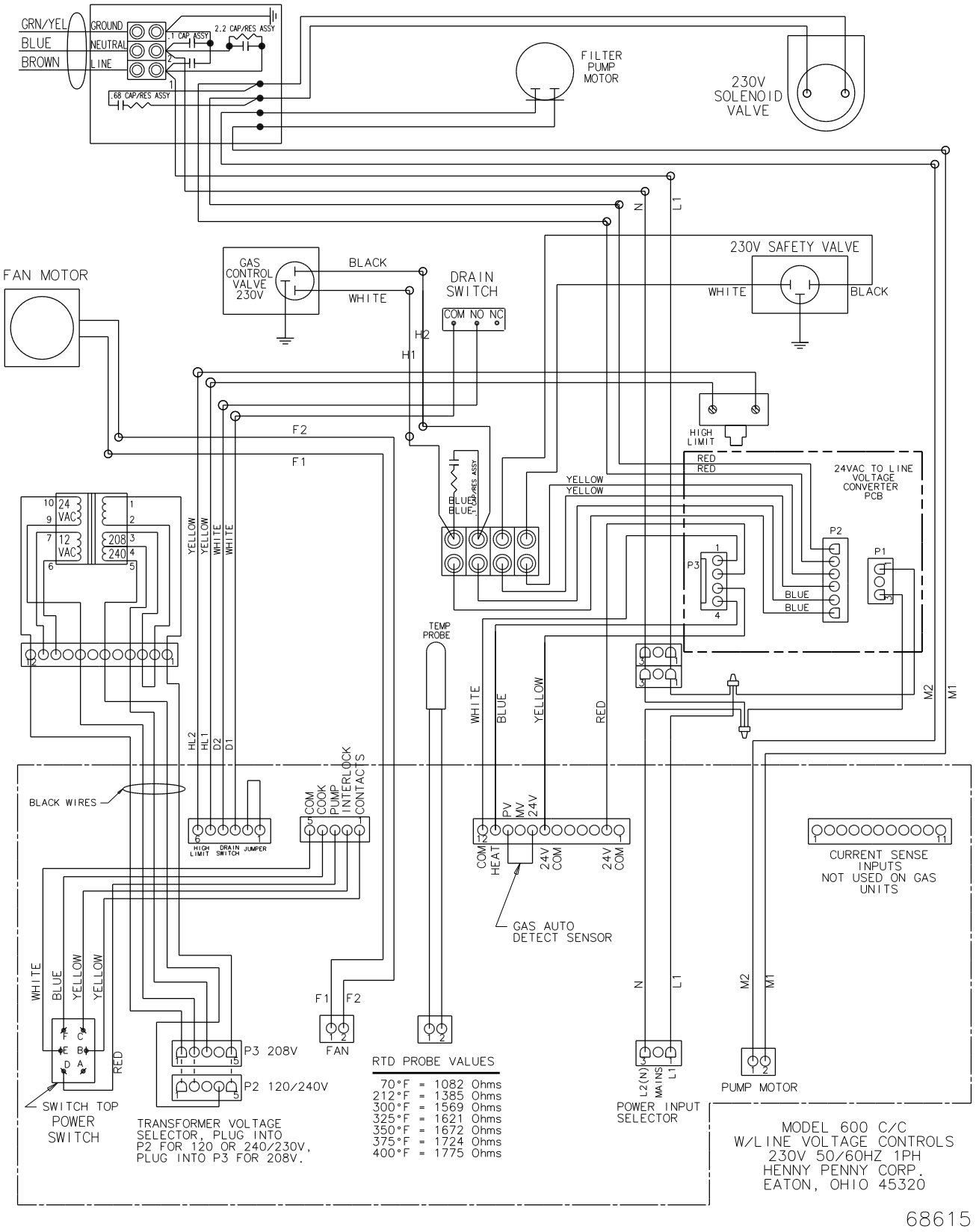


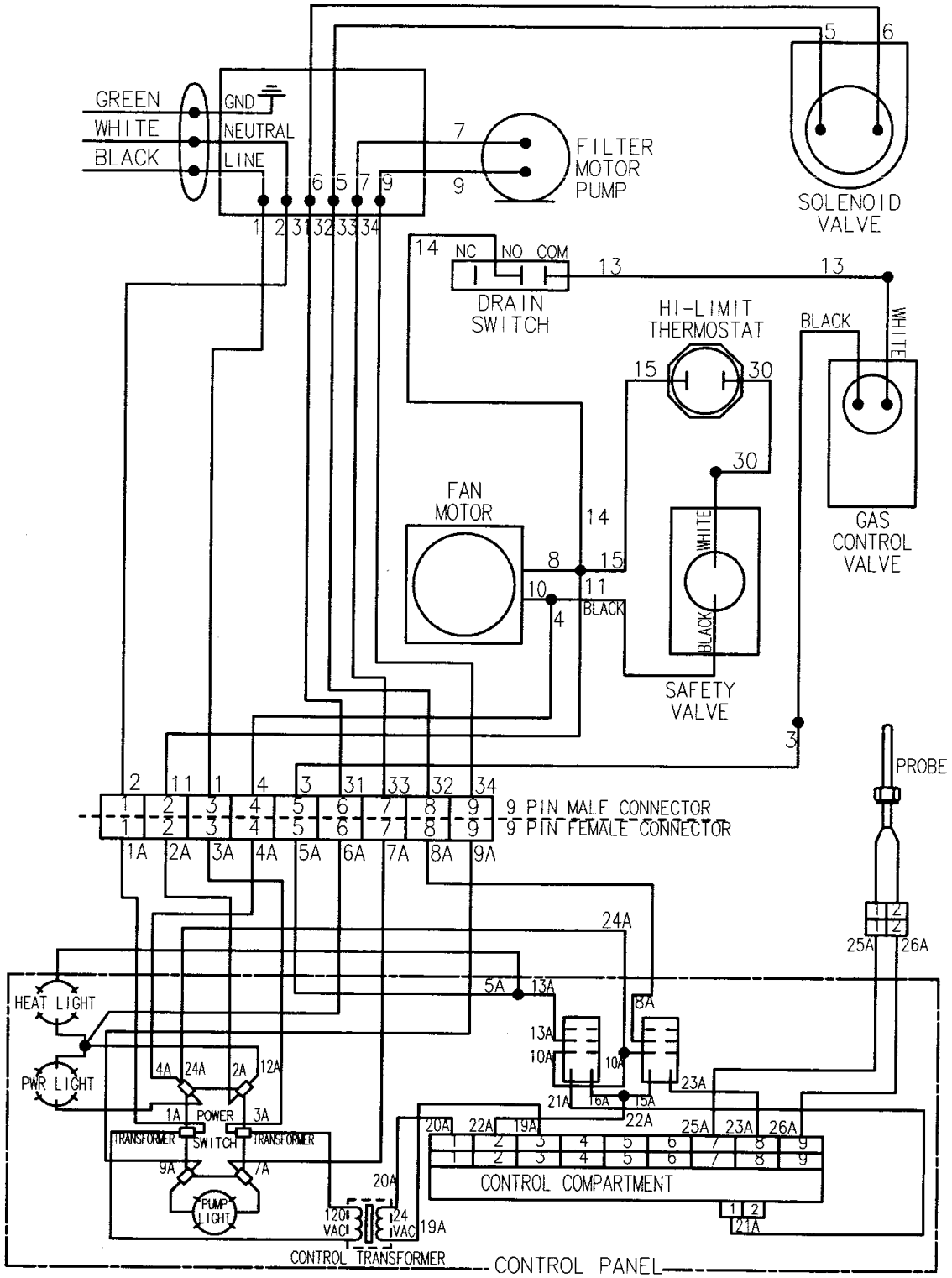
SN: AN0711030 & Above (Fenwal Module)


GREEN
BLUE
BROWN
GROUND
NEUTRAL
LINE
P2-2
P1-2
FILTER PUMP MOTOR
24V SOLENOID VALVE
M2-2
M1-2
M1
M2
P1-1
P2-1
N
L1
SAFETY VALVE
YELLOW
BLACK
FAN MOTOR
GAS CONTROL VALVE
H1-1
H2-1
HL2-1
HL1-1
D2-1
D1-1
F2
F1
COM NO NC
DRAIN SWITCH
HIGH LIMIT
24 VAC
12 VAC
208
240
YELLOW
YELLOW
WHITE
WHITE
TEMP PROBE
H2 H1 S2 S1 P2 P1
FPS TEMP PROBE
USE IF FRYPOT WALL TEMP PROBE IS PRESENT
HL2
HL1
D2
D1
COM
COOK
PUMP
INTERLOCK
CONTACTS
HIGH LIMIT
DRAIN SWITCH
JUMPER
PV
MV
24V
COM
HEAT
24V COM
24V COM
GAS AUTO DETECT SENSOR
CURRENT SENSE INPUTS NOT USED ON GAS UNITS
FPS CONNECTOR
WHITE
BLUE
YELLOW
YELLOW
RED
SWITCH TOP POWER SWITCH
P3 208V
P2 120/240V
TRANSFORMER VOLTAGE SELECTOR, PLUG INTO P2 FOR 120 OR 240/230V, PLUG INTO P3 FOR 208V.
F1 F2
FAN
RTD PROBE VALUES
70°F = 1082 Ohms
212°F = 1385 Ohms
300°F = 1569 Ohms
325°F = 1621 Ohms
350°F = 1672 Ohms
375°F = 1724 Ohms
400°F = 1775 Ohms
L2(N) MAINS L1
POWER INPUT SELECTOR
PUMP MOTOR
MODEL 600 C/C
208-240V 50/60HZ 1PH
HENNY PENNY CORP.
EATON, OHIO 45320
32759


GREEN
BLUE
BROWN
GROUND
NEUTRAL
LINE
P1-2
P2-2
FILTER PUMP MOTOR
24V SOLENOID VALVE
M2-2
M1-2
M1
M2
P2-1
P1-1
N
L1
SPARK IGNITION
SEN
SENSE
GND
PV/MV
MV
PV
TH 24V
IGNITION MODULE
G
PV-MV
MV
PV
TH
SAFETY VALVE
YELLOW
BLACK
USE IF SAFETY VALVE PRESENT
* INSULATE S1 & S2 IF NOT USED
MV-1
P
C
MPC
GAS VALVE
24 VAC
12 VAC
208
240
HL2-1
HL1-1
D2-1
D1-1
COM NO NC
DRAIN SWITCH
HIGH LIMIT
FAN MOTOR
FN2
FN1
TEMP PROBE
FPS TEMP PROBE
USE IF ADDITIONAL TEMP PROBE IS PRESENT
HL2
HL1
D2
D1
COM COOK PUMP INTERLOCK CONTACTS
HIGH LIMIT
DRAIN SWITCH
JUMPER
PV/MV
TH
PV
MV
24V
S2
S1
MV-1
P
C
P1
P2
24VAC GAS MODULE
GAS VALVE
CURRENT SENSE INPUTS NOT USED ON GAS UNITS
FPS CONNECTOR
WHITE
BLUE
YELLOW
YELLOW
RED
SWITCH TOP POWER SWITCH
P3 208V
P2 120/240V
TRANSFORMER VOLTAGE SELECTOR, PLUG INTO P2 FOR 120 OR 240/230V, PLUG INTO P3 FOR 208V.
F1
F2
FAN
RTD PROBE VALUES
70°F = 1082 Ohms
212°F = 1385 Ohms
300°F = 1569 Ohms
325°F = 1621 Ohms
350°F = 1672 Ohms
375°F = 1724 Ohms
400°F = 1775 Ohms
L2(N)
L1
MAINS
POWER INPUT SELECTOR
PUMP MOTOR
MODEL 600 C/C
208-240V 50/60HZ 1PH
HENNY PENNY CORP.
EATON, OHIO 45320
ELECTRONIC SPARK IGNITION
67204


GREEN
BLUE
BROWN
GROUND
NEUTRAL
LINE
FILTER PUMP MOTOR
240V SOLENOID VALVE
N
L1
240V SAFETY VALVE
YELLOW
BLACK
FAN MOTOR
GAS CONTROL VALVE 240V
F2
F1
COM NO NC
DRAIN SWITCH
HIGH LIMIT
RED
RED
24VAC TO LINE VOLTAGE CONVERTER PCB
YELLOW
YELLOW
BLUE
BLUE
P2
P1
P3
24 VAC
12 VAC
208
240
YELLOW
YELLOW
WHITE
WHITE
TEMP PROBE
WHITE
BLUE
YELLOW
RED
M2
M1
HL2
HL1
D2
D1
BLACK WIRES
HIGH LIMIT
DRAIN SWITCH
JUMPER
COM
COOK
PUMP
INTERLOCK
CONTACTS
PV
MV
24V
COM
HEAT
24V COM
24V COM
GAS AUTO DETECT SENSOR
CURRENT SENSE INPUTS NOT USED ON GAS UNITS
WHITE
BLUE
YELLOW
YELLOW
RED
F1
F2
FAN
P3 208V
P2 120/240V
SWITCH TOP POWER SWITCH
TRANSFORMER VOLTAGE SELECTOR, PLUG INTO P2 FOR 120 OR 240/230V, PLUG INTO P3 FOR 208V.
RTD PROBE VALUES
70°F = 1082 Ohms
212°F = 1385 Ohms
300°F = 1569 Ohms
325°F = 1621 Ohms
350°F = 1672 Ohms
375°F = 1724 Ohms
400°F = 1775 Ohms
N
L1
L2(N)
MAINS
L1
POWER INPUT SELECTOR
M2
M1
PUMP MOTOR
MODEL 600 C/C
W/LINE VOLTAGE CONTROLS
208-240V 50/60HZ 1PH
HENNY PENNY CORP.
EATON, OHIO 45320
68614

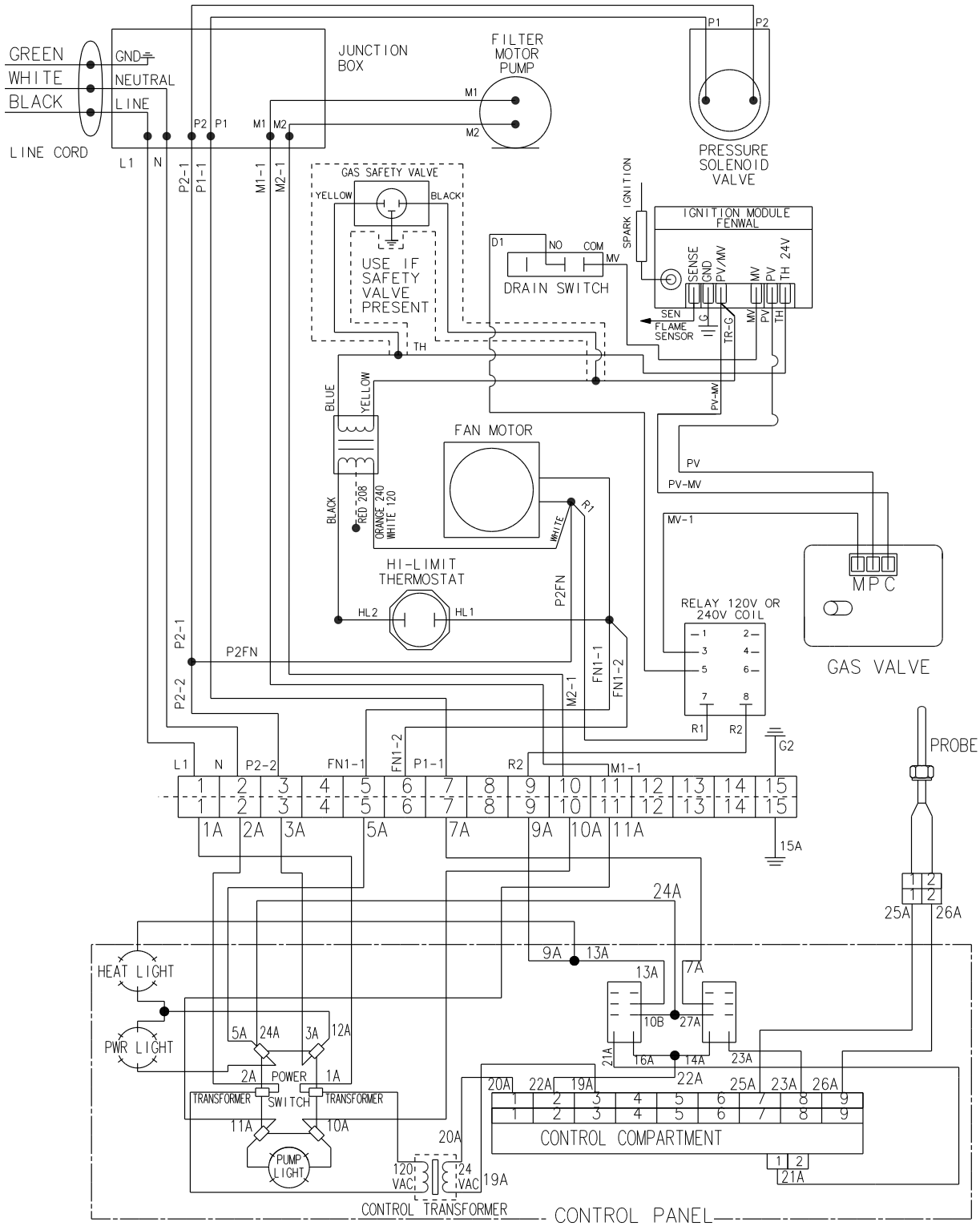

GRN/YEL
BLUE
BROWN
GROUND
NEUTRAL
LINE
.1 CAP ASSY
2.2 CAP/RES ASSY
.68 CAP/RES ASSY
FILTER PUMP MOTOR
230V SOLENOID VALVE
N
L1
230V SAFETY VALVE
WHITE
BLACK
FAN MOTOR
GAS CONTROL VALVE 230V
BLACK
WHITE
DRAIN SWITCH
COM NO NC
H2
H1
F2
F1
HIGH LIMIT
RED
RED
24VAC TO LINE VOLTAGE CONVERTER PCB
YELLOW
YELLOW
BLUE
BLUE
.1 CAP/RES ASSY
P2
P1
P3
BLUE
BLUE
24 VAC
12 VAC
208
240
YELLOW
YELLOW
WHITE
WHITE
TEMP PROBE
WHITE
BLUE
YELLOW
RED
M2
M1
HL2
HL1
D2
D1
BLACK WIRES
COM
COOK
PUMP
INTERLOCK
CONTACTS
HIGH LIMIT
DRAIN SWITCH
JUMPER
PV
MV
24V
COM
HEAT
24V COM
24V COM
GAS AUTO DETECT SENSOR
CURRENT SENSE INPUTS NOT USED ON GAS UNITS
WHITE
BLUE
YELLOW
YELLOW
RED
F
C
E
B
D
A
SWITCH TOP POWER SWITCH
P3 208V
P2 120/240V
TRANSFORMER VOLTAGE SELECTOR, PLUG INTO P2 FOR 120 OR 240/230V, PLUG INTO P3 FOR 208V.
F1
F2
FAN
RTD PROBE VALUES
70°F = 1082 Ohms
212°F = 1385 Ohms
300°F = 1569 Ohms
325°F = 1621 Ohms
350°F = 1672 Ohms
375°F = 1724 Ohms
400°F = 1775 Ohms
N
L1
L2(N)
L1
MAINS
POWER INPUT SELECTOR
M2
M1
PUMP MOTOR
MODEL 600 C/C
W/LINE VOLTAGE CONTROLS
230V 50/60HZ 1PH
HENNY PENNY CORP.
EATON, OHIO 45320
68615



MODEL 600F
100-240V 50/60Hz 1PH
HENNY PENNY CORP., EATON, OHIO 45320

63357

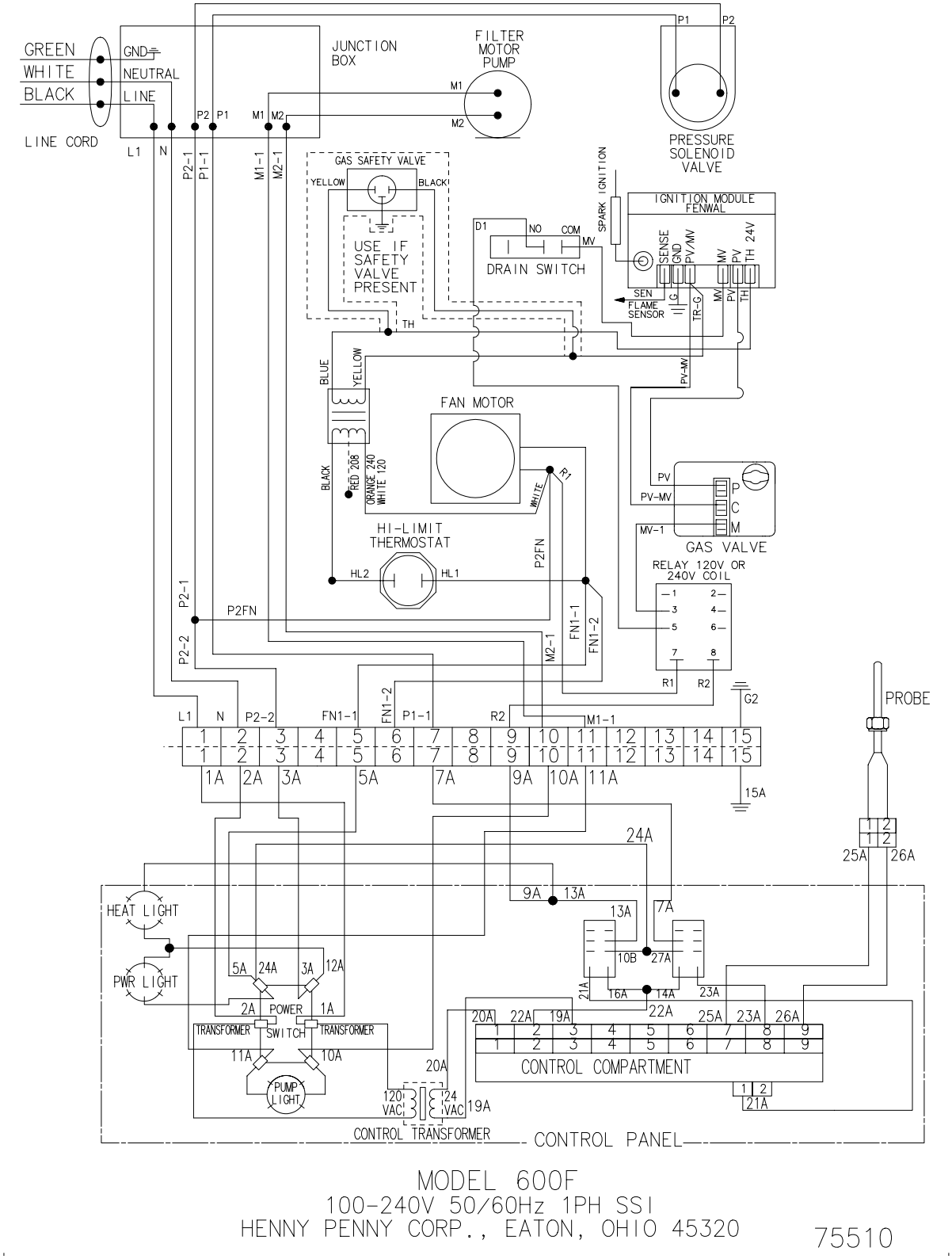
SN: AN0702112 & below



MODEL 600F
100-240V 50/60Hz 1PH SSI
HENNY PENNY CORP., EATON, OHIO 45320

75510

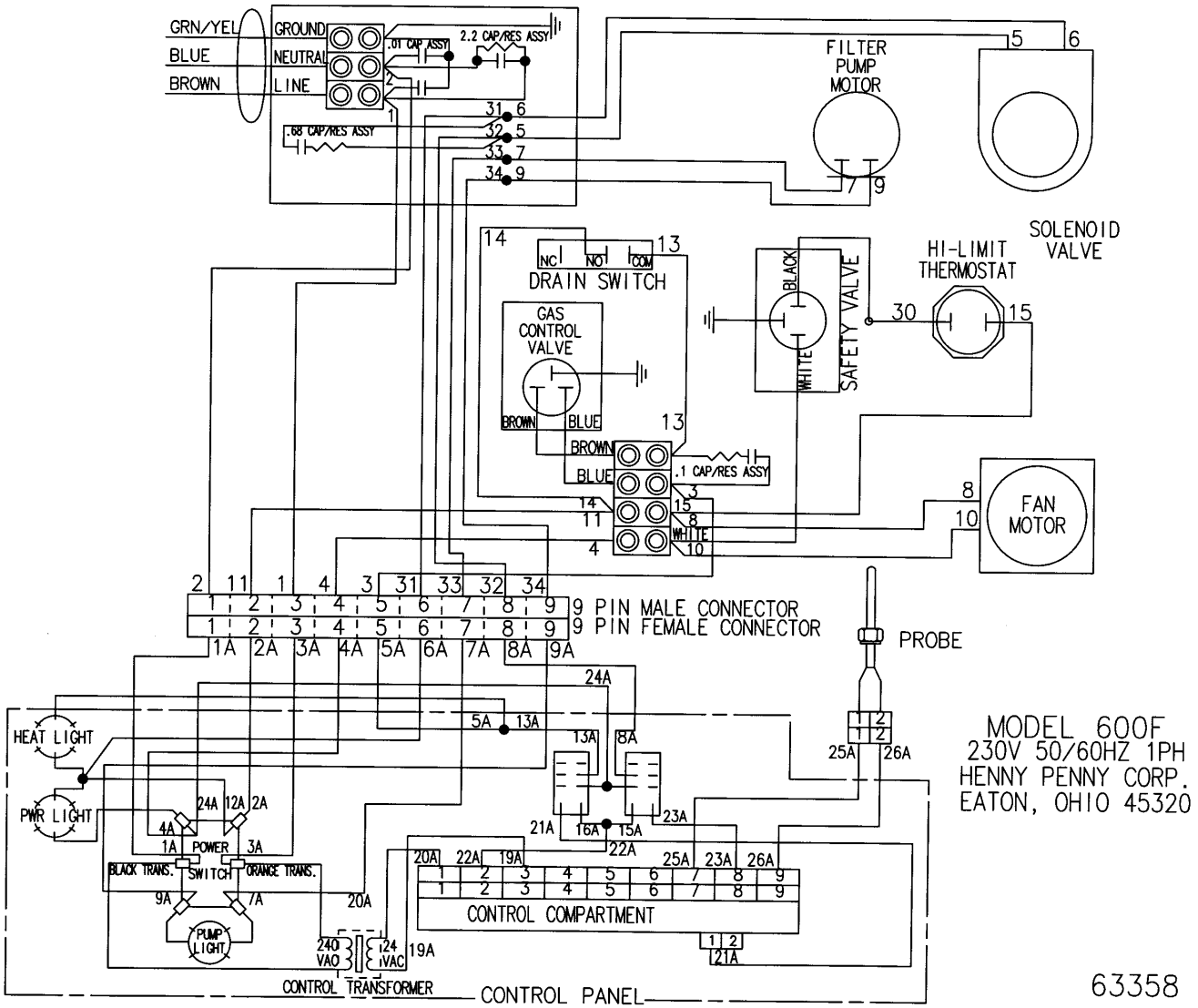
SN: AN0703021 to AN0711029 - (Robershaw Module)



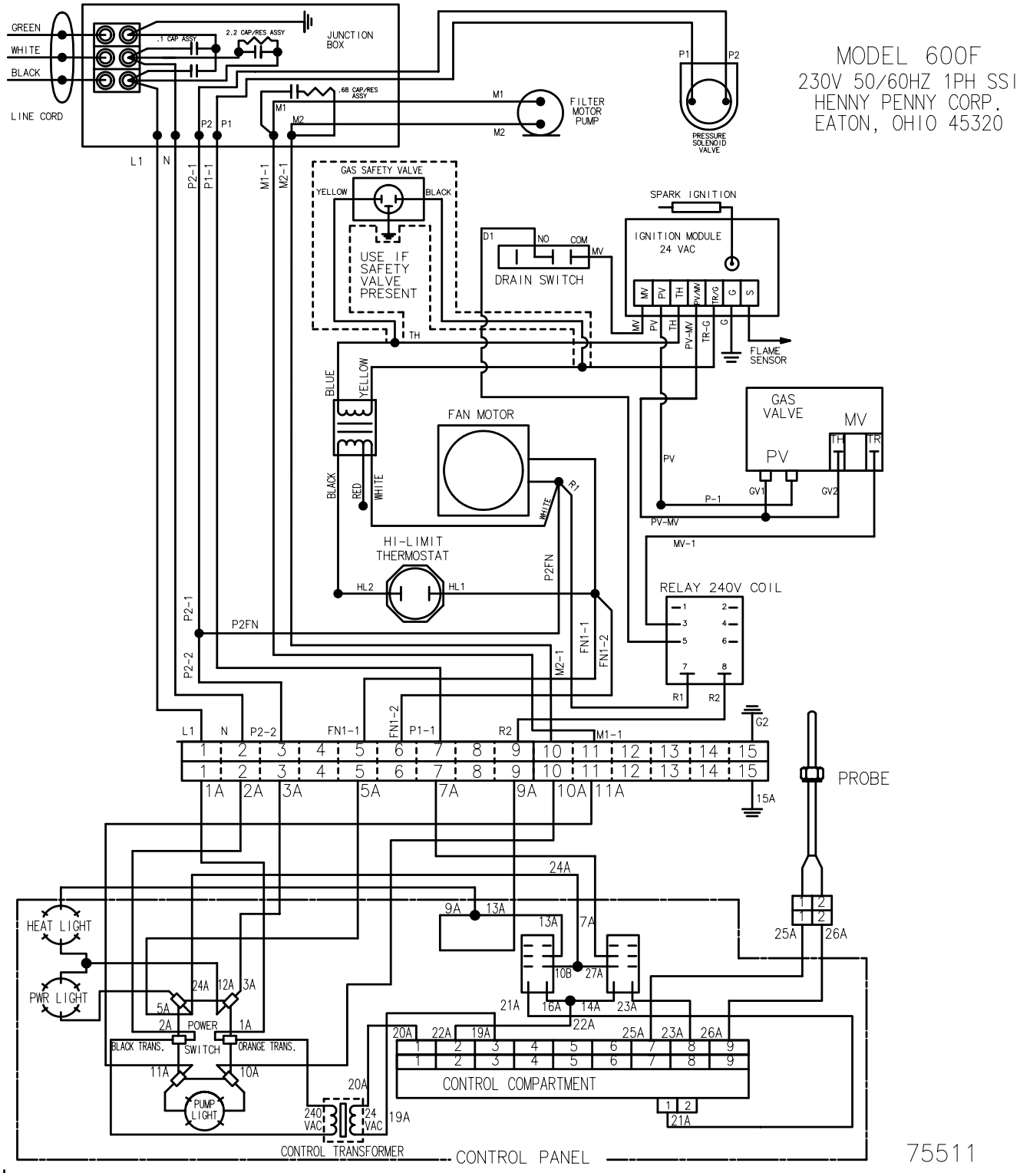
MODEL 600F
100-240V 50/60Hz 1PH SSI
HENNY PENNY CORP., EATON, OHIO 45320

75510

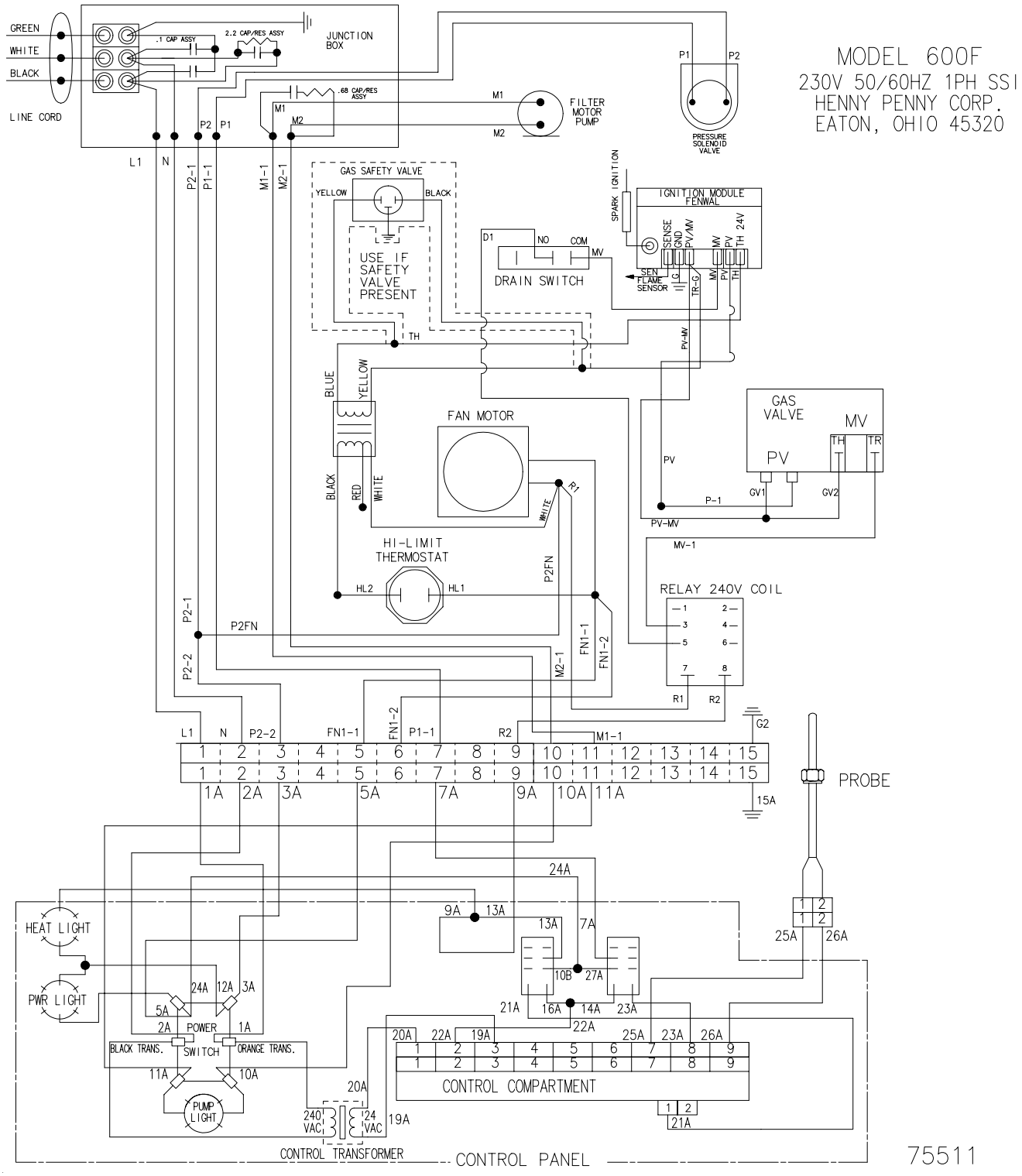
SN: AN0711030 & Above - (Fenwal Module)



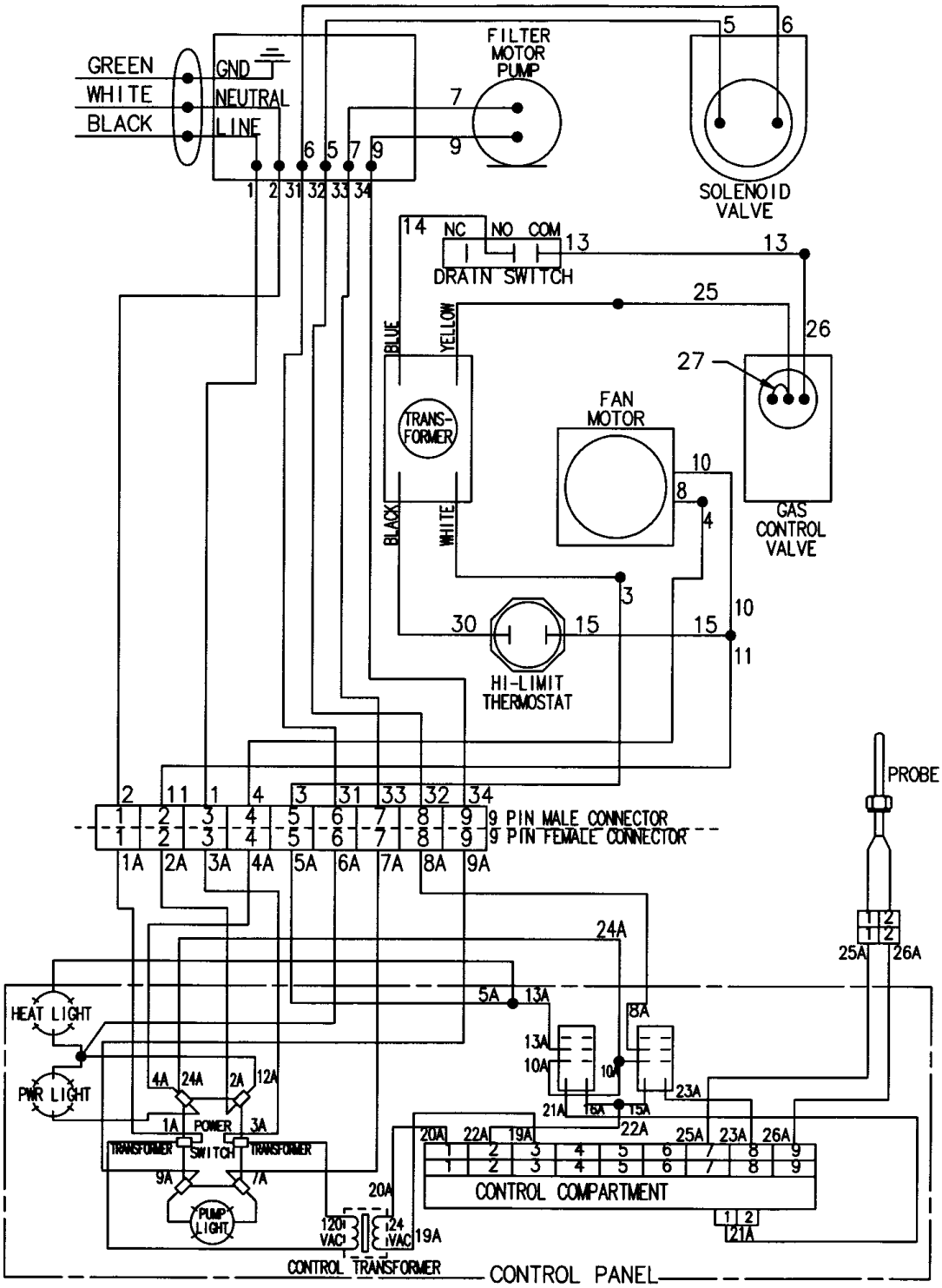
SN: AN0702112 & below



SN: AN0703021 to AN0711029 (Robershaw Module)



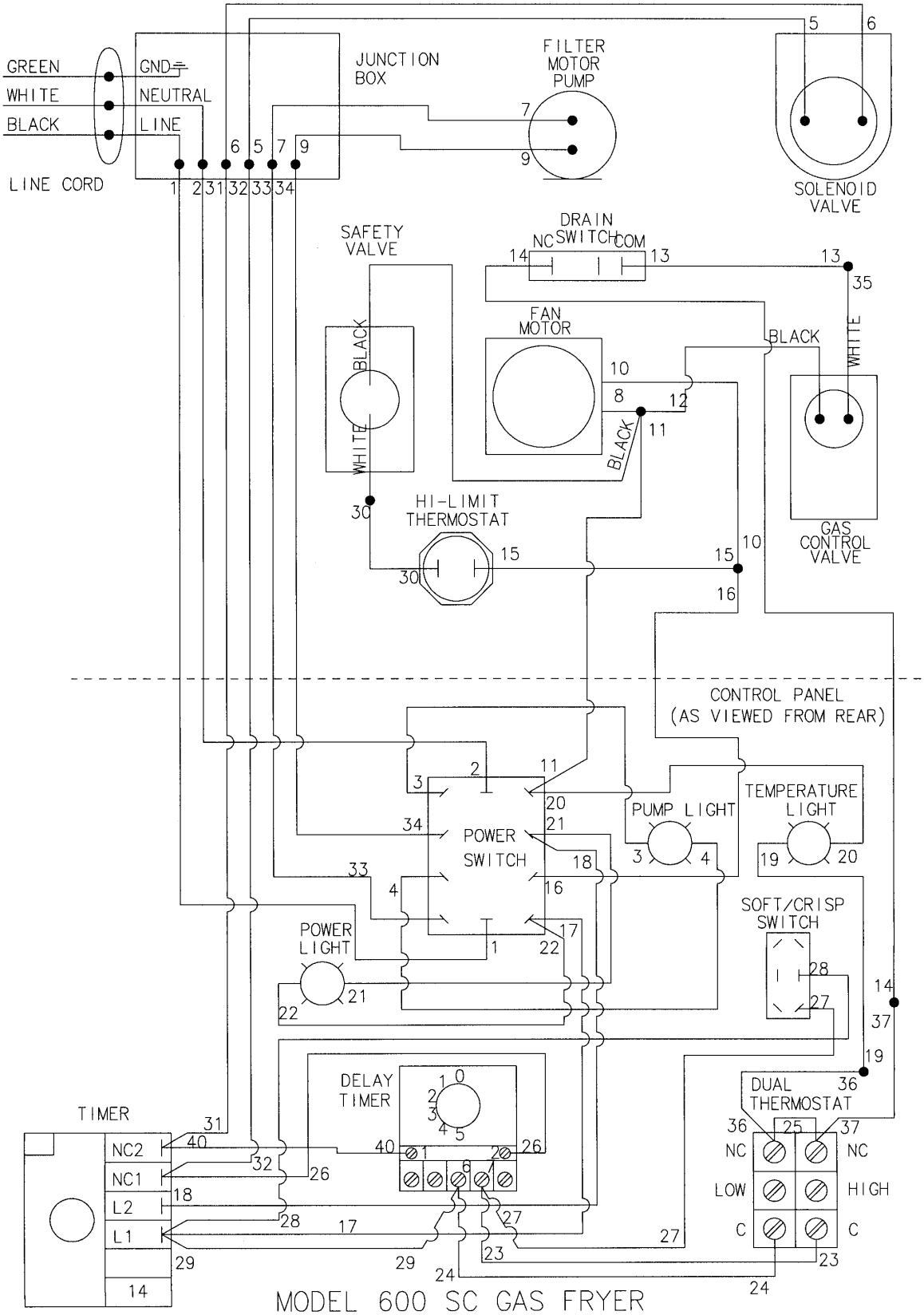
SN: AN0711030 & Above (Fenwal Module)



MODEL 600F
120V 50/60Hz 1PH
HENNY PENNY CORP., EATON, OHIO 45320

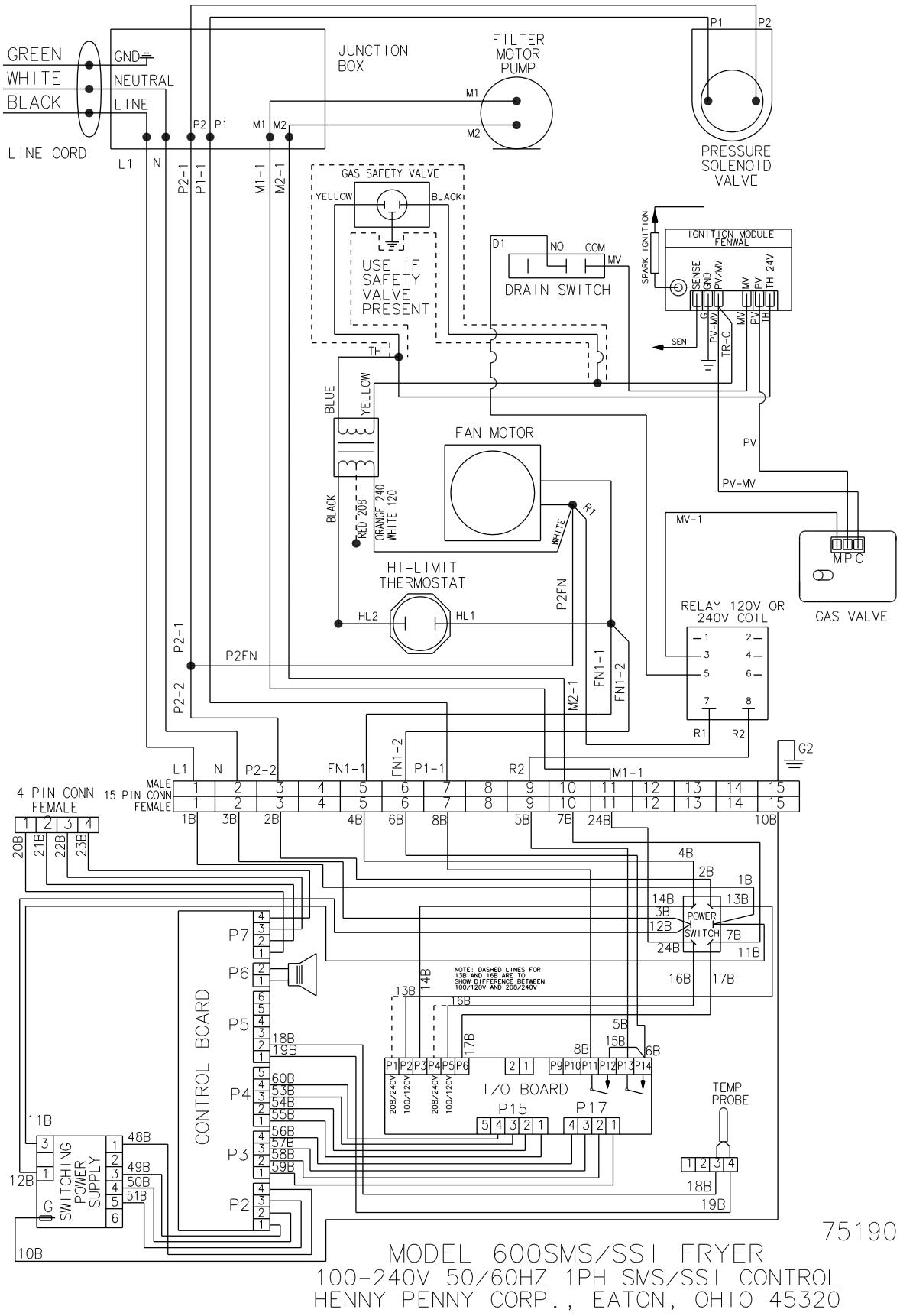
23457

SN: AN0702112 & below
(SN: AN0703021 & above use 75510)



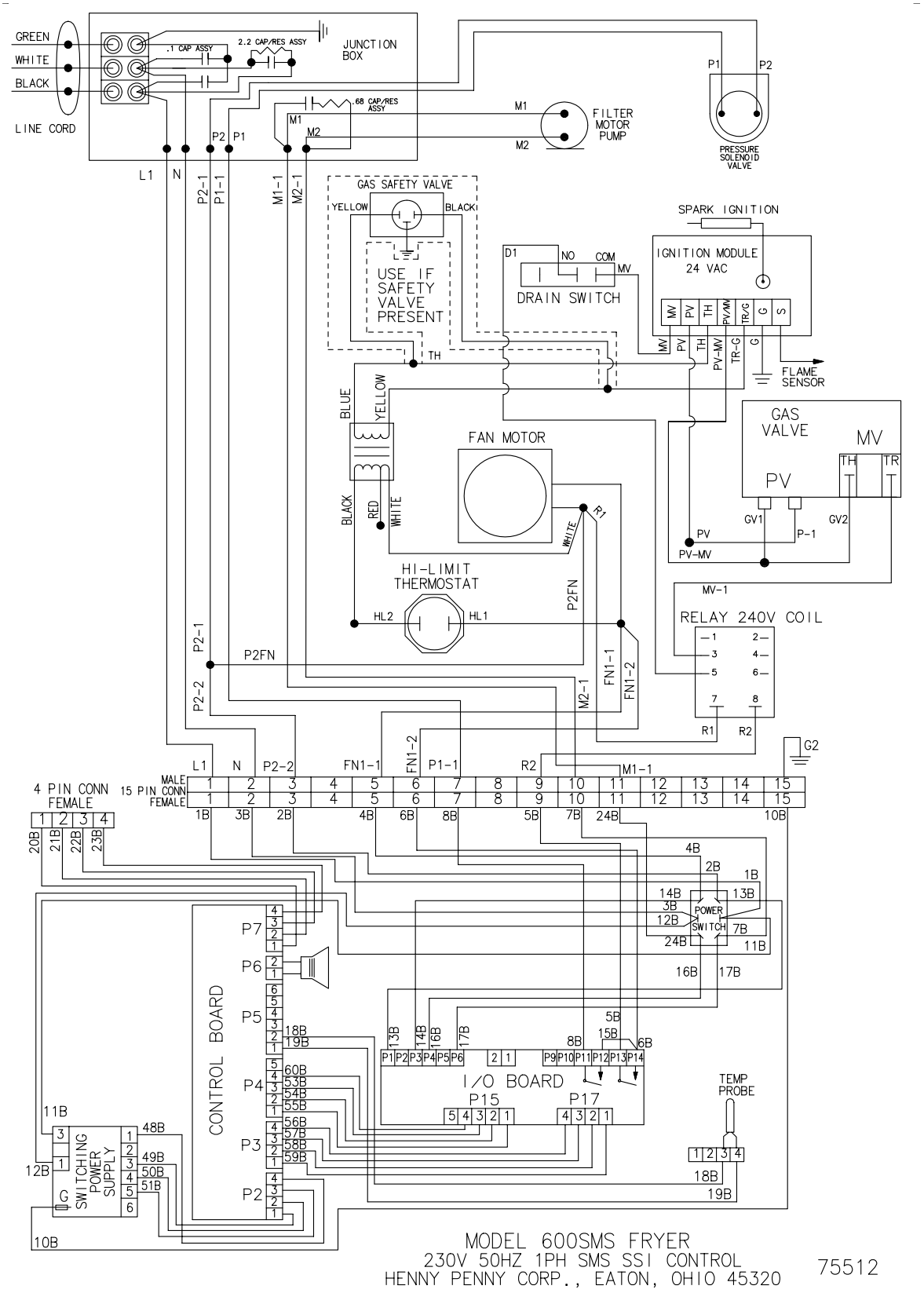
MODEL 600 SC GAS FRYER
120 VOLT 60 HZ 1 PHASE DUAL THERMOSTAT
STANDARD IGNITION VARIABLE TEMPERATURE

17353

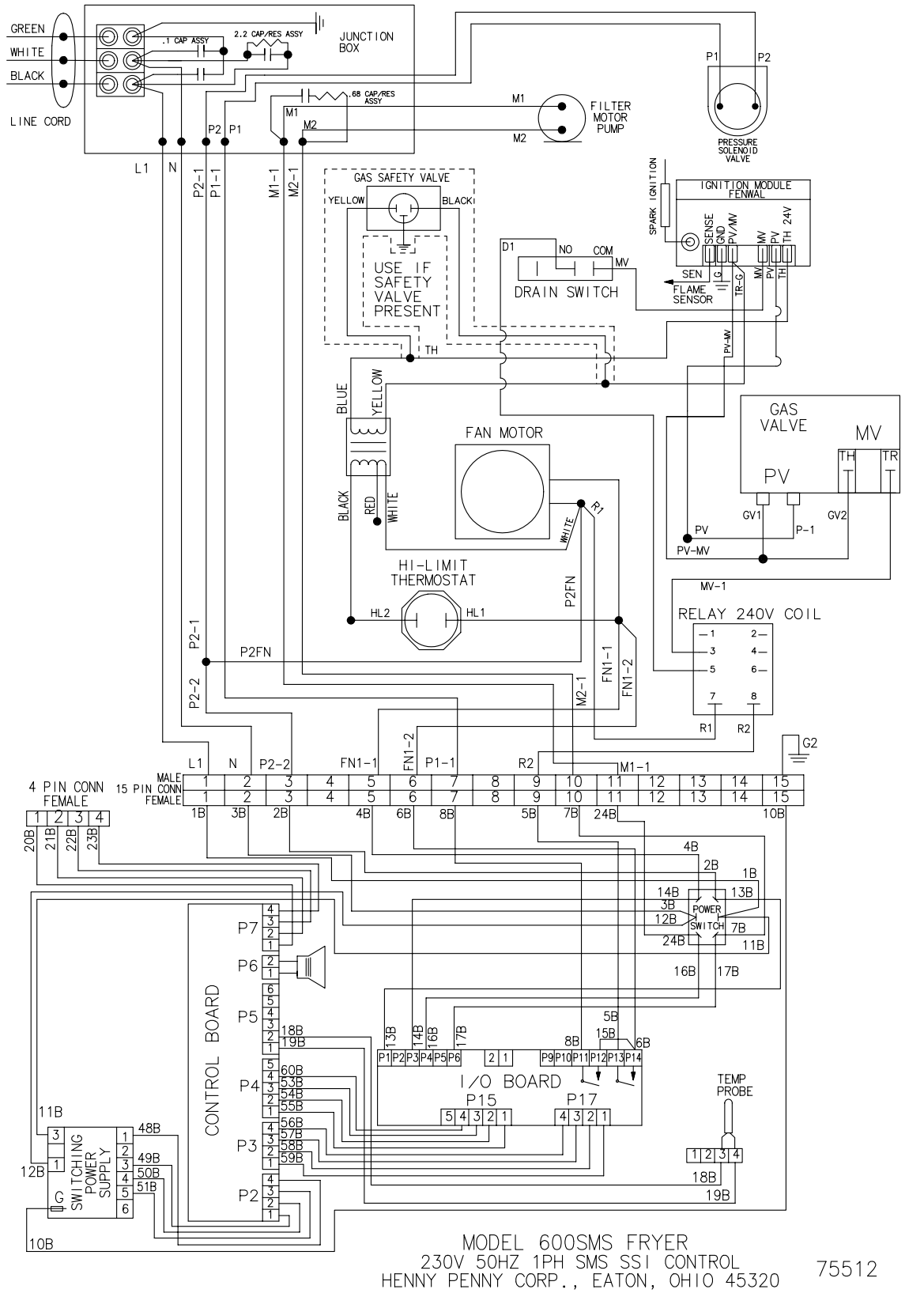


75190

MODEL 600SMS/SSI FRYER
100-240V 50/60HZ 1PH SMS/SSI CONTROL
HENNY PENNY CORP., EATON, OHIO 45320



SN: AN0703021 to AN0711029 (Robertshaw Module)



SN: AN0711030 & Above (Fenwal Module)

SECTION 3. PARTS INFORMATION

3-1. INTRODUCTION

This section lists and illustrates the replaceable parts of Henny Penny Model 500, 561 and 600 pressure fryers built after November 6, 2000. If your unit was built prior to that date, some differences may exist. If you have any doubts, please contact your distributor. As with all contacts to your distributor, include the model number and serial number from the nameplate on your unit.

3-2. GENUINE PARTS

Use only genuine Henny Penny parts in your fryer. Using a part of lesser quality or substitute design may result in fryer damage or personal injury.

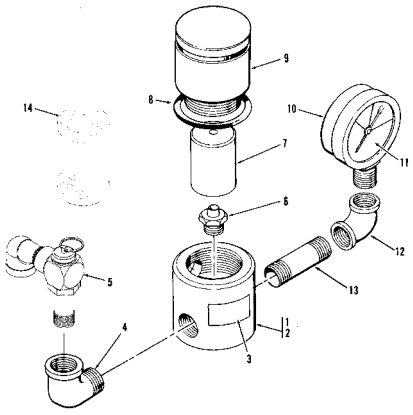
3-3. MODEL VARIATIONS

This section covers model variations due to options, different applications (gas or electric), and to cover the latest design improvements. When you order replacement parts, be sure to check for model variations as stated in the figure title and in the DESCRIPTION column of the parts list.

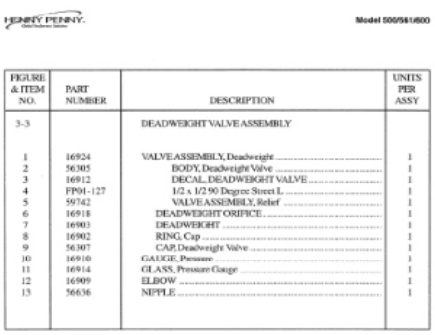
3-4. HOW TO FIND PARTS

To find the items you want to order, proceed as follows:

1. Use the index of illustrations, paragraph 3-11, to find the page number of the proper illustration.
2. Referring to the illustration, find the part desired and its item number.



(SAMPLE)



HENNY PENNY. Model 500/561/600

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-3		DEADWEIGHT VALVE ASSEMBLY	
1	16924	VALVE ASSEMBLY, Deadweight	1
2	56305	BODY, Deadweight Valve	1
3	16912	DECAL, DEADWEIGHT VALVE	1
4	FP01-127	1/2 x 1/2 90 Degree Street L	1
5	59742	VALVE ASSEMBLY, Relief	1
6	16918	DEADWEIGHT ORIFICE	1
7	16903	DEADWEIGHT	1
8	16902	RING, Cap	1
9	56307	CAP, Deadweight Valve	1
10	16910	GAUGE, Pressure	1
11	16914	GLASS, Pressure Gauge	1
12	16909	ELBOW	1
13	56636	NIPPLE	1

(SAMPLE)

3. Find the item number in the corresponding parts list, which shows the Henny Penny part number, a description of the part, any model or usage limitations, and the quantity of parts used on that illustration.

3-5. SUBASSEMBLIES

In some cases, items in the parts list can be purchased in groups (called subassemblies) instead of purchasing individual parts. The parts list shows these subassemblies by indenting the description of the parts included within the subassembly. For example:

TIMER, Automatic Reset
- SWITCH, Timer
- LIGHT, Timer Indicator
- COIL, Timer Buzzer

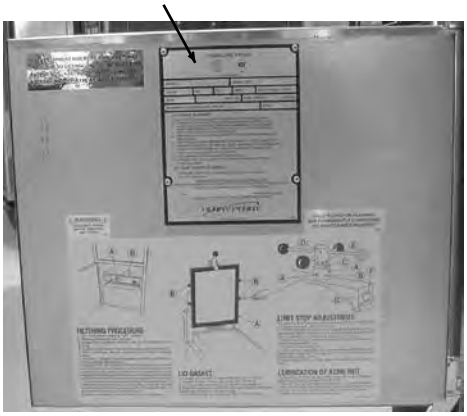
The items can be ordered separately (switch, light, or coil), or order the timer, and all three parts are included.

3-6. HOW TO ORDER PARTS

Once you have found the parts to be ordered, write down the following information:

1. From the parts list: (SAMPLE)
   - Figure number 3-3
   - Item number 6
   - Part number 16918
   - Description DEADWEIGHT ORIFICE
   - Page number 3-11
   - Page date code 401

DATA PLATE



2. From the data plate on your unit: (SAMPLE)

Model number	500
Serial number	10133

3. The following table has been provided as a sample format for you to use in preparing your spare parts orders. By providing all the entries, your distributor will be able to send you the correct parts. Also, prepayment expedites your order.

From Parts List					Your Order		
Figure & Item No.	Part Number	Description	Page No.	Page Date Code	Quantity Ordered	Price Each	Total Price
		(SAMPLE)					
3-1-16	16706	KNOB, Thermostat	3-7	1001	2	2.00	4.00
3-2-47	16102	KNOB, Spindle, Red	3-9	401	1	2.00	2.00
MODEL NO. 500		SERIAL NO. 10133			TOTAL ORDER		6.00

3-7. PRICES

Your distributor has a priced parts list and will be glad to inform you of the cost of your parts order.

3-8. DELIVERY

Commonly replaced items are stocked by your distributor and are shipped when your order is received. Other parts are ordered, by your distributor, from Henny Penny Corporation. Normally, these are sent to your distributor within 3 working days.

3-9. WARRANTY

All replacement parts (except lamps and fuses) are warranted for 90 days against manufacturing defects and workmanship. If damage occurs during shipping, notify the sender and the carrier at once, so that a claim is properly filed. Refer to warranty in the front of this manual for other rights and limitations.

3-10. RECOMMENDED SPARE PARTS FOR DISTRIBUTORS

Recommended replacement parts, stocked by your distributor, are indicated with √ in the parts lists. Please use care when ordering recommended parts, because all voltages and variations are marked. Distributors should order parts based upon common voltages and equipment sold in their territory.

3-11. INDEX OF PARTS LIST ILLUSTRATIONS

Title	Fig. No.	Page No.
AUTOMATIC RESET TIMER ASSEMBLY	3-5	3-13
COMPUTRON C1000 CONTROL	3-1	3-6
COMPUTRON C2000 CONTROL	3-2	3-7
CONTACTOR and FRAME ASSEMBLY (Single Phase Electric Model)	3-25	3-56
CONTACTOR and FRAME ASSEMBLY (Three Phase Electric Model)	3-26	3-58
COUNTERTOP INSULATION ASSEMBLY (Gas Model)	3-33	3-72
DEADWEIGHT VALVE ASSEMBLY	3-13	3-31
DIRECT-CONNECT ASSEMBLY - MODEL 500	3-20	3-48
DIRECT-CONNECT ASSEMBLY - MODEL 600	3-21	3-49
DRAIN VALVE ASSEMBLY (Electric Model)	3-15	3-35
DRAIN VALVE ASSEMBLY (Gas Model)	3-16	3-38
ELECTRIC CONDUIT ASSEMBLY	3-6	3-15
ELECTRONIC IGNITION ASSEMBLY	3-29	3-64
EXHAUST STACK ASSEMBLY	3-12	3-27
FAN and HIGH TEMPERATURE LIMIT CONTROL (Gas Model)	3-28	3-62
FAST CONTROL PANEL	3-3	3-8
FILTER DRAIN PAN and FILTER SCREEN ASSEMBLY	3-22	3-50
FILTER MOTOR and PUMP	3-19	3-46
FIREBOX and FLUE ASSEMBLY (Gas Model)	3-34	3-74

3-11. INDEX OF PARTS LIST ILLUSTRATIONS (continued)

Title	Fig. No.	Page No.
FIREBOX INSULATION ASSEMBLY (Gas Model)	3-35	3-76
FRAME and CABINET ASSEMBLY	3-7	3-17
FRY BASKET (Gas or Electric Model)	3-9	3-23
FRYPOT and GAS BURNER ASSY - NON-CE, DOMESTIC, & ELECTRONIC IGNITION	3-30	3-66
GAS CONTROL VALVE	3-32	3-70
GAS LINE and BURNER ASSEMBLY - CE, INT'L, and ELECTRONIC IGNITION	3-31	3-68
HEATING ELEMENT and HIGH LIMIT ASSEMBLY (Electric Model)	3-27	3-60
LID ASSEMBLY	3-8	3-21
LOWER FILTER PLUMBING COMPONENTS (Gas or Electric Model)	3-17	3-40
SOLENOID VALVE ASSEMBLY (Gas or Electric Model)	3-14	3-33
STANDARD CONTROL PANEL	3-4	3-10
SUPERSORB FILTER ASSEMBLY - Before 3-1-02	3-23	3-53
SUPERSORB FILTER ASSEMBLY - 3-1-02 & After	3-24	3-55
UPPER FILTER PLUMBING COMPONENTS	3-18	3-43
3 TIER WIRE BASKET (Gas Model)	3-10	3-25
4 TIER WIRE BASKET (Electric Model)	3-11	3-26

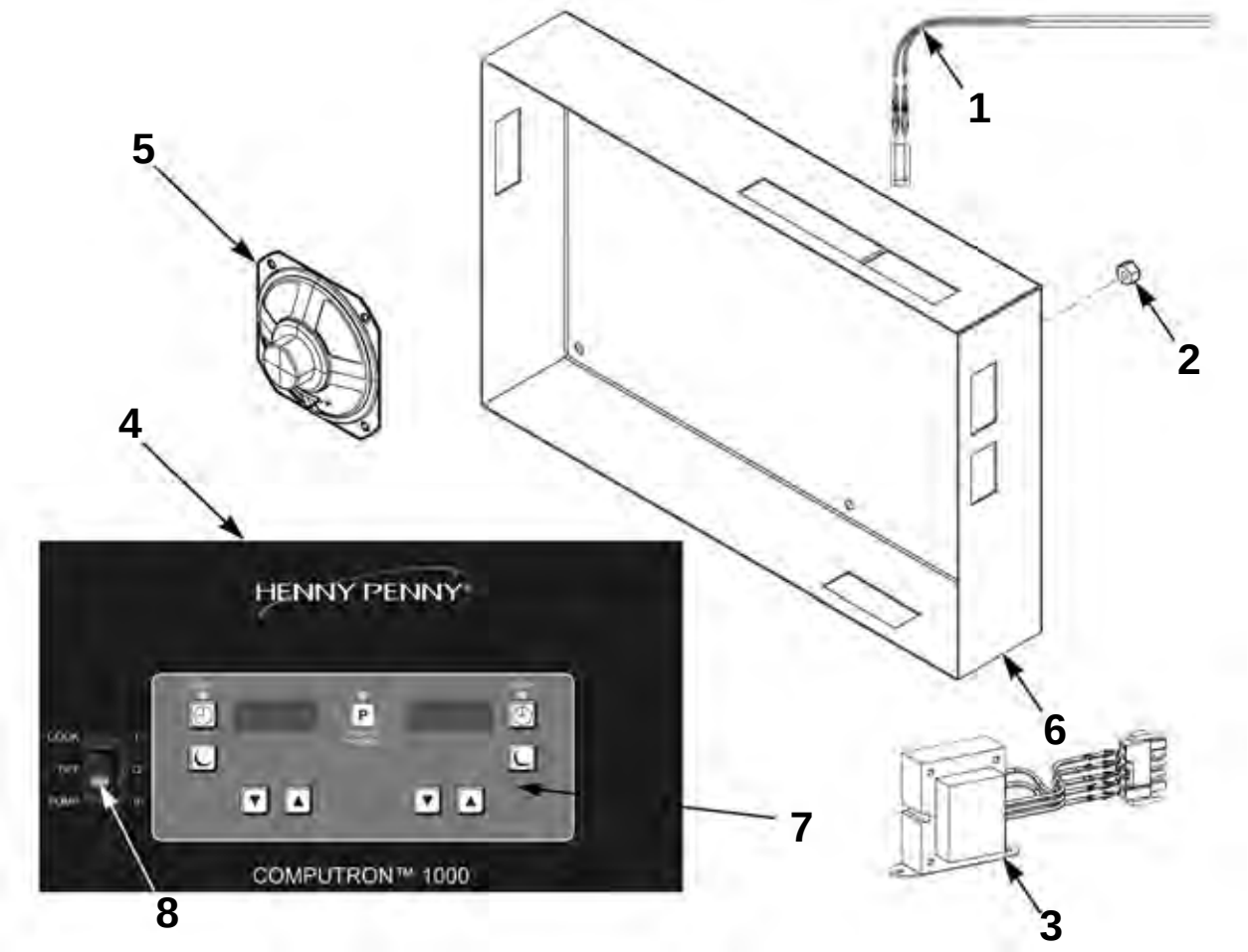


Figure & Item No.	Part No.	Description	Qty.
3-1		COMPUTRON C1000 CONTROL	
	14952	KIT - 500/561 E/M TO C1000 RETROFIT	1
	14953	KIT - 600 E/M TO C1000 RETROFIT	1
	14956	KIT - 600 E/M TO C1000 RETROFIT-CANADA	1
	14957	KIT - 500/561 E/M TO C1000 RETROFIT-CANADA	1
	14406	KIT-600-EM 120V TO LVC C8000BP	1
	140013	KIT - C1000 120V 600SSI TO C8000	1
	140014	KIT - C1000 240V 600SSI TO C8000	1
√ 1	14993	KIT - PROBE - 6 INCH (GAS)	1
√ 1	14992	KIT - PROBE - 3 INCH (ELEC)	1
2	NS02-005	NUT - HEX KEPS - #6-32 C	11
√ 3	60536	ASSY - TRANSFORMER - 24V/230V	1
√ 3	60207	ASSY - TRANSFORMER - 24V/120V	1
√ 4	14954	ASSY - CONTROL - C1000	1
√ 4	14955	ASSY - CONTROL - C1000 - CANADA	1
√ 5	ME70-005	SPEAKER - 16 OHM - 2 INCH	1
6	78269	COVER - PCB	1
7	80275	DECAL - C1000 - CONTROL - GM	1
√ 8	29898	SWITCH - POWER	1
9*	53669	GUARD-POWER SWITCH	1

√ Recommended Parts / * not shown -- **Starting SNs: Gas - AN0807053 and Electric - AA0807051**

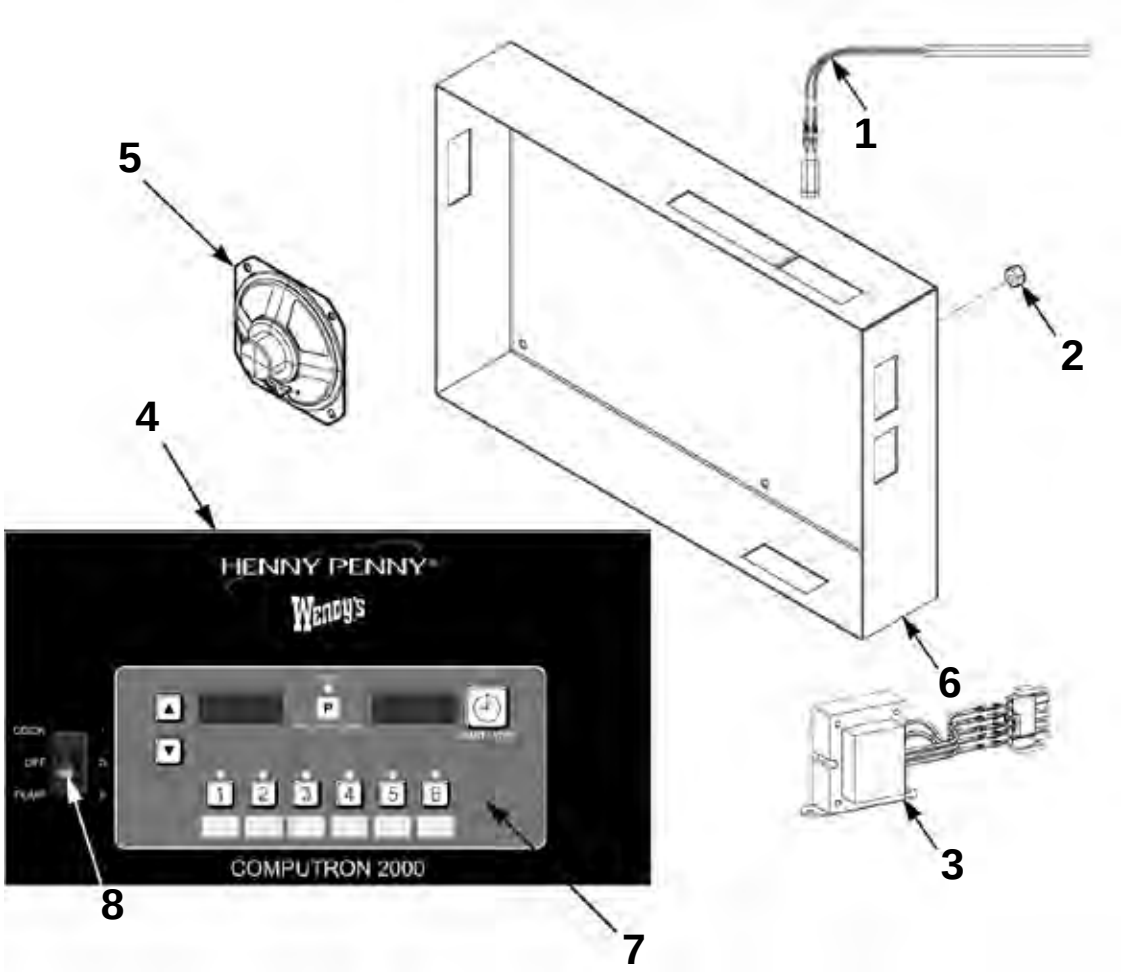


Figure & Item No.	Part No.	Description	Qty.
3-2		COMPUTRON C2000 CONTROL	
	14896	KIT-500/600 E/M to C2000 WENDY'S RETROFIT.....	1
	14934	KIT-500/600 E/M to C2000 WENDY'S RETRO-CAN....	1
√ 1	14993	ASSY - PROBE - 6 INCH (GAS).....	1
√ 1	14992	ASSY - PROBE - 3 INCH (ELEC).....	1
2	NS02-005	NUT - HEX KEPS - #6-32 C.....	11
√ 3	60536	ASSY - TRANSFORMER - 24V/230V.....	1
√ 3	60207	ASSY - TRANSFORMER - 24V/120V.....	1
√ 4	14958	CONTROL - 500/600 C2000 WENDY'S FRYER.....	1
√ 4	14959	CONTROL-500/600 C2000 WENDY'S-CANADA....	1
√ 5	ME70-005	SPEAKER - 16 OHM - 2 INCH.....	1
6	78269	COVER - PCB.....	1
7	72123	DECAL - C2000 - WENDY'S	1
7	78962	DECAL - C2000 - WENDY'S - FRENCH	1
√ 8	29898	SWITCH - POWER.....	1
9*	53669	GUARD - POWER SWITCH	1
√ 10*	75820	MENU CARD - WENDY'S - C2000.....	1

√ Recommended Parts / * not shown **-- Starting SNs: Gas - AN0801038 and Electric - AA0802059**

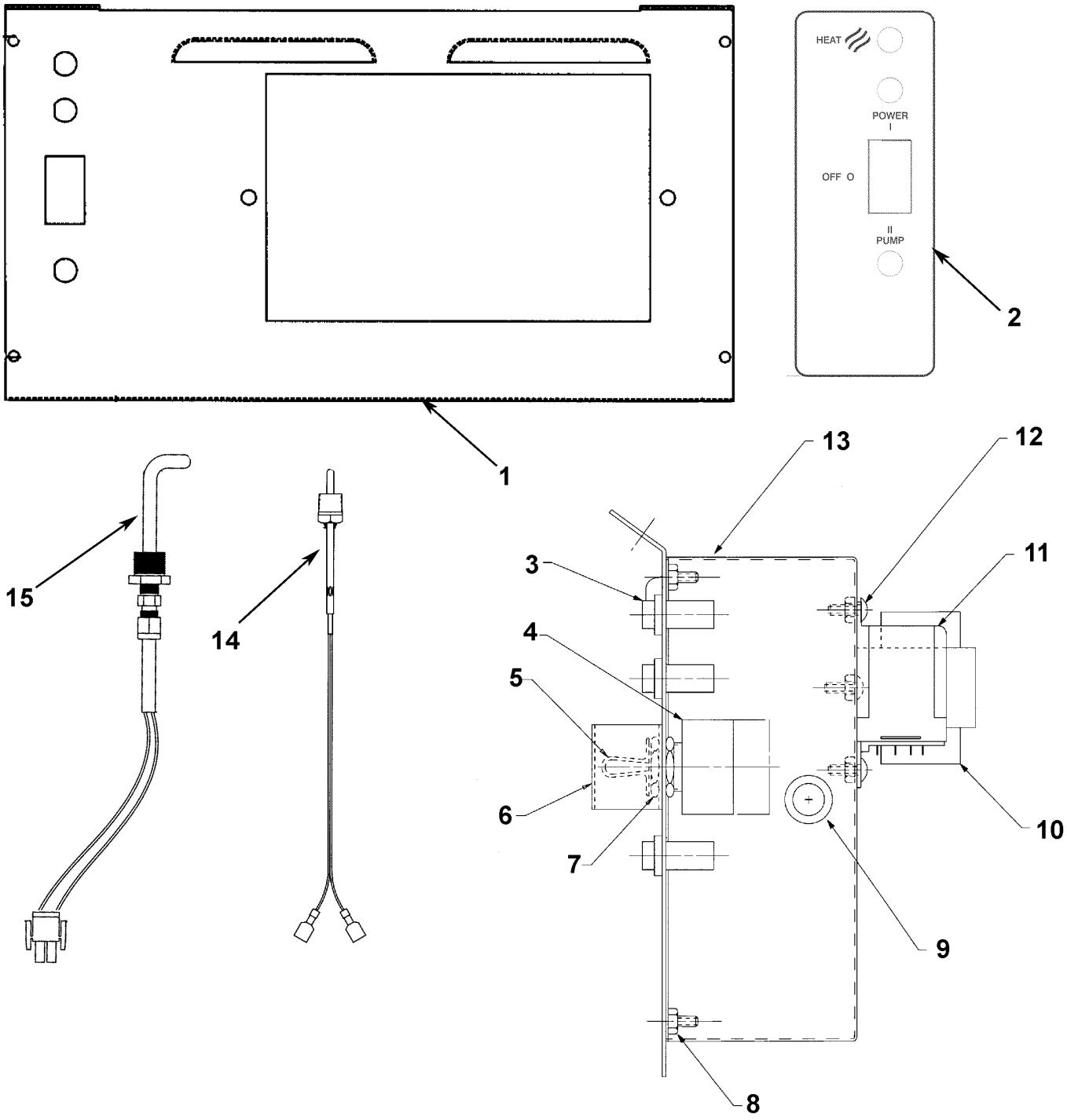


Figure 3-3. FAST Control Panel

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-3		**FAST CONTROL PANEL**	
1	51617	FAST CONTROL PANEL - 500 - 208-240V (KB020JJ & below)....	1
1	29938	FAST CONTROL PANEL - 500 - 380-415V (KB020JJ & below)....	1
1	63751	FAST CONTROL PANEL - 600-120V (KA021JJ to GA085JB).....	1
	140246	KIT-PFG600 FAST CONTROL	1
	63224	FAST CONTROL PANEL - 500/600-240V (KB021JJ to HB013JB) (KA021JJ to GA085JB)	1
1	63225	FAST CONTROL PANEL CE- 500/600 (KB021JJ to HB013JB) ..... (KA021JJ to GA085JB).....	1
1	27472	FAST CONTROL PANEL-600-100-120V (GA086JB & above).....	1
1	27423	FAST CONTROL PANEL-500/600-240V (HB014JB & above) ..... (GA086JB & above)	1
1	27424	FAST CONTROL PANEL- CE-500/600 (HB014JB & above)..... (GA086JB & above)	1
2	44559	DECAL - FAST CONTROL - 500 (KB020JJ & below).....	1
2	61722	DECAL - FAST CONTROL - 500/600 (KB021JJ & above)..... (KA021JJ & above).....	1
√ 3	54085	LIGHT - CE INDICATOR, GREEN.....	3
√ 3	16624	LIGHT - INDICATOR, RED	3
√ 4	16640	SWITCH MAIN ASSY - 4 PDT (KB020JJ & below)	1
√ 4	29898	SWITCH - POWER (KB021JJ & above) ..... (KA021JJ & above).....	1
5	48369	SWITCH COVER - CE.....	1
6	18450	GUARD - SWITCH FRYER	1
7	NS03-018	NUT - 3/4-32 JAM	2
8	NS02-005	NUT HEX KEPS #6-32 C.....	10
9	EF02-002	BUSHING 33/64 P.....	1
√ 10	30614	TRANSFORMER - 208/240V PRI-24 VS.....	1
√ 10	35916	TRANSFORMER - 120V - 50/60 Hz	1
√ 11	30429	RELAY, 24V COIL - 15A@120V, 10A@240V (Shown)	1
√ 11*	60818	RELAY, 24V COIL - 10A@120V, 12A@240V.....	1
12	SC01-049	SCREW #6-32 X 3/8 PH PHD C	6
13	29921	BOX - SHIELD (KB020JJ & below).....	1
13	63336	COVER - CONTROL PANEL FAST(KB021JJ & above)..... (KA021JJ & above).....	1
√ 14	29948	ASSY - PROBE FAST - ELECTRIC	1
√ 15	29383	ASSY - PROBE FAST - GAS	1
16*	14908	KIT - 600 CONV FAST TO SMS INT	1

√ Recommended Parts
*not shown

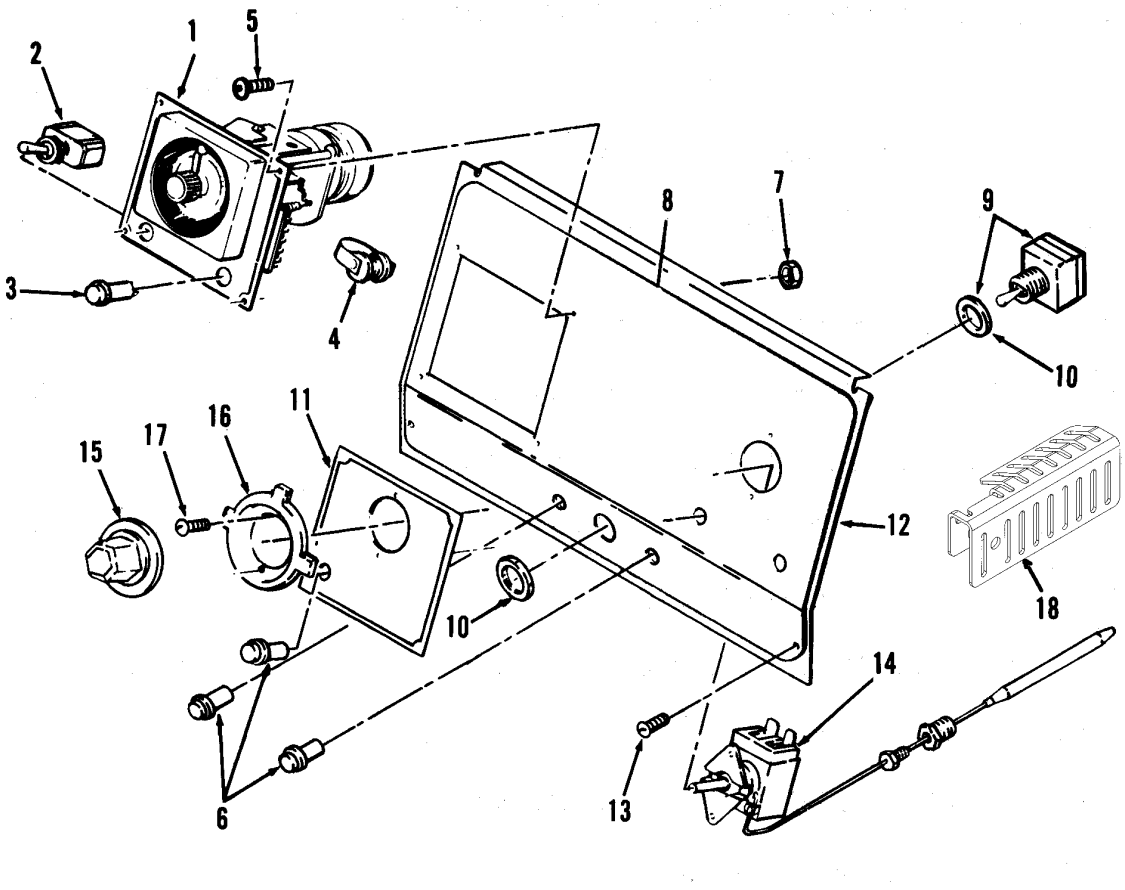


Figure 3-4. Standard Control Panel

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-4		STANDARD CONTROL PANEL	
	18425	ASSY, Control Panel Complete-Bent Panel - 500	1
	48185	ASSY, Control Panel Complete-Bent Panel - 561	1
	16675	ASSY, Control Panel Complete-Bent Panel - 600	1
√ 1	16602	TIMER ASSY, Automatic Reset, 115 Volt, 60 Hz	1
√ 1	16596	TIMER ASSY, Automatic Reset, 115 Volt, 50 Hz	1
√ 1	18301	TIMER ASSY, Automatic Reset, 208-240 Volt, 60 Hz	1
√ 1	18304	TIMER ASSY, Automatic Reset, 208-240 Volt, 50 Hz	1
√ 1	17366	TIMER ASSY, Automatic Reset, 208-240 Volt, 50 Hz - CE	1
√ 2	22195	SWITCH, Timer	1
√ 3	16624	LIGHT, Timer Indicator	1
√ 4	16659	COIL, Timer Buzzer, 115 Volt	1
√ 4	18302	COIL, Timer Buzzer, 220 Volt	1
4	14283	KIT, 600, Cont. 120 EM Buzzer	1
4	14284	KIT, 500/600, Cont. 230 EM Buzzer	1
4	14419	KIT, 500, Cont. 24 EM Buzzer	1
5	SC01-073	SCREW, Timer	4
√ 6	16624	LIGHT, Indicator	3
√ 6	63609	LIGHT, Indicator, Temperature - 48 Volt - Gas Models	1
√ 6	54086	LIGHT, Indicator, Green-CE and Australia - Gas Models	3
7	NS02-009	NUT, Timer	4
8		DECAL, Control - **See chart on next page**	1
√ 9	16640	SWITCH, Main	1
10	NS03-018	NUT, Main Switch	2
11	16745	PLATE, Thermostat	1
12		PANEL, Stud Assy - Control - **See chart on next page**	1
13	SC04-003	SCREW, Control Panel	2
√14a	18382	THERMOSTAT only, RS KX 365F Max.-CE-500/600	1
√14b	14293	KIT, Thermostat Control-600 (Includes items 15, 16, & 17)	1
√14c	14648	KIT, Thermostat Control-500/561(Includes items 15, 16, 17, 18)	1
15	16706	KNOB, Thermostat (Included in item 14b & 14c)	1
16	16704	BEZEL, Thermostat (Included in item 14b & 14c)	1
17	SC01-023	SCREW, Thermostat (Included in item 14b & 14c)	2
18	65183	ASSY, Pot Capillary Guard - 500/561(Included in item 14c)	1
19*	32927	WRAP, Thermostat Capillary	1
		FAST Controls (Also see pgs. 3-8 & 3-9 for exploded view & details)	
20*	61722	Decal - FAST Controls	1
√ 21*	29898	Power Switch	1
22*	18450	Guard - Power Switch	1
√ 23*	30429	Relay - 15A-125VAC, 10A-250VAC	1
√ 11	60818	Relay - 24V COIL (120V)	1
√ 24*	30614	Transformer - 208/240 V - Pri 24 VS	1
√ 25*	54085	Indicator Light - Green - CE	3
26*	27472	Control Panel Assy. - FAST - 600 - 100-120V	1
26*	27423	Control Panel Assy. - FAST - 500/600 - 240V	1
√ 27*	29948	Temperature Probe - FAST - 500	1
√ 27*	29383	Temperature Probe - FAST - 600	1

√ Recommended Parts/* Not shown

Standard Control Panel

Serial Number	Description	500	561	600
KB020JJ & Below	Control Decal	64427	-	-
	Control Decal-Wendy's	61570	-	-
	Control Decal-Pollo Campero	61572	-	-
	Control Panel Stud Assy	18439	-	-
KB029JJ & Below	Control Decal	-	64428	-
	Control Panel Stud Assy	-	17524	-
KA020JJ & Below	Control Decal	-	-	64429
	Control Decal-Wendy's	-	-	61571
	Control Decal-Pollo Campero	-	-	61580
	Control Decal-Pollo Campero-CE	-	-	61754
	Control Panel Stud Assy	-	-	16701
KB021JJ to HB013JB	Control Decal	61554	-	-
	Control Decal-Wendy's	61570	-	-
	Control Decal-Pollo Campero	61572	-	-
	Control Panel Stud Assy	63230	-	-
KB030JJ to HB016JB	Control Decal	-	61709	-
	Control Panel Stud Assy	-	63230	-
KA021JJ to GA085JB	Control Decal	-	-	61555
	Control Decal-Wendy's	-	-	61571
	Control Decal-Pollo Campero	-	-	61580
	Control Panel Stud Assy	-	-	63230
	Control Decal-Pollo Campero-CE	-	-	61754
HB014JB & Above	Control Decal	61554	-	-
	Control Decal-Wendy's	61570	-	-
	Control Decal-Pollo Campero	61572	-	-
	Control Panel Stud Assy	27396	-	-
HB017JB & Above	Control Decal	-	61709	-
	Control Panel Stud Assy	-	27396	-
GA086JB & Above	Control Decal	-	-	61555
	Control Decal-Wendy's	-	-	61571
	Control Decal-Pollo Campero	-	-	61580
	Control Decal-Pollo Campero-CE	-	-	61754
	Control Panel Stud Assy	-	-	27396

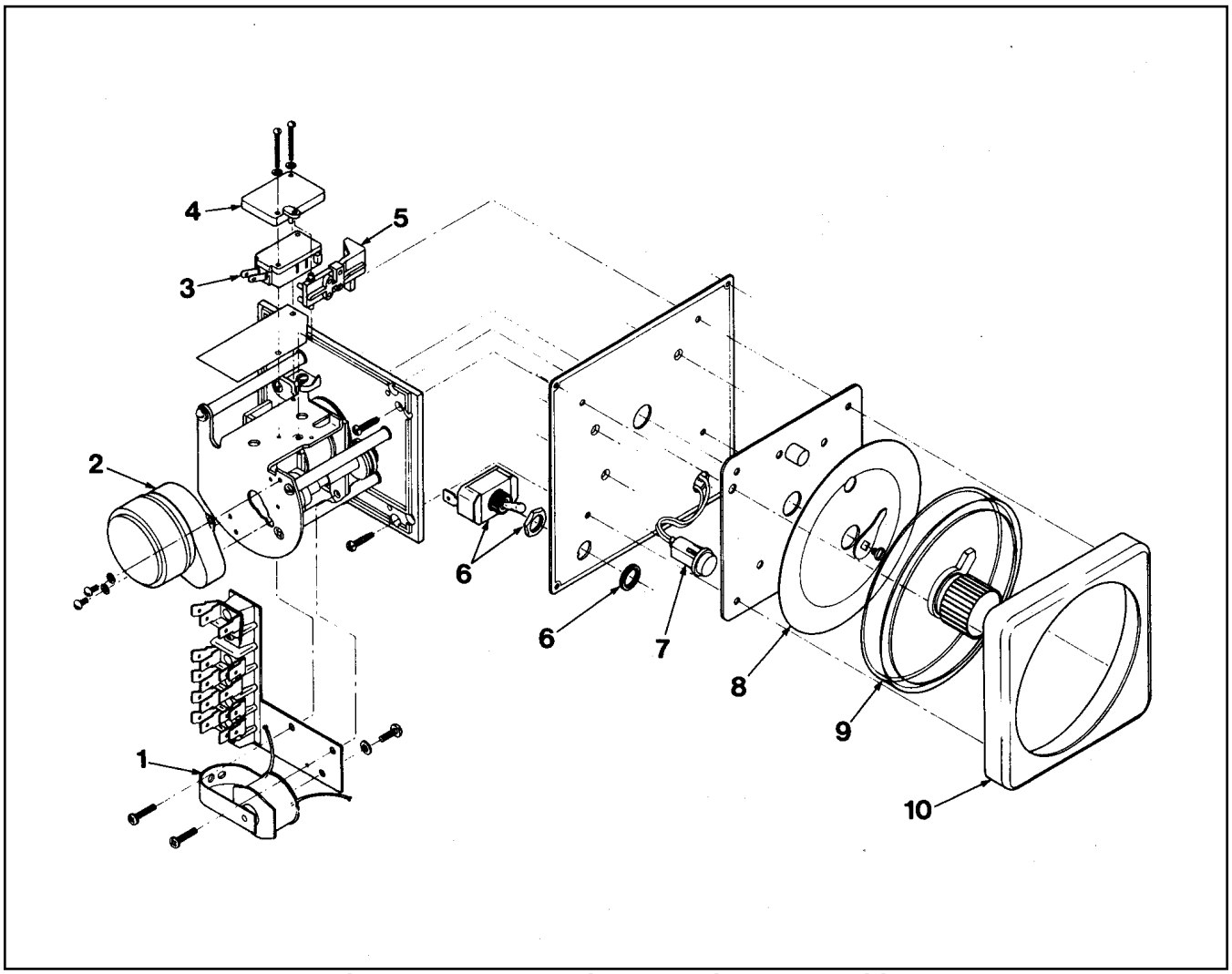


Figure 3-5. Automatic Reset Timer Assembly

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-5		AUTOMATIC RESET TIMER ASSEMBLY	
√ 1	16659	BUZZER COIL ASSY, 120 V	1
√ 1	18302	BUZZER COIL ASSY, 208-240 V	1
√ 2	16673	TIMER MOTOR, 120 V	1
√ 2	18303	TIMER MOTOR, 208-240 V	1
√ 3	16671	TIMER MICROSWITCH	1
√ 4	18771	MICROSWITCH MOUNTING PLATE	1
√ 5	18772	MICROSWITCH ACTUATOR ARM	1
√ 6	22195	ON/OFF SWITCH (includes nut)	1
√ 7	16624	INDICATOR LIGHT	1
√ 9	16371	KNOB & POINTER ASSY	1
√ 10	16657	BEZEL	1

√ Recommeded Parts

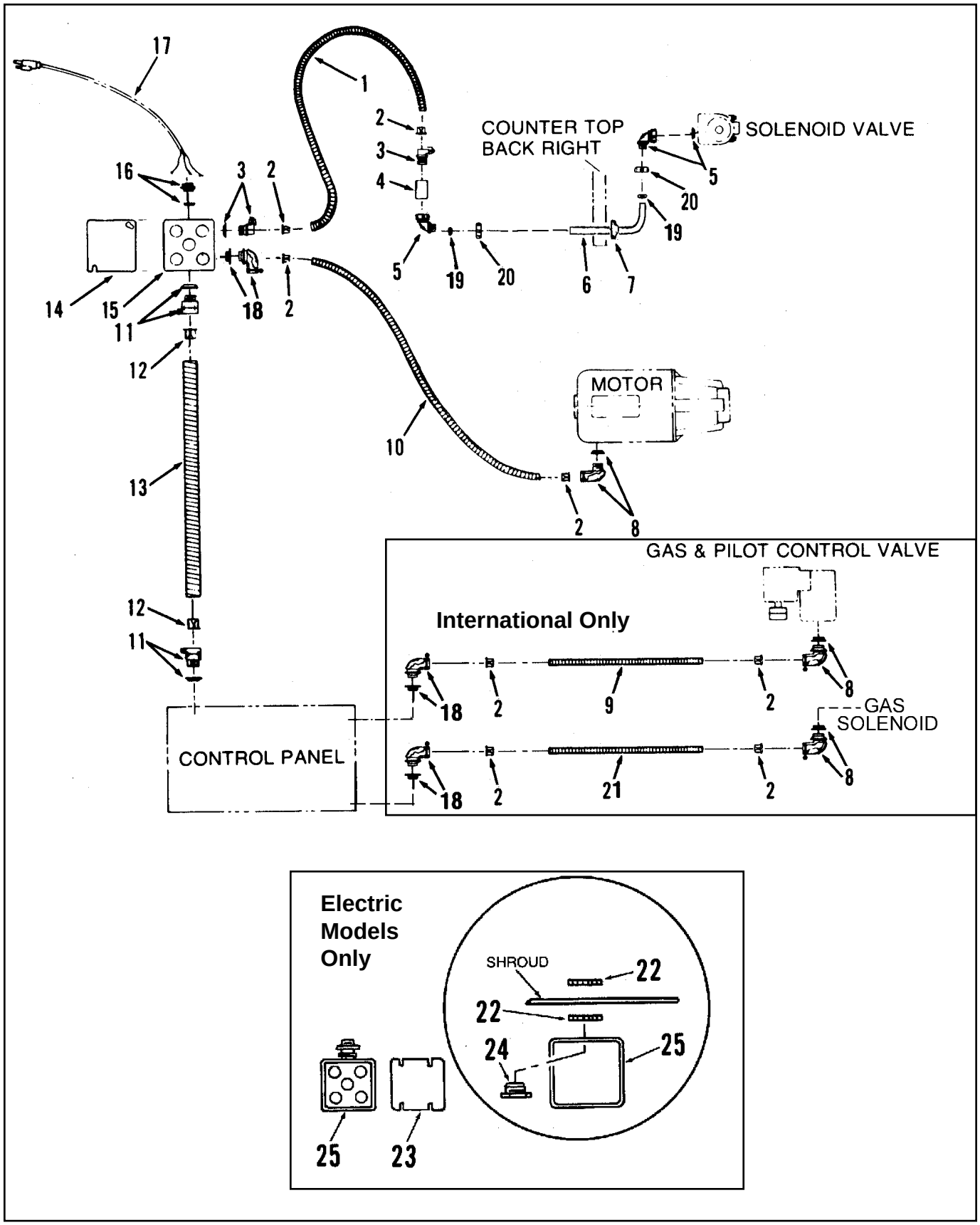


Figure 3-6. Electric Conduit Assembly

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-6		ELECTRIC CONDUIT ASSEMBLY	
1	18527	CONDUIT, Flexible	1
2	18105	BUSHING, Anti Short	8
3	18111	CONNECTOR, Conduit	2
4	FP01-018	COUPLING, Pipe	1
5	18113	CONNECTOR, Conduit, 90°	2
6	59218	TUBE, Conduit - Solenoid	1
7	16804	GROMMET, Umbrella	1
8	18107	CONNECTOR, Conduit, 90°	1
9	17221	CONDUIT, Flexible	1
9	33866	CONDUIT, Flexible-CE and Australia	1
10	30291	CONDUIT, Flexible	1
11	18104	CONNECTOR, Conduit	2
12	18108	BUSHING, Anti Short	2
13	33628	CONDUIT, Flexible	1
14	18101	COVER, Junction Box	1
15	18102	BOX, Junction	1
15	54965	BOX, Junction w/cover-Splash Proof - CE and Australia	1
16	18103	CONNECTOR, Power Cord	1
17	53656	CORD, Power, With Grounded Plug - Gas Models only	1
17	34823	CORD, Power-CE and Australia - Gas Models only	1
18	18644	CONDUIT CONNECTOR	1
19	16817	SLEEVE, Teflon	2
20	16809	NUT, Fitting	2
21	44814	CONDUIT, Flexible	1
22	19617	NUT, Lock, 3/4 inch	2
23	19708	COVER, Junction Box	1
23	44485	COVER, Junctn. Box, Water Tight, CE & Australia (500).	1
23	32779	COVER, Junction Box, Water Tight, CE (600)	1
24	19616	NIPPLE, 3/4 inch Chase	1
25	19707	BOX, Main Power Junction	1
25	48437	BOX, Junction, Water Tight -CE (model 500)	1
25	32740	BOX, Junction, Water Tight -CE (model 600)	1
√26*	51390	EMC Filter Assy.-CE and Australia	1
27*	19923	TRANSFORMER, Large - 480 Volt	1

√ Recommended Parts

*not shown

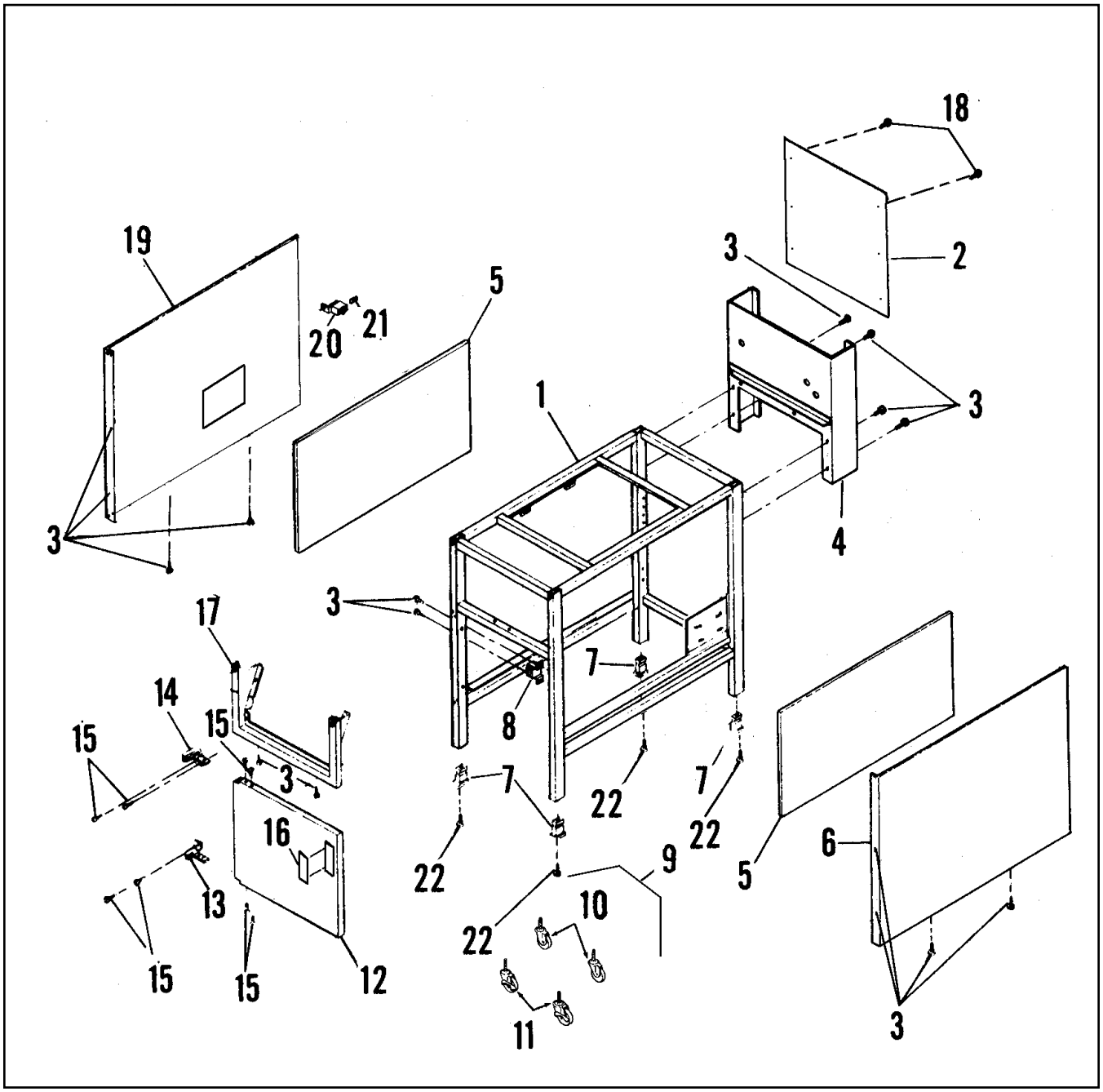


Figure 3-7. Frame and Cabinet Assembly

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-7		FRAME AND CABINET ASSEMBLY	
1		FRAME ASSEMBLY-**See chart on next page**	1
2		COVER, Back Shroud-**See chart on next page**	1
3	SC03-005	SCREW, Panels and Bracket, Sheet Metal	22
4		SHROUD ASSEMBLY-**See chart on next page**	1
5	59730	INSULATION, Side Panel, (Gas only)	2
5	59732	INSULATION, Side Panel - CE (Gas only)	2
6		PANEL, Right Side, SS -**See chart on next page**	1
6	24255	PANEL, Right Side, - CE and Australia (Gas only) (KA021JJ & above)	1
7	54225	INSERT, Aluminum Feet - 1 in. x 1 in.	4
7	17612	INSERT, Aluminum Feet - 1 in. x 1-1/2 in.	4
8	59230	BRACKET, Magnetic Catch	1
8	17002	MAGNET	1
9	03007	CASTER, Assembly	1
10	17630	CASTER, Less Brake	2
11	17629	CASTER, w/Brake	2
10	151564	CASTER 3 IN. SWIVEL STEM HD	2
11	151563	CASTER 3 IN. SWIVEL W/BRAKE HD	5
12	17639	DOOR ASSY, Complete (KB020JJ & below-elec) (KA020JJ & below-gas)	1
12	58849	DOOR ASSY, Complete (KB021JJ & above-elec) (KA021JJ & above-gas)	1
13	17620	HINGE, Bottom Door	1
14	17618	HINGE, Top Door	1
15	SC01-072	SCREW, Door Hinge	8
16	41836	HANDLE, Door	1
17		PANEL, Frt, SS - **See chart on next page**	1
18	SC04-003	SCREW, Back Shroud	6
19		PANEL, Side Left, SS-**See chart on next page**	1
19	24254	PANEL, Side Left,- CE and Australia (Gas only) (KA021JJ & above)	1
20	17627	LUG, Grounding	1
21	17611	SCREW, Grounding Lug	1
22	SC01-143	5/8-18x4 Hex Hd (bright finish) (adjust. legs)	4
22	SC01-067	5/8-18x3-1/4 Hex Hd (black finish) (adjust. legs)	4
23*	NS03-050	NUTSERT, #8-32 Steel CAD Plated (hinge nutserts)	4
24*	SC01-234	SCREW, #8-32x1/2 PH Flat Hd (Door to Frame)	4

* not shown

Frame and Cabinet Assembly

Serial Number	Description	500	561	600
KB020JJ & Below	Front Panel	17602	-	-
	Frame Assy(short)	N/A	-	-
	Frame Assy(long)	N/A	-	-
	Right Side Panel	17606	-	-
	Left Side Panel	17604	-	-
KB029JJ & Below	Front Panel	-	17602	-
	Frame Assy(short)	-	N/A	-
	Frame Assy(long)	-	N/A	-
	Right Side Panel	-	48047	-
	Left Side Panel	-	17604	-
KA020JJ & Below	Front Panel	-	-	17602
	Back Shroud Cover	-	-	17346
	Shroud Assy	-	-	18740
	Frame Assy(short)	-	-	N/A
	Frame Assy(long)	-	-	N/A
	Right Side Panel	-	-	17606
	Left Side Panel	-	-	17604
KB021JJ to HB013JB	Back Shroud Cover	64255	-	-
	Front Panel	56974		
	Frame Assy(long)	64018	-	-
	Frame Assy(short)	64017		
	Right Side Panel	56972	-	-
	Left Side Panel	56973	-	-
KB030JJ to HB016JB	Back Shroud Cover	-	64255	-
	Shroud Assy	-	67900	-
	Front Panel	-	56974	-
	Frame Assy(long)		64018	
	Frame Assy(short)		64017	
	Right Side Panel	-	56972	
	Left Side Panel	-	56973	
KA021JJ to GA085JB	Back Shroud Cover	-	-	64255
	Front Panel	-	-	56974
	Frame Assy(long)			64018
	Frame Assy(short)			64017
	Right Side Panel	-	-	56972
	Left Side Panel		-	56973

(Continued on following page)

Frame and Cabinet Assembly

Serial Number	Description	500	561	600
HB014JB & Above	Back Shroud Cover	24534	-	-
	Front Panel	83195	-	-
	Frame Assy(short)	23679	-	-
	Frame Assy(long)	26854	-	-
	Right Side Panel	56972	-	-
	Left Side Panel	56973	-	-
HB017JB & Above	Back Shroud Cover	-	24534	-
	Shroud Assy	-	67900	-
	Front Panel	-	83195	-
	Frame Assy(short)	-	23679	-
	Frame Assy(long)	-	26854	-
	Right Side Panel	-	56972	-
	Left Side Panel	-	56973	-
GA086JB & Above	Back Shroud Cover	-	-	24534
	Front Panel	-	-	83195
	Frame Assy(short)	-	-	23679
	Frame Assy(long)	-	-	26854
	Right Side Panel	-	-	56972
	Left Side Panel	-	-	56973
AA1411055 & Below	Shroud Assy	67900		
AA1411056 & Above	Shroud Assy	154672		
KA020JJ - AN1411014	Shroud Assy			67900
AN1411015 & Above	Shroud Assy			154672

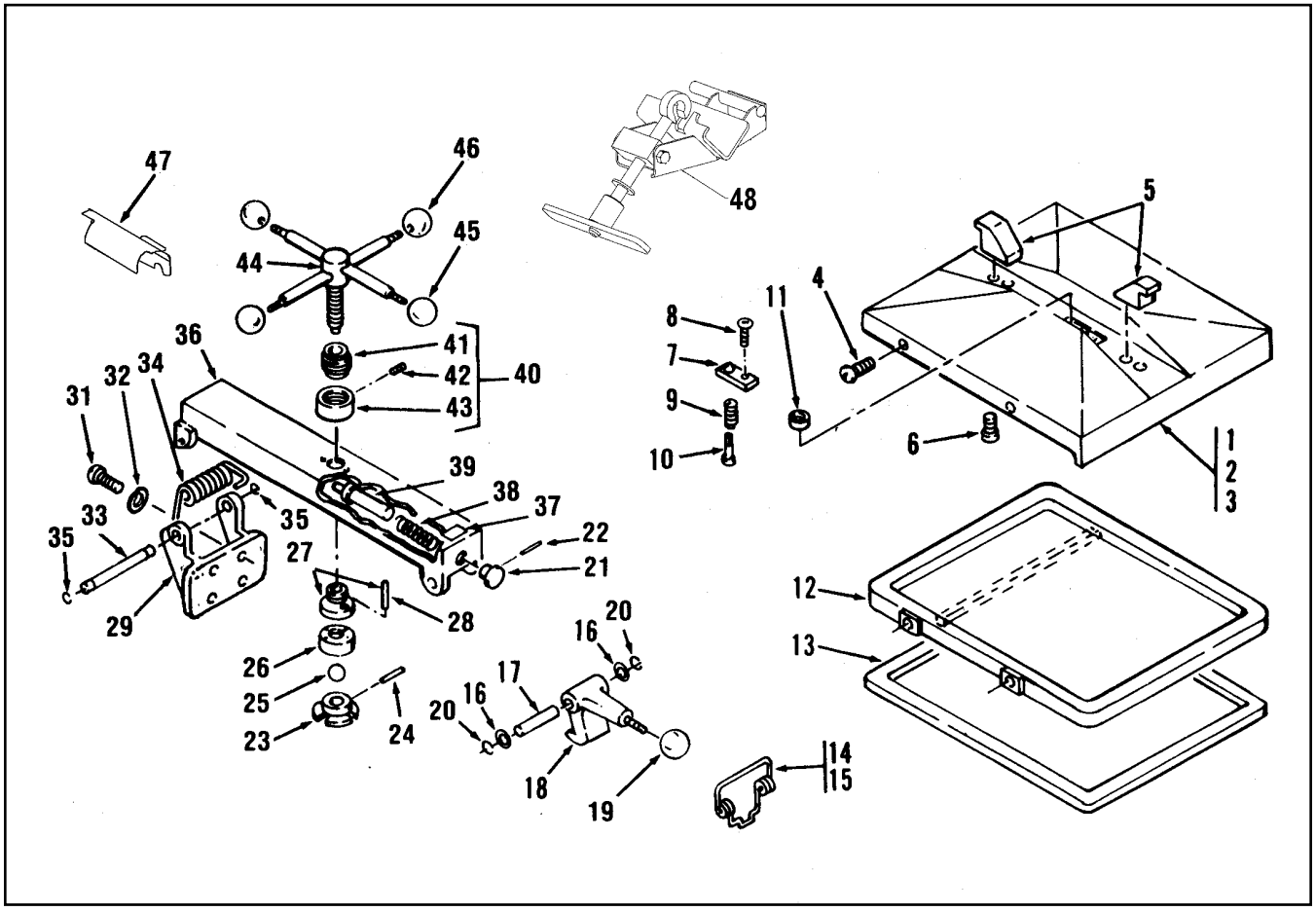


Figure 3-8. Lid Assembly

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-8		LID ASSEMBLY	
1	16170	LID ASSEMBLY	1
2	16169	COVER ASSEMBLY.....	1
3	16155	COVER, Lid	1
4	SC01-083	SCREW, Lid Cover.....	4
5	16133	HOOK, Cover Retaining.....	2
6	SC06-027	SCREW, Retaining Hook.....	4
7	16166	RETAINER	1
8	SC06-010	SCREW, Retaining Hook (Allen Head).....	1
9	16165	SPRING, Return	1
10	16164	PIN, Locking.....	1
11	16163	BALL, Seat	1

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-8 Cont'd.			
12	16119	LINER, Inner Lid	1
√ 13	16120	GASKET, Reversible, Inner Lid Liner.	1
√ 14	16199	KIT, Latch Spring	1
15	33480	SPRING	1
16	16198	SPACER	2
17	16197	PIN, Latch	1
√ 18	16116	LATCH, Lid	1
19	16102	KNOB, Latch	1
20	16121	RING, Tru-Arc Latch	2
21	16137	KNOB, Retaining Pin	1
22	16138	PIN, Knob Roll	1
23	16157	COLLAR, Locking	1
23	27325	COLLAR, Locking - CE	1
24	16158	PIN, Locking Collar	1
24	27351	PIN, Locking Collar - CE	1
25	16159	BALL, Thrust	1
26	27326	NUT, Idle	1
27	27329	NUT, Acme	1
28	16162	PIN, Acme Nut	2
√ 29	16112	HINGE, Lid Assembly	1
31	SC01-081	SCREW, Lid Hinge	4
32	LW01-010	WASHER, Lock, Lid Hinge	4
33	16110	PIN, Lid Hinge	1
√ 34	75293	HINGE, Lid Spring	1
35	16111	RING, Retainer, Tru-Arc, Hinge	2
36	16154	BAR, Center Cross	1
36	26884	BAR, Center Cross - CE	1
37	36099	DECAL, DANGER	1
38	16136	SPRING, Retaining Pin	1
39	16135	COVER, Retaining Pin	1
40	16171	STOP, Limit Assembly	1
41	16153	STOP, Limit	1
42	16156	SCREW, Set, Limit Stop Collar	2
43	16152	COLLAR, Limit Stop	2
44	16168	SPINDLE ASSEMBLY	1
44	26911	SPINDLE ASSEMBLY - CE	1
45	16102	KNOB, Spindle, Red	1
46	16101	KNOB, Spindle, Black	3
47	29587	COVER, Spring	1
√ 48	14960	KIT, Spring Loading Tool	1

√ Recommended Parts

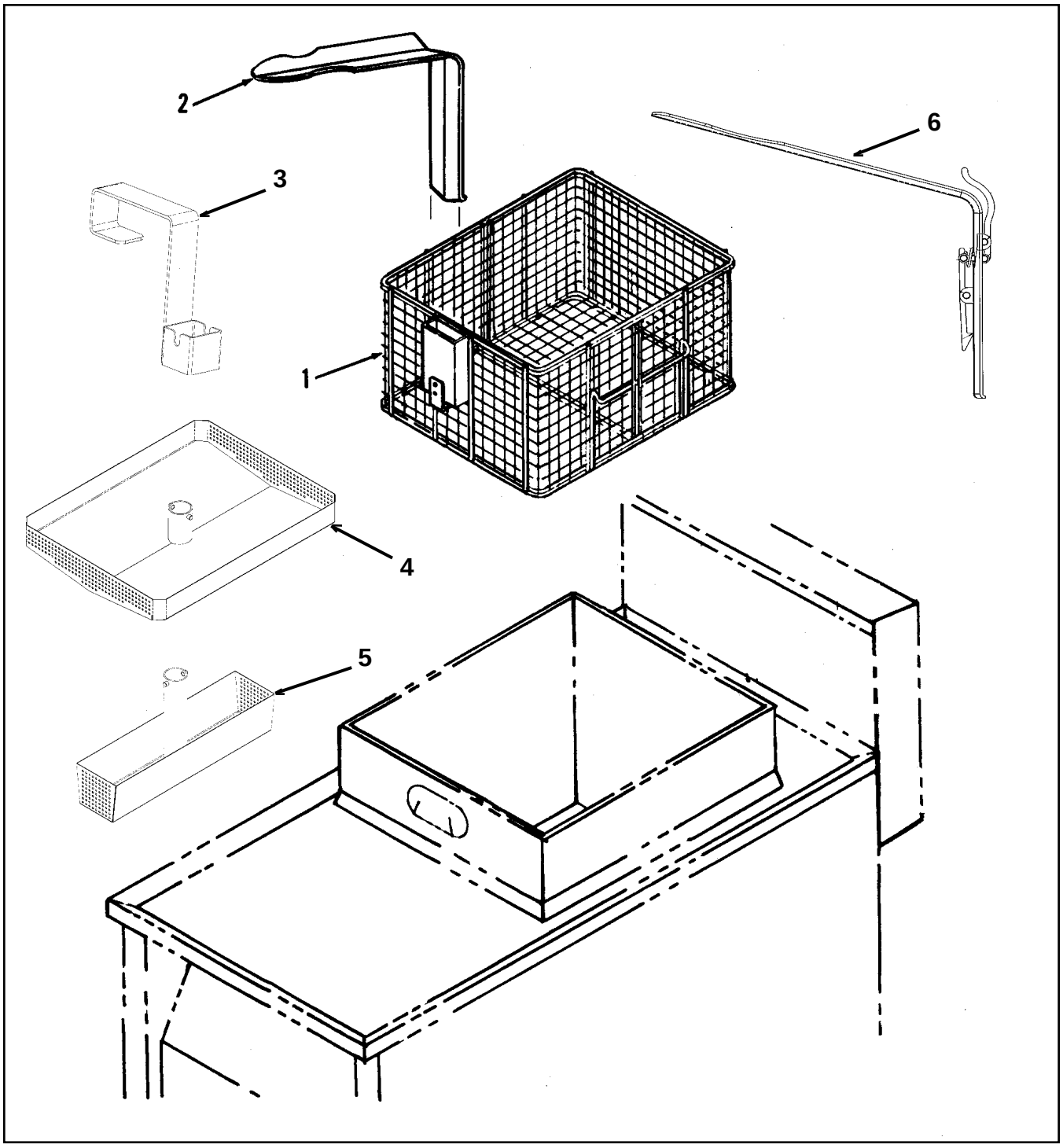


Figure 3-9. Fry Basket (Gas or Electric Model)

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-9		FRY BASKET (Gas or Electric Model)	
1	56075	BASKET, Model 561	1
1	55424	BASKET, Full Basket w/Bail Handle - Model 561	1
1	17801	BASKET, Without Legs, Gas Model Only	1
1	19501	BASKET, With Legs, Electric Model Only	1
1	19507	BASKET, Expanded - PFE500	1
2	19502	HANDLE	1
2	48115	HANDLE, Basket - Model 561	1
3	24438	ASSY, Weld-Crumb Basket Handle	1
4	03357	ASSY, Weld-Crumb Pan/Tube-PFE-500 w/Handle	1
4	03363	ASSY, Weld-Crumb Pan/Tube-PFE-561 w/Handle	1
5	03397	ASSY, Weld-Crumb Pan/Tube-PFG-600 w/Handle	1
6	64071	HANDLE, Locking Assembly	1
7*	19535	1/2 SIZE BASKET Support - Model 500/600	1
7*	73037	1/2 SIZE Basket Support - Model 500	1
8*	19509	1/2 SIZE Basket - Model 500/600	2
8*	73025	1/2 SIZE Basket - Model 500	2
8*	71371	BASKET, Chicken Filet (McDs) - Model 500	1
8*	72009	BASKET, Chicken Filet (McDs) - Model 600	1
9*	72294	INSERT, Drop-in Fillet Basket (McDs)	1

* not shown

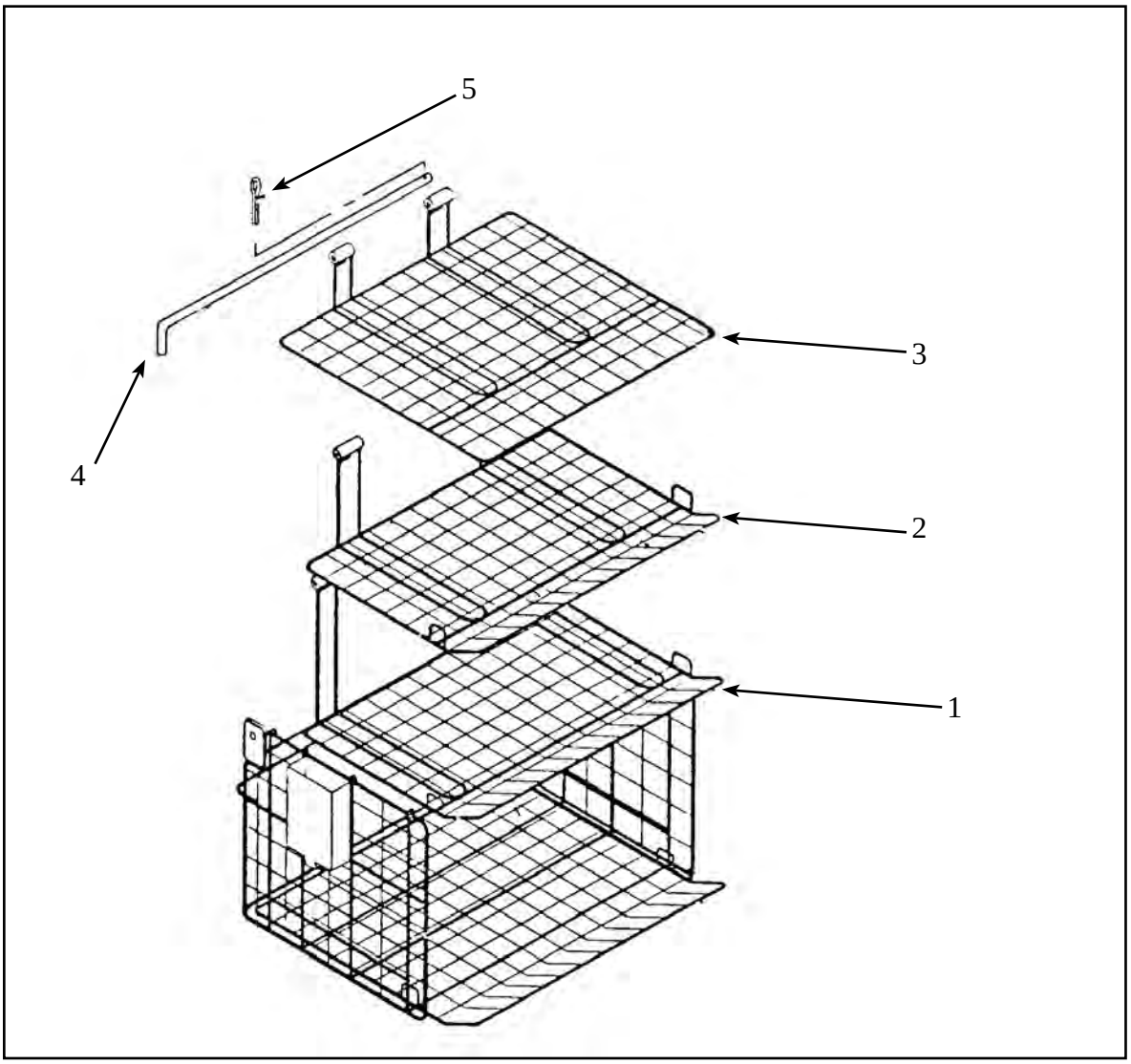


Figure 3-10. 3 Tier Wire Basket (Gas Model)

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
3-10	64058	STAINLESS STEEL BASKET.....	1
1	64060	SHELF, 2nd	1
2	64061	SHELF, 3rd.....	1
3	64062	COVER.....	1
4	19536	ROD, Pivot	1
5	PN01 -001	PIN, Cotter.....	1

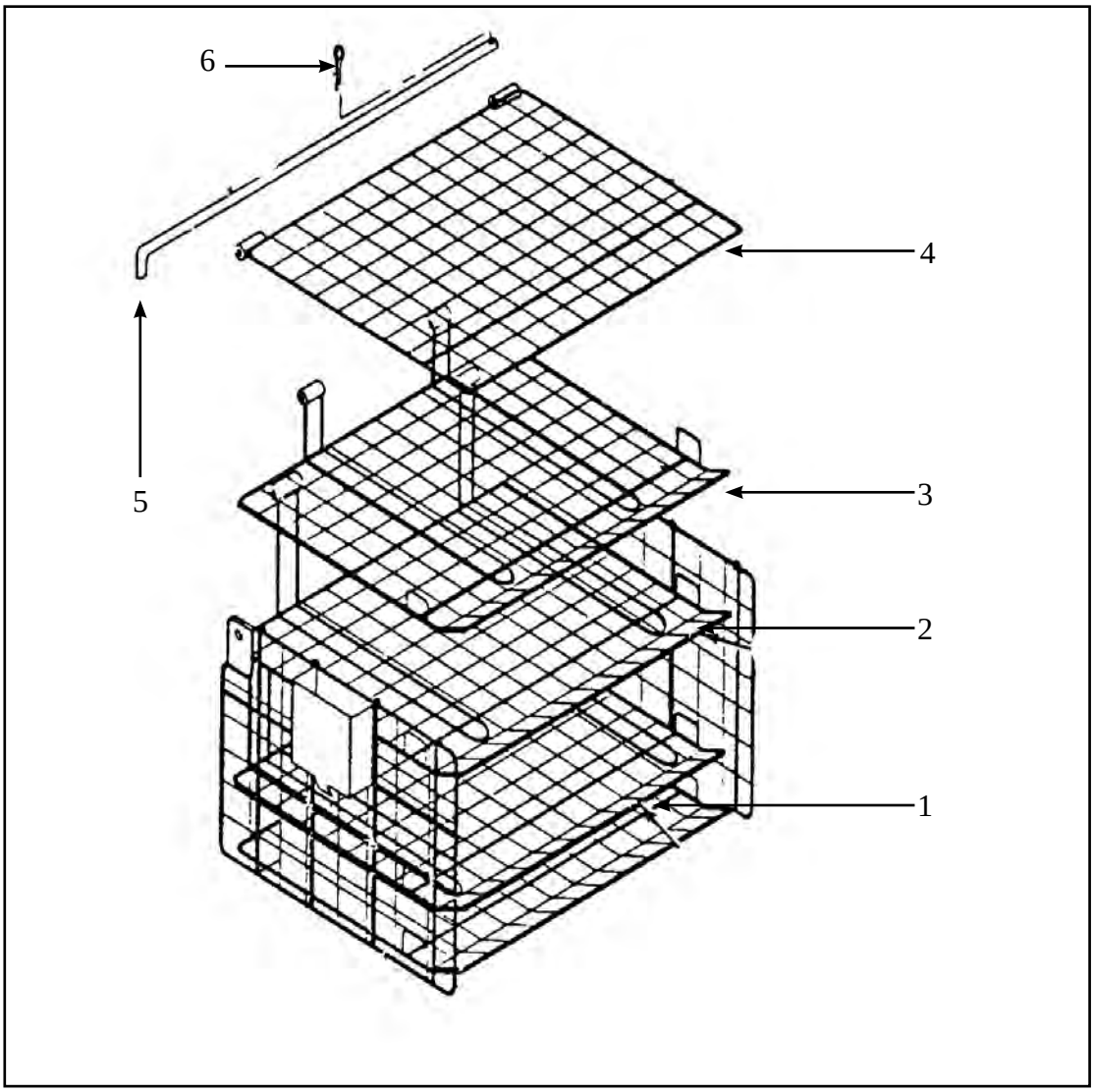


Figure 3-11. 4 Tier Wire Basket (Electric Model)

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
3-11	63039	STAINLESS STEEL BASKET	1
1	63043	SHELF, 2nd	1
2	63044	SHELF, 3rd	1
3	63045	SHELF, 4th	1
4	63046	COVER	1
5	19536	ROD, Pivot.	1
6	PN01 -001	PIN, Cotter	1
7*	24900	BASKET-TIER - 3.375 Hook Height (Malaysia)	1

* not shown

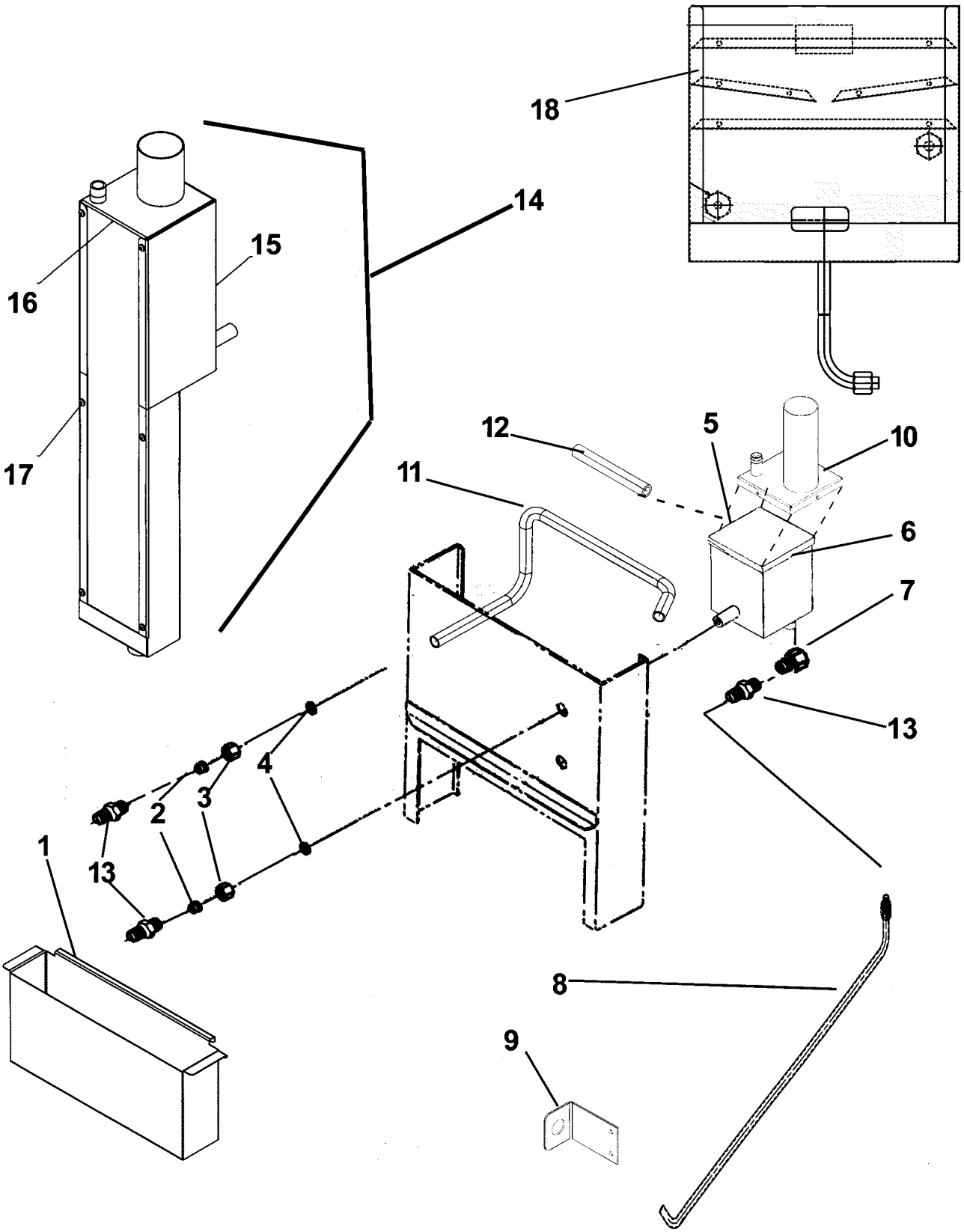


Figure 3-12. Exhaust Stack Assembly

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-12		EXHAUST STACK ASSEMBLY	
1	68086	PAN, Condensate Drain	1
1	64274	PAN, Condensate Drain-Short (CFA-SN: JB095JA to HB013JB)	1
2	16817	FITTING, Teflon Sleeve	2
3	16809	NUT, Fitting	2
4	16804	UMBRELLA GROMMET	2
5	58852	CONDENSATE BOX - Bottom-**See chart on next page**.....	1
6	SC02-016	SCREW, #8-32-AB x 1/2 PH PHD S	4
7	FP01-122	REDUCER, 3/8 to 1/2 BI.....	1
8		TUBE, Condensation Assembly-**See chart on next page**.....	1
9	63992	BRACKET, Condensation Hose	1
10	64013	CONDENSATE BOX - Top-**See chart on next page**.....	1
11		TUBE, Deadweight-**See chart on next page**	1
12		HOSE, Deadweight to Steam Box-**See chart on next page**	1
13	16807	CONNECTOR, Male	3
14	65724	ASSY, Condensate Box-**See chart on next page**.....	1
15	65725	WELD ASSY, Steam Box - Outer	1
16	65726	WELD ASSY, Steam Box - Inner	1
17	SC04-003	SCREW, #8-32 x 3/8 PH PHD S	6
18	21302	ASSY, Exhaust Stack - 500/561 - SN: KB020JJ & Below.....	1

Exhaust Stack Assembly

Item No.	Serial Number	Description	500	561	600
8	KB020JJ & Below	Condensation Line Assy	18506	-	-
8	KB029JJ & Below	Condensation Line Assy	-	55432	-
8	KA020JJ & Below	Condensation Line Assy	-	-	16838
11		Dead Weight Tube SS	-	-	16854
8	KB021JJ to BB016JA	Condensation Line Assy	14320	-	-
10		Condensate Box Top	64013	-	-
11		Dead Weight Tube SS	59221	-	-
12		Flex Hose To Cond. Box	63195	-	-
14		Condensate Box	58852	-	-
8	KB030JJ to BB055JA	Condensation Line Assy	-	14320	-
10		Condensate Box Top	-	64013	-
11		Dead Weight Tube SS	-	59221	-
12		Flex Hose To Cond. Box	-	63195	-
14		Condensate Box	-	58852	-
8	KA021JJ to BA026JA	Condensation Line Assy	-	-	14320
10		Condensate Box Top	-	-	64013
11		Dead Weight Tube SS	-	-	59221
12		Flex Hose To Cond. Box	-	-	63195
14		Condensate Box	-	-	58852
8	BB017JA to EB015JB	Condensation Line Assy	64016	-	-
10		Condensate Box Top	64013	-	-
11		Dead Weight Tube SS	59221	-	-
12		Flex Hose To Cond. Box	63195	-	-
14		Condensate Box	58852	-	-
8	BB056JA to EB019JB	Condensation Line Assy	-	64016	-
10		Condensate Box Top	-	64013	-
11		Dead Weight Tube SS	-	59221	-
12		Flex Hose To Cond. Box	-	63195	-
14		Condensate Box	-	58852	-
8	BA027JA to EA014JB	Condensation Line Assy	-	-	64016
10		Condensate Box Top	-	-	64013
11		Dead Weight Tube SS	-	-	59221
12		Flex Hose To Cond. Box	-	-	63195
14		Condensate Box	-	-	58852

(Continued on following page)

Exhaust Stack Assembly

Item No.	Serial Number	Description	500	561	600
8	EB016JB to HB013JB	Condensation Line Assy	24998	-	-
10	(except EB018JB	Condensate Box Top	use 65724	-	-
11	& EB019HB)	Dead Weight Tube SS	65621	-	-
12		Flex Hose To Cond. Box	52124	-	-
5		Condensate Box Bottom	use 65724	-	-
14		Condensate Box	use 65724	-	-
8	EB020JB to HB016JB	Condensation Line Assy	-	24998	-
10		Condensate Box Top	-	use 65724	-
11		Dead Weight Tube SS	-	65621	
12		Flex Hose To Cond. Box	-	52124	-
5		Condensate Box Bottom	-	use 65724	-
14		Condensate Box	-	use 65724	-
8	EA015JB to GA085JB	Condensation Line Assy	-	-	24998
10		Condensate Box Top	-	-	use 65724
11		Dead Weight Tube SS	-	-	65621
12		Flex Hose To Cond. Box	-	-	52124
5		Condensate Box Bottom	-	-	use 65724
14		Condensate Box	-	-	use 65724
8	HB014JB & Above	Condensation Line Assy	69009	-	-
11		Dead Weight Tube SS	65621	-	-
12		Flex Hose To Cond. Box	52124	-	-
14		Condensate Box	65724	-	-
8	HB017JB & Above	Condensation Line Assy	-	69009	-
11		Dead Weight Tube SS	-	65621	-
12		Flex Hose To Cond. Box	-	52124	-
14		Condensate Box	-	65724	-
8	GA086JB & Above	Condensation Line Assy	-	-	69009
11		Dead Weight Tube SS	-	-	65621
12		Flex Hose To Cond. Box	-	-	52124
14		Condensate Box	-	-	65724

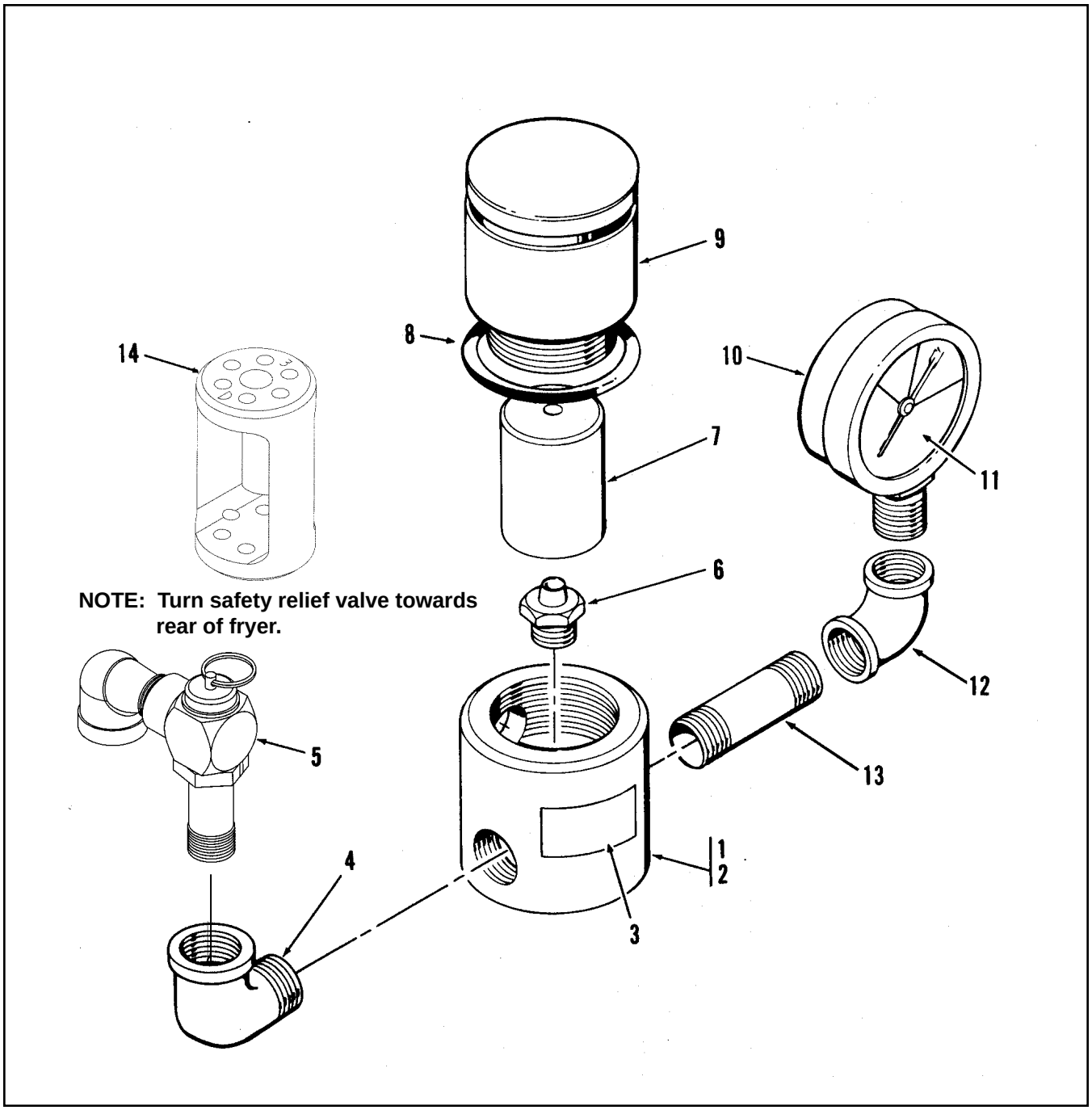


Figure 3-13. Deadweight Valve Assembly

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-13		DEADWEIGHT VALVE ASSEMBLY	
1	16924	VALVE ASSEMBLY, Deadweight	1
2	56305	BODY, Deadweight Valve	1
3	16912	DECAL, DEADWEIGHT VALVE	1
4	FP01-127	1/2 x 1/2 90 Degree Street L	1
√ 5	59742	VALVE ASSEMBLY, Relief	1
6	16918	DEADWEIGHT ORIFICE	1
6	27910	DEADWEIGHT ORIFICE - 3 lb. (use w/28922)	1
7	16903	DEADWEIGHT - 12 lb.	1
7	81343	DEADWEIGHT - 11 lb (Malaysia).	1
7	28922	DEADWEIGHT - 3 lb (use w/27910)	1
7	32729	DEADWEIGHT - 7 lb.	1
8	16902	RING, Cap	1
9	56307	CAP, Deadweight Valve	1
√ 10	16910	GAUGE, Pressure	1
11	16914	GLASS, Pressure Gauge	1
12	16909	ELBOW	1
13	56636	NIPPLE	1
14	65449	DEADWEIGHT - 3 lb.	1

√ Recommended Parts

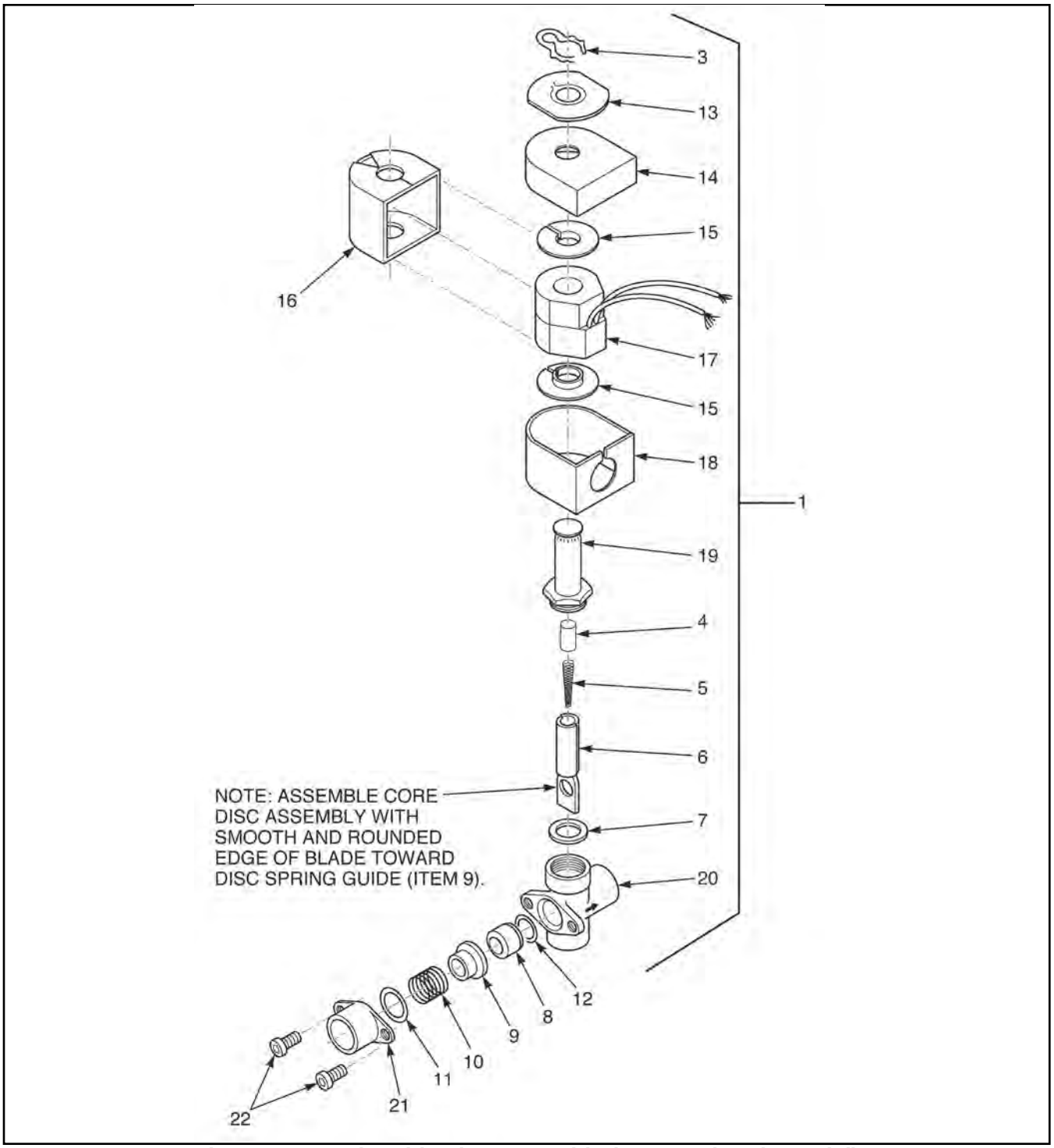


Figure 3-14. Solenoid Valve Assembly (Gas or Electric Model)

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-14		SOLENOID VALVE ASSEMBLY (Gas or Electric Model)	
1	17121	VALVE, Solenoid, 120 Volt, 60 Cycle	1
1	18724	VALVE, Solenoid, 208-240 Volt, 50 Cycle	1
1	18721	VALVE, Solenoid, 208/240 Volt, 60 Cycle	1
1	29515	VALVE, Solenoid, 24 Volt, 60 Cycle	1
1	29698	VALVE, Solenoid, 24 Volt, 50 Cycle	1
1	54945	VALVE, Solenoid, 208-240 Volt, 50 Cycle-CE	1
1	54971	VALVE, Solenoid, 24 Volt, 50 Cycle-CE	1
√ 2	17120	KIT, Solenoid Valve Repair	1
3	17101	CLIP, Retaining	1
4	17109	RETAINER, Spring	1
5	17110	SPRING, Core	1
6	17111	CORE, Disc Assembly	1
7	17112	GASKET, Bonnet	1
8	17114	SEAT, Teflon	1
9	17115	GUIDE, Disc Spring	1
10	17116	SPRING, Disc	1
11	17117	RING, Spring Retainer	1
12	17122	SEAT, O-Ring Seal	1
√ 13	17102	PLATE, Solenoid Name	1
√ 14	17103	COVER, Coil Housing	1
√ 15	17104	WASHER, Coil	2
√ 16	17105	YOKE, Coil	1
√ 17	17106	COIL, 120 Volt, 60 Cycle	1
√ 17	18706	COIL, 208/240 Volt, 60 Cycle	1
√ 17	18726	COIL, 208-240 Volt, 50 Cycle	1
√ 17	29547	COIL, 24 Volt, 60 Cycle	1
√ 17	29575	COIL, 24 Volt, 50 Cycle	1
√ 18	17123	HOUSING, Coil	1
√ 19	17108	BONNET, Solenoid	1
√ 20	17113	BODY, Solenoid Valve	1
√ 21	17118	ADAPTER, Pipe	1
√ 22	SC01-132	SCREW, Adapter	2

√ Recommended Parts

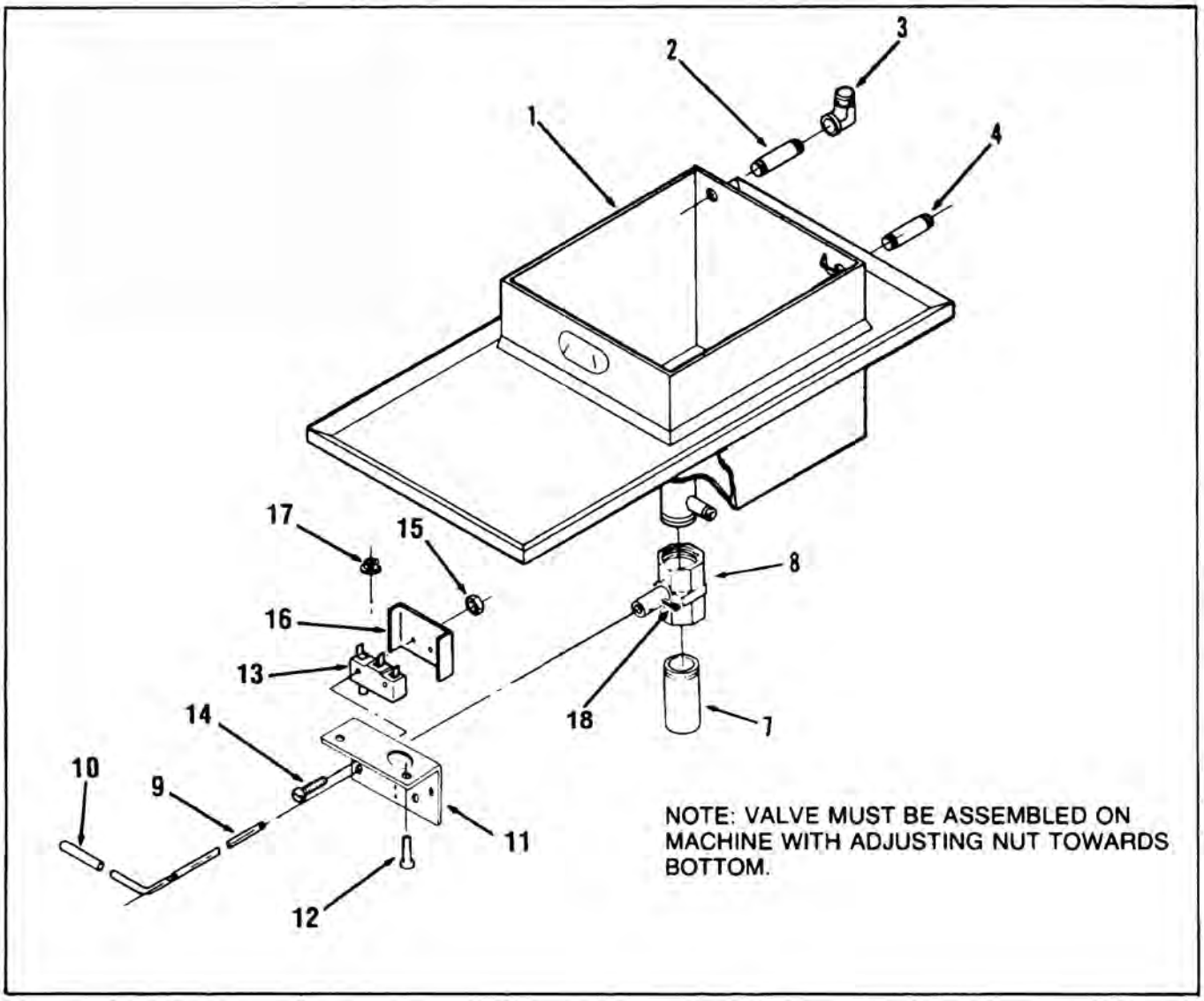


Figure 3-15. Drain Valve Assembly (Electric Model)

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-15		DRAIN VALVE ASSEMBLY (Electric Model)	
1		TOP ASSEMBLY, Pot and Counter-**See chart on next page**	1
2	18816	NIPPLE, Pipe	1
3	16239	ELBOW	1
4	18816	NIPPLE, Pipe	1
7		NIPPLE, Drain Extension-**See chart on next page.....**	1
8	17261	BODY, Drain Valve (SN: FB099IH and above).....	1
8	55152	ASSY, Drain Valve and Coupling (SN: FB098IH and below)	1
9	18818	ROD, Drain Valve Extension - Normally Closed	1
9	66123	ROD, Drain Valve Extension - Normally Open	1
9	44907	ROD, Drain Valve Extension - 561 (Before 11-12-02)	1
10	16293	COVER, Valve Handle	1
11		BRACKET, Filter & Drain Rod -**See chart on next page ..**	1
12	SC03-005	SCREW, Drain Valve Bracket	2
√ 13	18227	MICROSWITCH	1
14	SC01-058	SCREW, Microswitch	2
15	NS02-005	NUT, Microswitch	2
16	18528	COVER, Microswitch	1
16		COVER, Microswitch - 561 -**See chart on next page .....**	1
17	EF02-004	BUSHING, Snap	1
18	17255	PIN, Cotter.....	2
19*	59964	INSULATION, Front Panel - 561 (500 elements).....	1
20*	59956	INSULATION, Right Side Panel - 561 (500 elements)	2
21*	55412	INSULATION, Rear Panel - 561 (500 elements).....	1
22*	59955	SHROUD, Control Panel-Rear - 561 (500 elements)	1
23*	55417	INSULATION, Rear Panel - 561 (500 elements).....	1
24*	59957	INSULATION, Side Panel - 561 (500 elements)	2
25*	63339	INSULATION, Front Panel - 561 (500 elements).....	1
√ 26*	14653	KIT, PFE500 Norm Open Drain Switch.....	1

√ Recommended Parts

*not shown

Frypot & Drain Valve Assembly

Serial Number	Description	500	561
KB020JJ & Below	Bracket - Drain Rod	18419	-
	Drain Extension	18817	-
	Pot & Countertop	18921	-
KB029JJ & Below	Bracket - Drain Rod	-	44847
	Pot & Countertop	-	56071
	Pot & Countertop w/Firebar	-	44455
	Drain Switch Cover	-	48033
KB021JJ to HB013JB	Bracket - Drain Rod	63193	-
	Drain Extension	18817	-
	Pot & Countertop	65025	-
	Pot & Countertop(Pollo Campero)	65027	
KB030JJ to HB016JB	Bracket - Drain Rod	-	59958
	Pot & Countertop	-	65198
	Front Panel	-	56974
	Drain Switch Cover	-	59954
HB014JB & Above	Bracket - Drain Rod	23917	-
	Drain Extension & Deflector	24633	-
	Pot & Countertop	65025	-
	Pot & Countertop(Pollo Campero)	65027	
	Frame Assy(short)	23679	-
	Frame Assy(long)	26854	-
HB017JB & Above	Bracket - Drain Rod	-	23756
	Drain Extension & Deflector	-	24638
	Pot & Countertop	-	65024
	Frame Assy(short)	-	23679
	Frame Assy(long)	-	26854
	Drain Switch Cover	-	23757

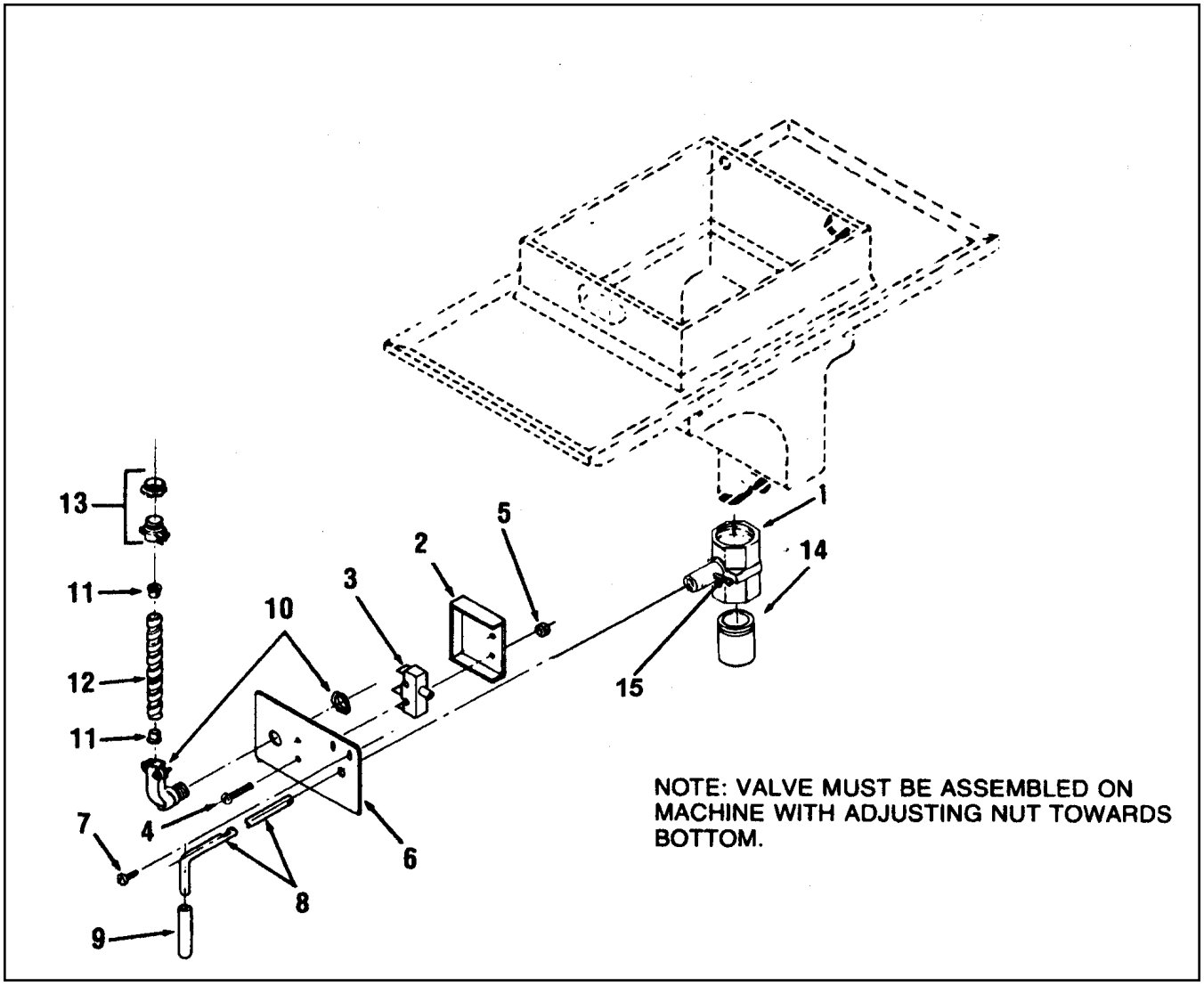


Figure 3-16. Drain Valve Assembly (Gas Model)

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-16		DRAIN VALVE ASSEMBLY (Gas Model)	
1	17261	BODY, Drain Valve (June 1998 and above)	1
1	55152	ASSY, Drain Valve & Coupling (May 1998 & below).	1
2	17210	COVER, Microswitch	1
√ 3	18227	MICROSWITCH	1
4	SC01-058	SCREW, Microswitch	2
5	NS02-005	NUT, Microswitch	2
6	l72l1	BRACKET, Drain, Valve Rod	1
7	SC03-005	SCREW, Drain Bracket	2
8	17254	ROD, Drain Valve - Normally Closed	1
8	67661	ROD, Drain Valve - Normally Open	1
9	16293	COVER, Valve Handle	1
10	18644	CONNECTOR, 90° Flexible Conduit ..... (Includes Nut)	1
11	18105	INSULATOR	2
12	17214	CONDUIT, Flexible	1
13	18111	CONNECTOR, Flexible Conduit ..... (Includes Nut)	1
14	18819	EXTENSION NIPPLE (SN: KA020JJ and below) ...	1
14	18817	EXTENSION NIPPLE (SN: KA021JJ to GA085JB)	1
14	24647	EXTENSION & DEFLECTOR..... (SN: GA086JB and above)	1
15	17255	PIN, Cotter	2
√ 16*	14652	KIT, PFG600 Norm Open Drain Switch.....	1

√ Recommended / * not shown

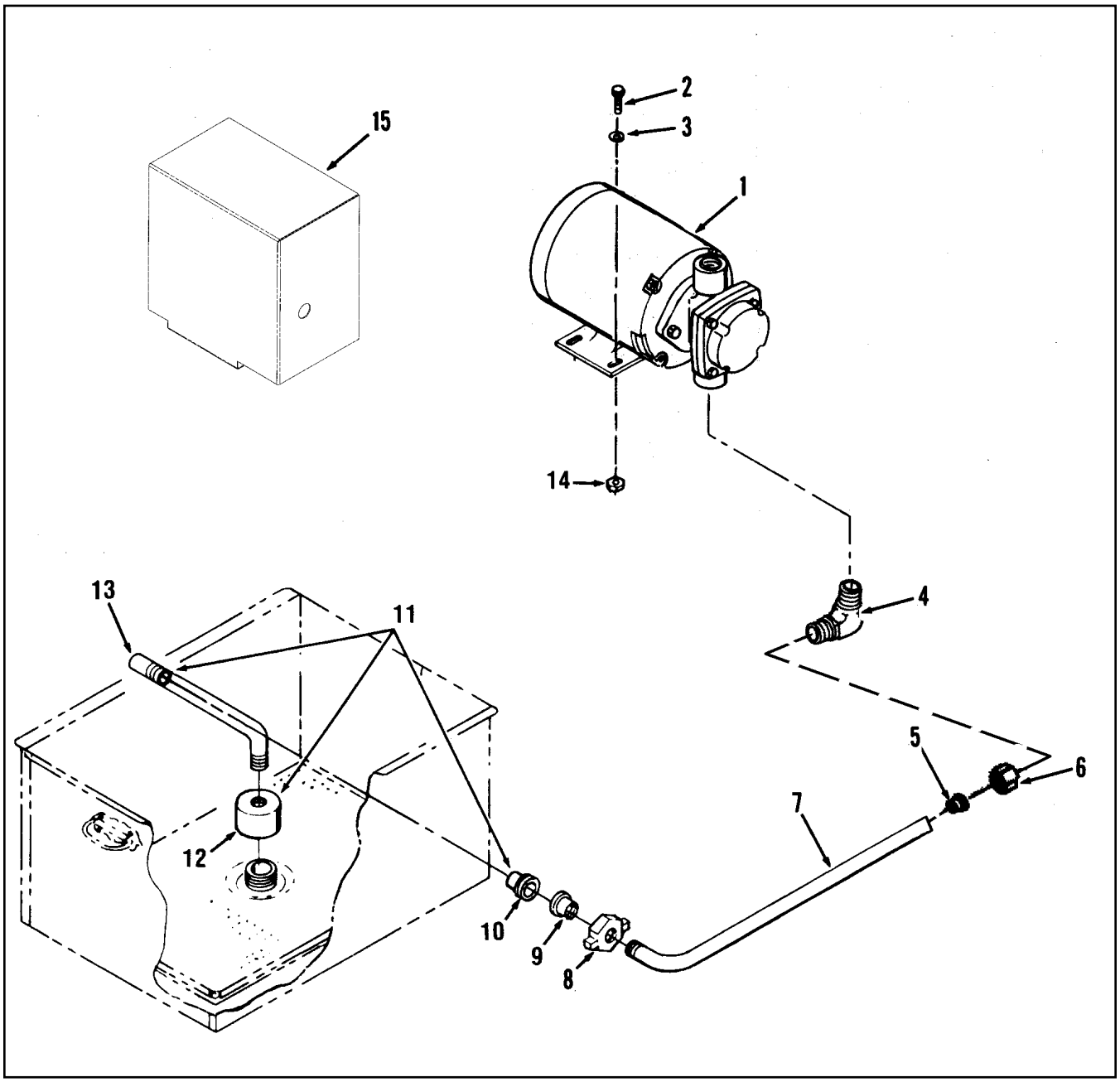


Figure 3-17. Lower Filter Plumbing Components (Gas or Electric Model)

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-17		LOWER FILTER PLUMBING COMPONENTS (Gas or Electric Model)	
1	67589	MOTOR AND PUMP, Filter	1
√	67583	MOTOR Only - 1/2 Horse Power	1
	17437	PUMP Only	1
√	17476	SEAL KIT, Pump	1
2	SC01-022	SCREW, Motor	8
3	WA01-002	WASHER	8
4	17407	CONNECTOR, Male Elbow	1
5	16808	FITTING, Sleeve	1
6	16809	NUT Fitting	1
7		PUMP RETURN TUBE-**See chart next page**	1
√ 8	17432(use 69289)	FITTING, Union Handle	1
√ 9	17431(use 69289)	FITTING, Male Union	1
√10	17430(use 69289)	FITTING, Female Union (Also included with item 11)	1
11		STANDPIPE ASSY, Filter Screen-**See chart next page**	1
12	65208	NUT, Filter Screen	1
13		TUBING-**See chart next page**	1
14	NS02-002	NUT, Motor	4
15		SHIELD, Motor Splash-CE-**See chart next page**	1
16*	14064	KIT, KFC Filter	1
	17225	GRID, KFC Filter	1
	17226	CLIP, Filter	1
	17228	FITTING, Male Filter	1
	17229	FITTING, Female Filter	1

√ Recommended Parts

*not shown

Lower Filter Plumbing Components

SN	Description	500	561	600
KB020JJ &	Standpipe Assy	19102	-	-
Below	Standpipe Tube	19101	-	-
	Pump Return Tube Assy	16812 (includes 16808 & 16809)	-	-
	Pump Return Tube	64331 (use if pan has cover)	-	-
	Motor Splash Shield-CE	55281	-	-
KB029JJ &	Standpipe Assy	-	19102	-
Below	Standpipe Tube	-	19101	-
	Pump Return Tube Assy	-	16812 (includes 16808 & 16809)	-
	Pump Return Tube	-	64331 (use if pan has cover)	-
KA020JJ &	Standpipe Assy	-	-	17433
Below	Standpipe Tube	-	-	55367
	Pump Return Tube Assy	-	-	16812 (includes16808 & 16809)
	Pump Return Tube	-	-	64331 (use if pan has cover)
	Motor Splash Shield-CE	-	-	55281
KB021JJ to	Standpipe Assy	14732	-	-
HB013JB	Standpipe Tube	70061	-	-
	Pump Return Tube	58877	-	-
	Motor Splash Shield-CE	59731		
KB030JJ to	Standpipe Assy	-	14732	-
HB016JB	Standpipe Tube	-	70061	-
	Pump Return Tube	-	58877	-
KA021JJ to	Standpipe Assy	-	-	14732
GA085JB	Standpipe Tube			70061
	Pump Return Tube	-	-	58877
	Motor Splash Shield-CE	-	-	59731
HB014JB &	Standpipe Assy	14659	-	-
Above	Standpipe Tube	23951	-	-
	Pump Return Tube Assy	23800 (includes 16808 & 16809)	-	-
	Motor Splash Shield-CE	24644	-	-
HB017JB &	Standpipe Assy	-	14659	-
Above	Standpipe Tube	-	23951	-
	Pump Return Tube Assy	-	23800 (includes 16808 & 16809)	-
GA086JB &	Standpipe Assy	-	-	14664
Above	Standpipe Tube	-	-	24284
	Pump Return Tube Assy	-	-	23800 (includes 16808 & 16809)
	Motor Splash Shield-CE	-	-	24644

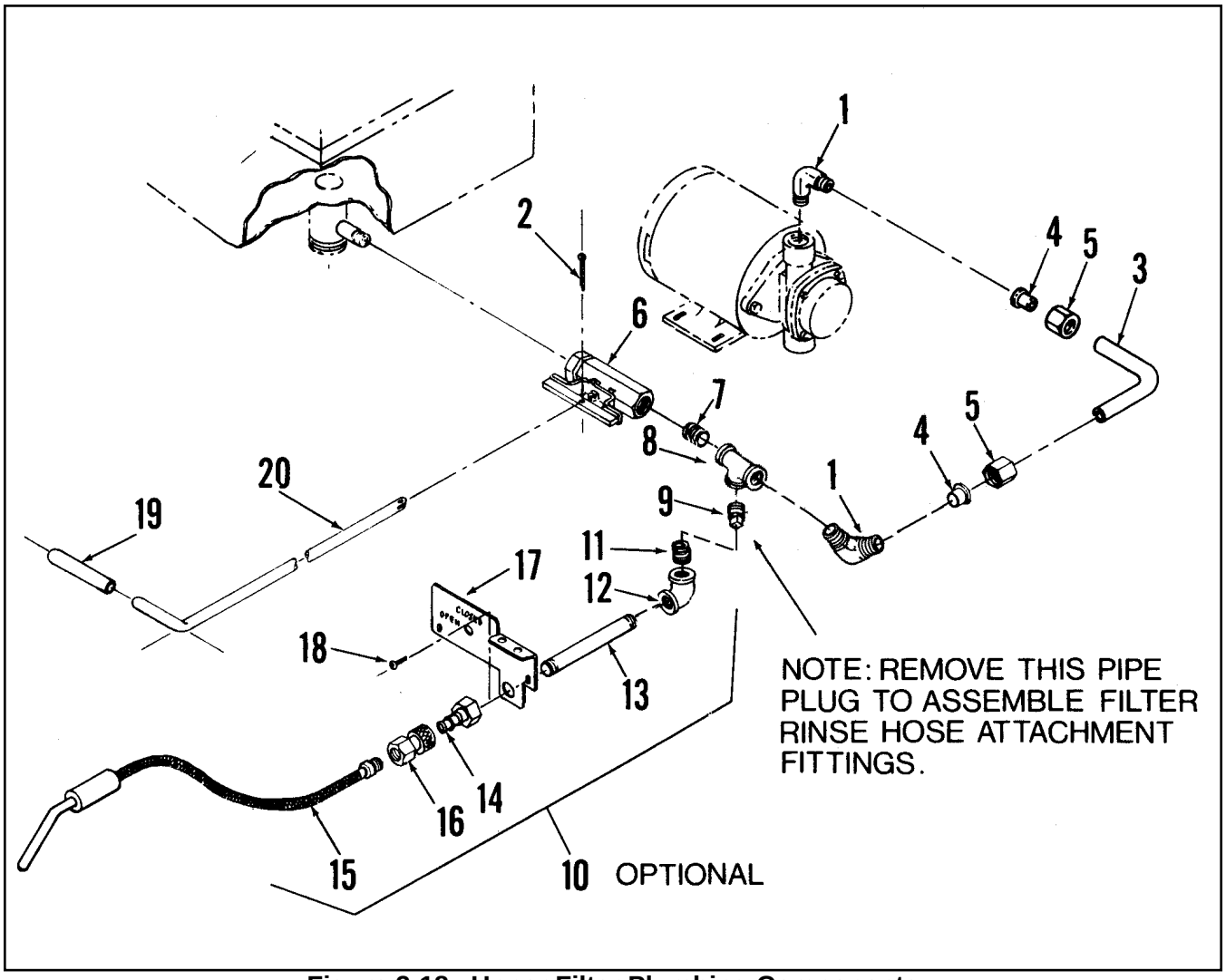


Figure 3-18. Upper Filter Plumbing Components

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-18		UPPER FILTER PLUMBING COMPONENTS	
1	17407	CONNECTOR, Male Elbow	2
2	17255	PIN, Cotter, Valve	1
3		TUBING, Stainless Steel-**See chart next page**	1
4	16808	FITTING, Sleeve	2
5	16809	NUT, Fitting	2
√ 6	17308	VALVE ASSEMBLY, Filter	1
7	FP02-001	NIPPLE, Close	1
8	17306	TEE, Pipe	1
9	FP01-015	PLUG, Pipe	1
10	03001	HOSE ASSY, Filter Rinse Optional (models 500/561)	1
10	03002	HOSE ASSY, Filter Rinse Optional (models 600)	1
11	FP02-007	NIPPLE, Pipe	1
12	17319	ELBOW, Pipe	1
13		NIPPLE, Rinse Hose Pipe-**See chart next page**	1
14	17334	FITTING, Rinse Hose Disconnect, Male	1
15	03003	HOSE, Filter Rinse	1
16	17333	FITTING, Rinse Hose Disconnect - Female	1
17		BRACKET, Rinse Hose-**See chart next page**	1
18	SC03-005	SCREW, Rinse Hose Bracket	2
19	16293	COVER, Valve Rod	1
20	17311	ROD, Filter Valve Extension (model 600)	1
20	18911	ROD, Filter Valve Extension (models 500/561)	1
20	50646	ROD, Filter Valve Extension (model 561 SN: HB013JB & below)	1
21*	03601	KIT, Shuttle Conversion - model 500	1
22*	03602	KIT, Shuttle Conversion - model 600	1

√ Recommended Parts
*not shown

Pump to Valve Tube

SN	Description	500	561	600
KB020JJ & Below	Pump to Valve Tube	18904	-	-
	Rinse Hose Pipe Nipple	17320	-	-
	Filter Valve & Rinse Hose Brkt	18419		
KB029JJ & Below	Pump to Valve Tube	-	44911	-
	Rinse Hose Pipe Nipple	-	17320	
	Filter Valve & Rinse Hose Brkt		44847	
KA020JJ & Below	Pump to Valve Tube	-	-	17329
	Rinse Hose Pipe Nipple	-	-	17320
	Filter Valve & Rinse Hose Brkt			17224
KB021JJ to HB013JB	Pump to Valve Tube	63134	-	-
	Rinse Hose Pipe Nipple	17320	-	-
	Filter Valve & Rinse Hose Brkt	63193		
KB030JJ to HB016JB	Pump to Valve Tube	-	63134	-
	Rinse Hose Pipe Nipple	-	17320	-
	Filter Valve & Rinse Hose Brkt		59958	
KA021JJ to GA085JB	Pump to Valve Tube	-	-	63246
	Rinse Hose Pipe Nipple	-	-	17320
	Filter Valve & Rinse Hose Brkt			17224
HB014JB & Above	Pump to Valve Tube	27405	-	-
	Rinse Hose Pipe Nipple	24982	-	-
	Filter Valve & Rinse Hose Brkt	23917		
HB017JB & Above	Pump to Valve Tube	-	26217	-
	Rinse Hose Pipe Nipple	-	24982	-
	Filter Valve & Rinse Hose Brkt		23756	
GA086JB & Above	Pump to Valve Tube	-	-	27456
	Rinse Hose Pipe Nipple	-	-	24982
	Filter Valve & Rinse Hose Brkt			24958

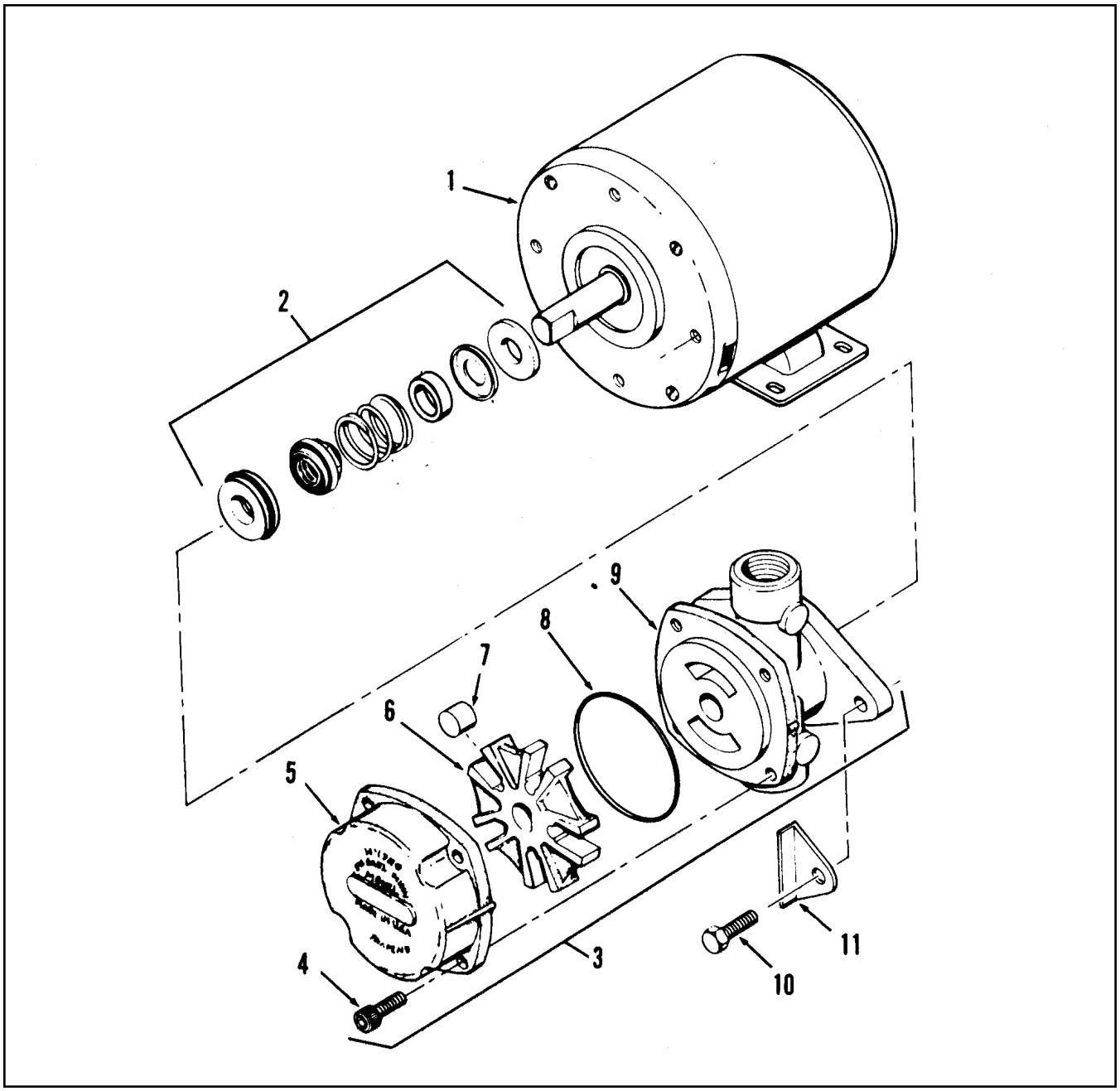


Figure 3-19. Filter Motor and Pump

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-19		FILTER MOTOR AND PUMP	
√ 1	67583	MOTOR, 1/2 HP - 50/60 Hz	1
√ 2	17476	SEAL KIT	1
3	17437	PUMP ASSEMBLY	1
√ 4	SC01-132	SCREW, Pump Cover	1
√ 5	17451	COVER, Pump	1
√ 6	17447	ROTOR, Pump	1
√ 7	17446	ROLLER, Pump	5
√ 8	17453	O-RING	1
√ 9	17454	BODY, Pump	1
√ 10	17456	SHIELD, Pump	2
√ 11	SC01-026	SCREW, Pump Shield	1

√ Recommended Parts

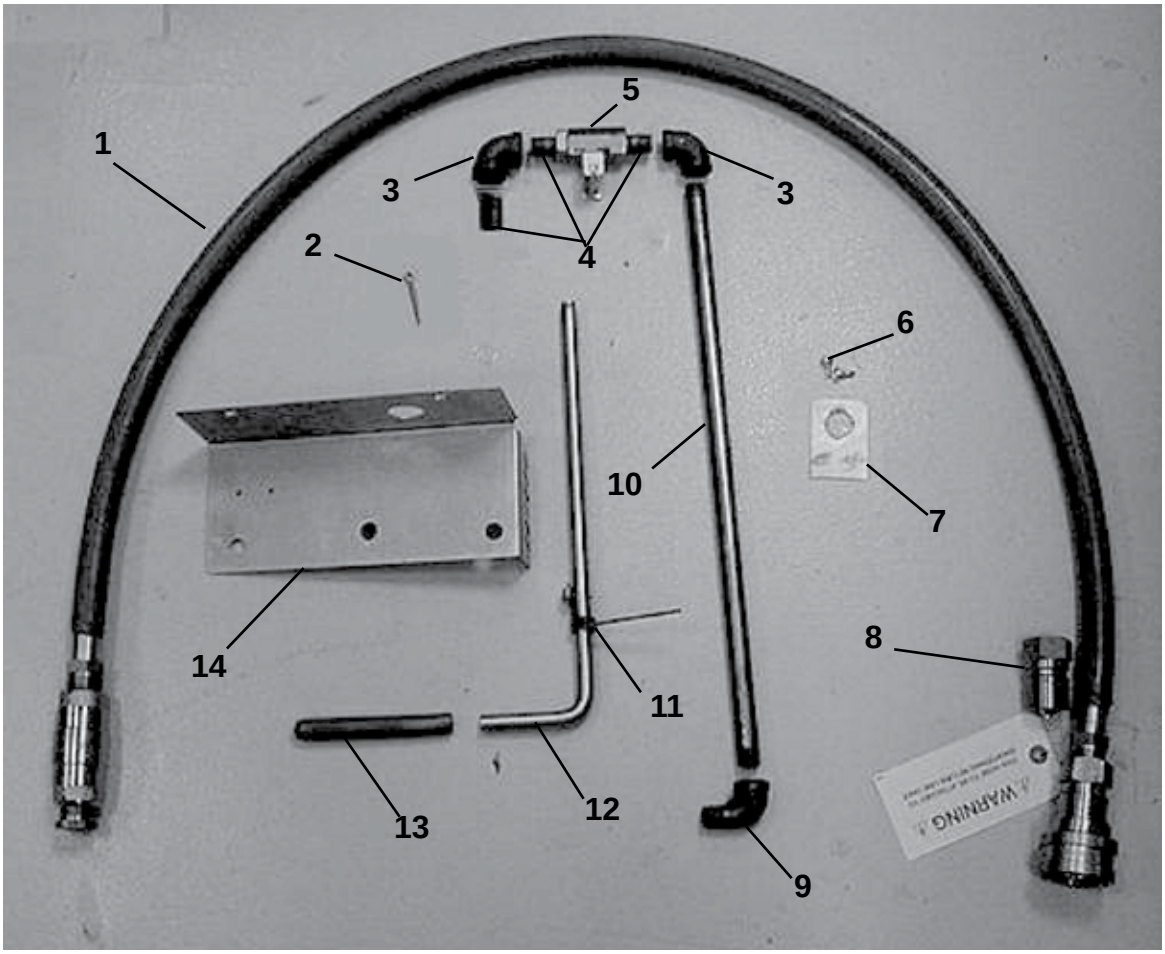


FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-20		DIRECT-CONNECT ASSEMBLY - MODEL 500	
1	65139	ASSY, Direct-Connect Hose	1
2	17255	PIN, Cotter	1
3	17319	ELBOW, Pipe	2
4	FP02-024	NIPPLE, 3/8 NPT Close BI	3
√ 5	17308	VALVE, Filter	1
6	SC03-005	SCREW, SD #8 x 1/2 PH PHD	2
7	32504	ASSY, Shortening Mgt. Brkt.	1
8	21611	DISCONNECT, Male	1
9	FP01-114	ELBOW, Street - 3/8 NPT BI	2
10	FP02-055	NIPPLE, - 3/8 x 18 LG BI	1
11	21874	SPRING, Shortening Mgt.	1
12	32723	ROD, Direct-Connect - 500	1
13	29769	GRIP, Fryer Handle	1
14	32526	BRACKET, Drain Rod - 500	1
15*	14369	KIT, Direct-Connect (SN: KB020JJ & below)	1
15*	14365	KIT, Direct-Connect (SN: KB021JJ to HB013JB	1
15*	14425	KIT, Direct-Connect (SN: HB014JB & above)	1
15*	14696	KIT, Direct-Connect-No Hose (SN: HB014JB & above)	1

√ Recommended Parts/*not shown

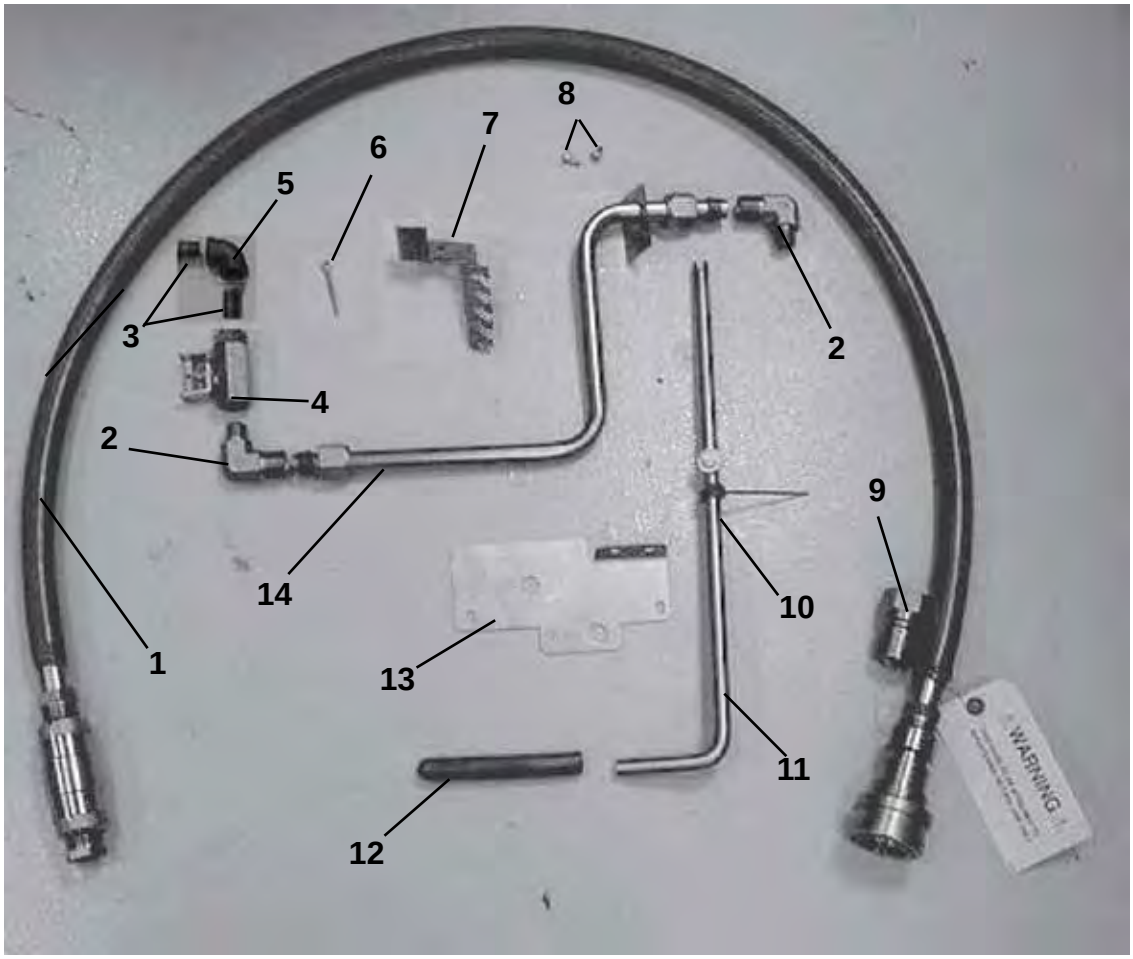


FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-21		DIRECT-CONNECT ASSEMBLY - MODEL 600	
1	65139	ASSY, Direct-Connect Hose	1
2	FP01-079	ELBOW, 5/8 Tube - 3/8 NPT Male	2
3	FP02-024	NIPPLE, 3/8 NPT Close B. I.	2
√ 4	17308	VALVE, Filter	1
5	17319	ELBOW, Pipe	1
6	17255	PIN, Cotter	1
7	24641	ASSY, Shortening Mgt. Brkt.	1
8	SC03-005	SCREW, SD #8 x 1/2 PH PHD	2
9	21611	DISCONNECT, Male	1
10	21874	SPRING, Shortening Mgt.	1
11	32722	ROD, Direct-Connect - 600	1
12	29769	GRIP, Fryer Handle	1
13	32557	BRACKET, Drain Rod - 600	1
14	32648	ASSY, Direct-Connect Tube - 600	1
15*	14370	KIT, Direct-Connect (SN: KA020JJ & below)	1
15*	14366	KIT, Direct-Connect (SN: KA021JJ to GA085JB	1
15*	14426	KIT, Direct-Connect (SN: GA086JB & above)	1

√ Recommed. Parts/*not shown

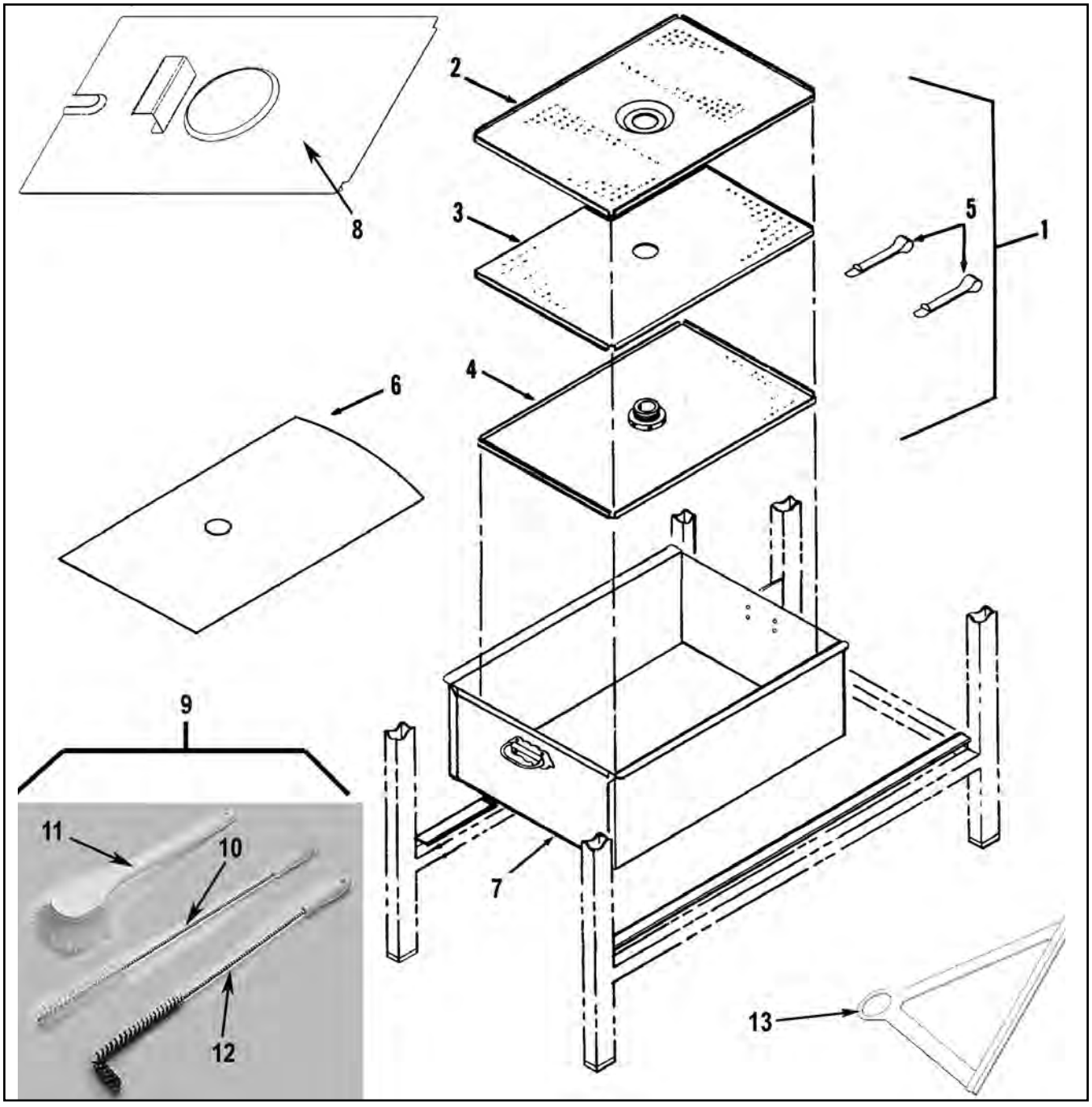


Figure 3-22. Filter Drain Pan and Filter Screen Assembly

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-22		FILTER DRAIN PAN AND FILTER SCREEN ASSEMBLY	
1	14671	KIT, GM Filter Screens-**See chart on next page**.....	1
1	14672	KIT, Wendy's Filter Screens-**See chart on next page**	1
2	65211	CATCHER, Crumb - SS	1
3	NLA	SCREEN, Top Filter	1
4	use 14671 or 14672	SCREEN, Bottom Filter(SN: AA0503097 & below-500/561) (SN: AN0503086 & below-600)	1
4	65447	SCREEN, Bottom Filter - SS (SN: AA0503098 & above-500/561)	1
		(also see #16 below) (SN: AN0503087 & above-600).....	1
5	17505	CLIPS, Filter Envelope	2
√ 6	12102	FILTER, Envelope Paper (100 per carton).....	1
√ 6	24262	CARBON PAD, Filter Envelope (30 per carton)	1
√ 6	24263	CARBON, Filter Envelope (30 per carton).....	1
7		PAN, Filter Drain Assembly-**See chart on next page**	1
7	23499	PAN, Filter Drain Assy. (CFA- SN: JB095JA to HB013JB) ..	1
8		COVER, Filter Drain Pan-**See chart on next page**	1
8	32627	COVER, Filter Drain Pan-Malyasia.....	1
8	69294	COVER, Storage - PFE-500.....	1
8	69296	COVER, Storage - PFG-600	1
8		KIT, Cover/Drain Extension-**See chart on next page**	1
√ 9	14461	KIT, Brush Set.....	1
10	12112	BRUSH, Straight White	1
11	12116	BRUSH, Fryer - Gong - Long Handle.....	1
12	12126	BRUSH, Black L Tipped.....	1
13	63102	Sealer Bar - Wendy's	1
13	62116	Sealer Bar - Gen. Market.....	1
14*		FILTER PAN DOLLY-**See chart on next page**.....	1
15*	14895	KIT - SPCL SHORT FLTR KFC/FALCON	1
16*	65208	NUT - FILTER - FEMALE (Use with item 4 above).....	1

√ Recommended Parts
*not shown
NLA - No Longer Available

Filter Screen Kits

	65211	65447	17505	65208	63102
14671-GM	1	1	2	1	-
14672-Wendy's	-	1	-	1	1

Standard Filter Pan & Cover Assys.

SN	Description	500	561	600
KB020JJ & Below	Pan Cover	18915	-	-
	Pan	19206	-	-
	Pan Dolly	03387	-	-
KB029JJ & Below	Pan Cover	-	18915	-
	Pan	-	19206	-
	Pan Dolly	-	03387	-
KA020JJ & Below	Pan Cover	-	-	17512
	Pan	-	-	17506
	Pan Dolly	-	-	03352
KB021JJ to BB016JA	Pan Cover	64024	-	-
	Pan	58848	-	-
	Pan Dolly	03389	-	-
	Cover/Drain Ext. Kit	14414		
KB030JJ to BB055JA	Pan Cover	-	64025	-
	Pan	-	63203	-
	Pan Dolly	-	03390	-
	Cover/Drain Ext. Kit		14414	
KA021JJ to BA026JA	Pan Cover	-	-	64023
	Pan	-	-	58848
	Pan Dolly	-	-	03389
BB017JA to HB013JB	Pan Cover	64021	-	-
	Pan	64014	-	-
	Pan Dolly	03391	-	-
	Cover/Drain Ext. Kit	14415		
BB056JA to HB016JB	Pan Cover	-	64022	-
	Pan	-	64015	-
	Pan Dolly	-	03392	-
	Cover/Drain Ext. Kit		14415	
BA027JA to GA085JB	Pan Cover	-	-	64020
	Pan	-	-	64014
	Pan Dolly	-	-	03391
HB014JB & Above	Pan Cover	68065	-	-
	Pan	24702	-	-
	Pan Dolly	03343	-	-
HB017JB & Above	Pan Cover	-	68065	-
	Pan	-	24702	-
	Pan Dolly	-	03343	-
GA086JB & Above	Pan Cover	-	-	68066
	Pan	-	-	17506
	Pan Dolly	-	-	03352

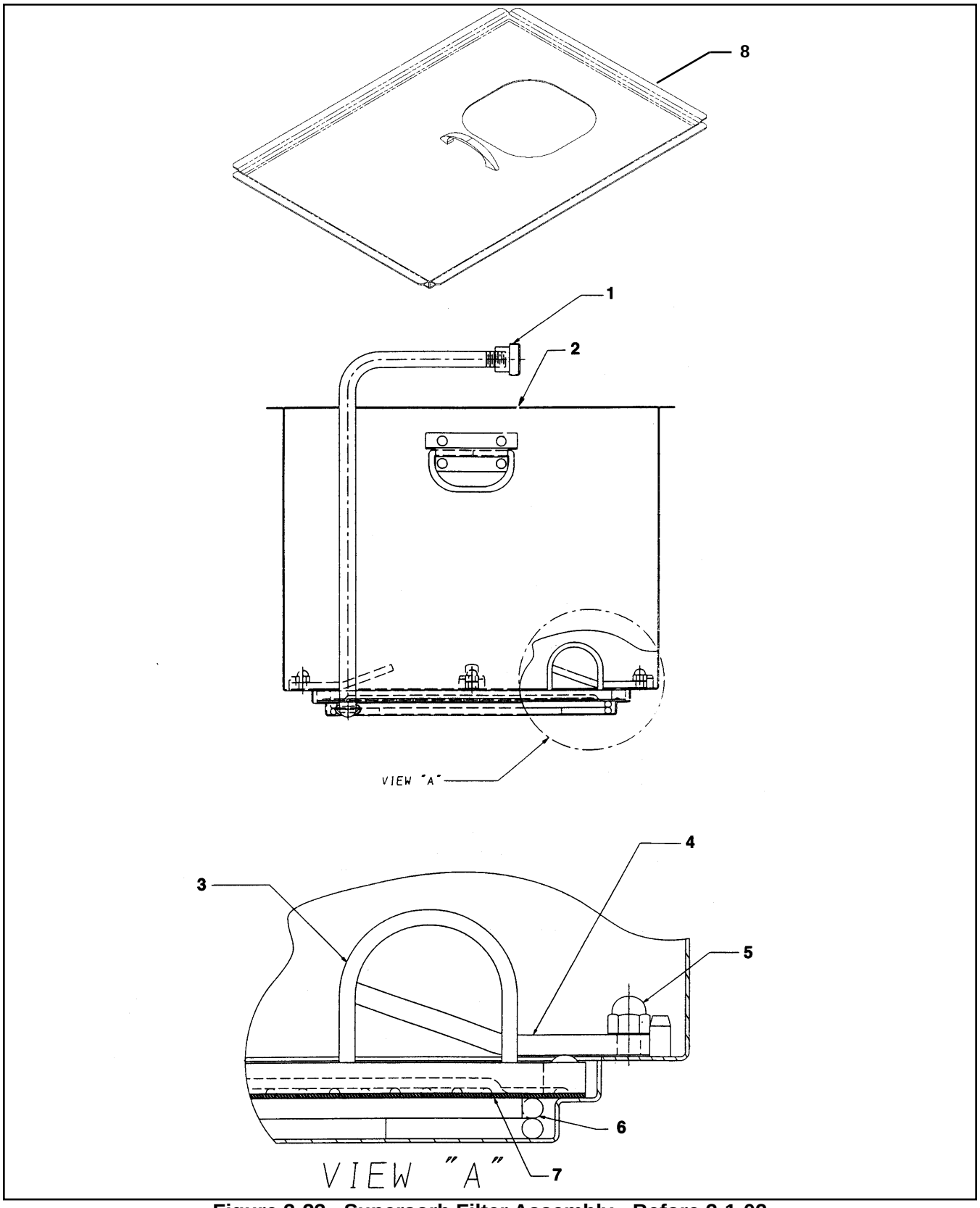


Figure 3-23. Supersorb Filter Assembly - Before 3-1-02

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-23		Supersorb Filter Assembly - Before 3-1-02	
√ 1	17430(use 69289)	UNION, Female Fitting.....	1
2		FILTER PAN ASSEMBLY -**See chart below**	1
3	70561	FILTER CLAMP RING w/Screw	1
4	36596	HANDLE, Filter Lock.....	4
5	NS03-023	NUT, 1/4-20 Acorn Cap	4
6	30944	SUPPORT, Filter Pad	1
√ 7	12186	CHARCOAL FILTER PAD	1
8		COVER - FILTER PAN ASSY-**See chart below**.....	1
9*		FILTER PAN DOLLY (4 & 6 hd)-**See chart below**	1
10*	19004	Casters	4

√ Recommended Parts / *not shown

SN	Description	500	561	600
KB020JJ & Below	Pan Dolly	03388	-	-
	Pan Cover	54008	-	-
	Pan Assy	140028	-	-
KB029JJ & Below	Pan Dolly	-	03388	-
	Pan Cover	-	54008	-
	Pan Assy	-	140028	-
KA020JJ & Below	Pan Dolly	-	-	03388
	Pan Cover	-	-	54538
	Pan Assy	-	-	140034
KB021JJ to BB016JA	Pan w/Casters	NLA	-	-
	Pan w/o Casters	140035	-	-
KB030JJ to BB055JA	Pan w/Casters	-	NLA	-
	Pan w/o Casters	-	140036	-
KA021JJ to BA026JA	Pan w/Casters	-	-	NLA
	Pan w/o Casters	-	-	140035
BB017JA to HB013JB	Pan w/Casters	NLA	-	-
	Pan w/o Casters	140037	-	-
BB056JA to HB016JB	Pan w/Casters	-	NLA	-
	Pan w/o Casters	-	140038	-
BA027JA to GA085JB	Pan w/Casters	-	-	NLA
	Pan w/o Casters	-	-	140037
HB014JB & Above	Pan Dolly	03343	-	-
	Pan Cover	24627	-	-
	Pan Assy	24702	-	-
HB017JB & Above	Pan Dolly	-	03343	-
	Pan Cover	-	24627	-
	Pan Assy	-	24702	-
GA086JB & Above	Pan Dolly	-	-	03352
	Pan Cover	-	-	68066
	Pan Assy	-	-	17506

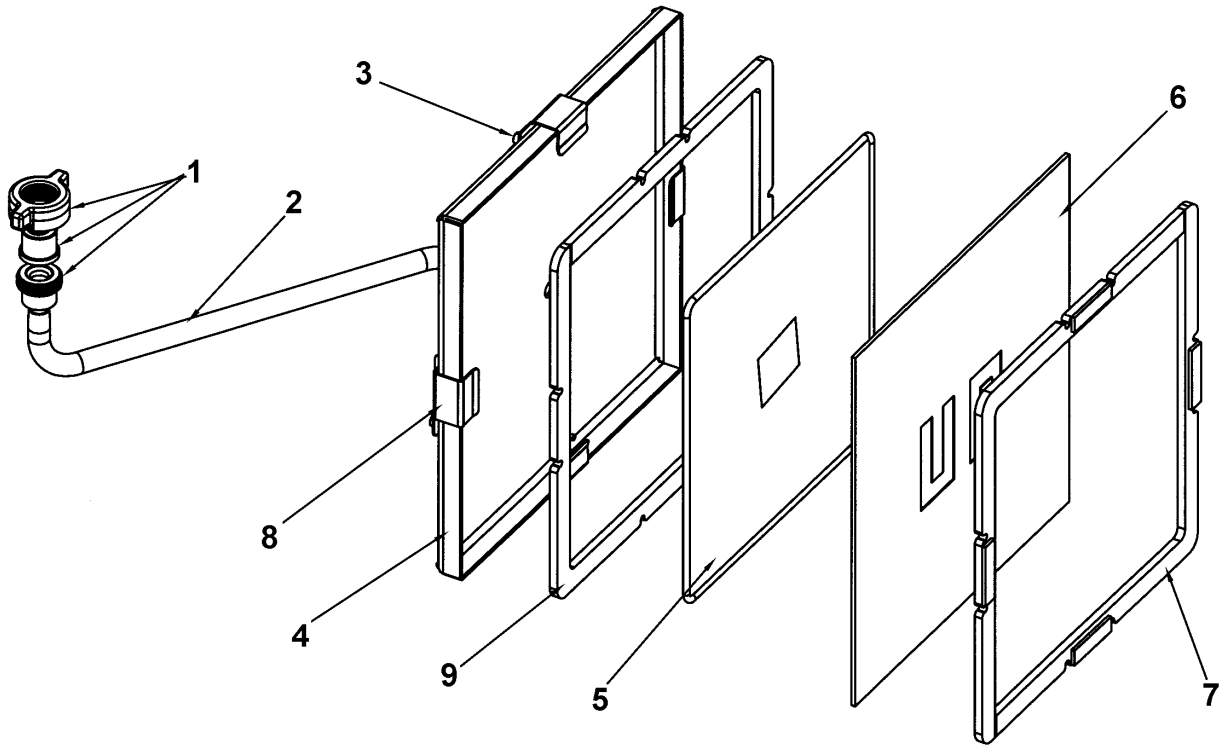


FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-24		Supersorb Filter Assembly - 3-1-02 and After	
	14423	KIT, 500/561 Supersorb Assy (Includes 1, 2A, 3-7, 8B, & 9)	1
	14424	KIT, 600 Supersorb Assy (Includes 1, 2B, 3-7, 8B, & 9)	1
√ 1	69289	ASSY, Filter Union	1
2A	23951	TUBE D.U.to Filter-Electric	1
2B	24284	TUBE D.U.to Filter-Gas	1
3	SC01-249	SCREW, 8-32 x 3/16 TH SHOULDER	4
4	67948	WELD ASSY, Drain Filter	1
5	66202	WELD ASSY, Filter Section	1
6	12186	CHARCOAL FILTER PAD (carton of 30)	1
7	70585	FILTER CLAMP RING w/o Screw	1
8A	32851	CLIP, Drain Filter (SN: AN0507125 & below-600) ..... (SN: AA0507115 & below-500/561-below SN: AB0508001)	4
8B	67952	CLIP, Short Drain Filter (SN: AN0507126 & above-600) ..... (SN: AA0507116 & above-500/561-SN: AB0508001 & above)	4
9	70721	RING, Filter Retainer Whole (SN: AN0507126 & above-600) (SN: AA0507116 & above-500/561-SN: AB0508001 & above)	1

√ Recommended Parts

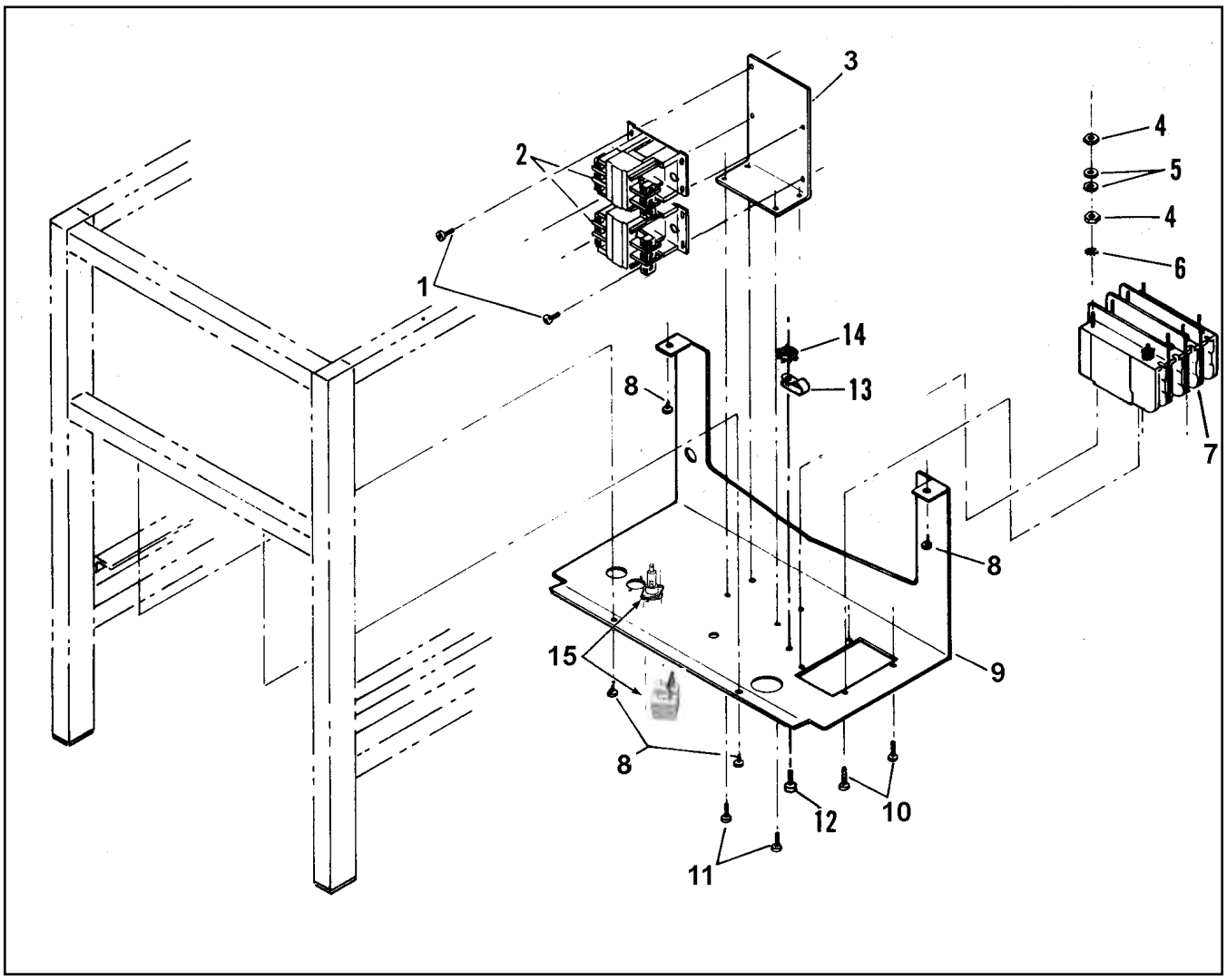


Figure 3-25. Contactor and Frame Assembly (Single Phase Electric Model)

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-25		CONTACTOR AND FRAME ASSEMBLY, (Single Phase Electric Model)	
1	SC04-003	SCREW	4
√ 2	19405	CONTACTOR	2
2	29942	CONTACTOR, Mercury 208-240 VAC ..... (Before SN: AA0909048 - 500 or AB0909007 - 561)	1
√ 2	65075	CONTACTOR, E/M Heat - Non-CE - 240V..... (After SN: AA0909047 - 500 OR AB0909006 - 561)	1
√ 2	65074	CONTACTOR - 230 Volt - CE.....	2
3	18243	BRACKET, Contactor	1
4	NS01-014	NUT, Hex.....	16
5	WA01-007	WASHER.....	16
6	LW02-005	LOCKWASHER.....	8
7	18242	BREAKER, CIRCUIT 50 amp.....	1
8	SC03-005	SCREW.....	4
9	18244	SHROUD, Single Phase (KB020JJ & below)	1
9	63226	SHROUD, Single Phase (KB021JJ to HB013JB)	1
9	27418	SHROUD, Single Phase (HB014JB & above)	1
10	SC01-072	SCREW.....	4
11	SC04-002	SCREW.....	4
12	SC01-010	SCREW.....	1
13	EF02-030	CAPILLARY CLAMP.....	1
14	NS02-005	NUT	1
√ 15	EF02-125	BREAKER, Push-Button Reset (10-23-06 & after)	2
√ 15	18364	ASSY, Fuse Holder - 15 Amp (before 10-23-06).....	2
√ 15	EF02-007	FUSE, 15 Amp.....	2
√ 15	EF02-006	HOLDER, Fuse.....	2
16*	14033	KIT - 3 Phase to 1 Phase Conversion (KB020JJ & below) ...	1
16*	14677	KIT - 3 Phase to 1 Phase Conversion (KB021JJ to HB013JB)	1
16*	14882	KIT - 3 Phase to 1 Phase w/ Fuses (HB014JB to AA0611084)	1
16*	14678	KIT - 3 Phase to 1 Phase Conversion (AA0611085 & above)	1

√ Recommended Parts
*not shown

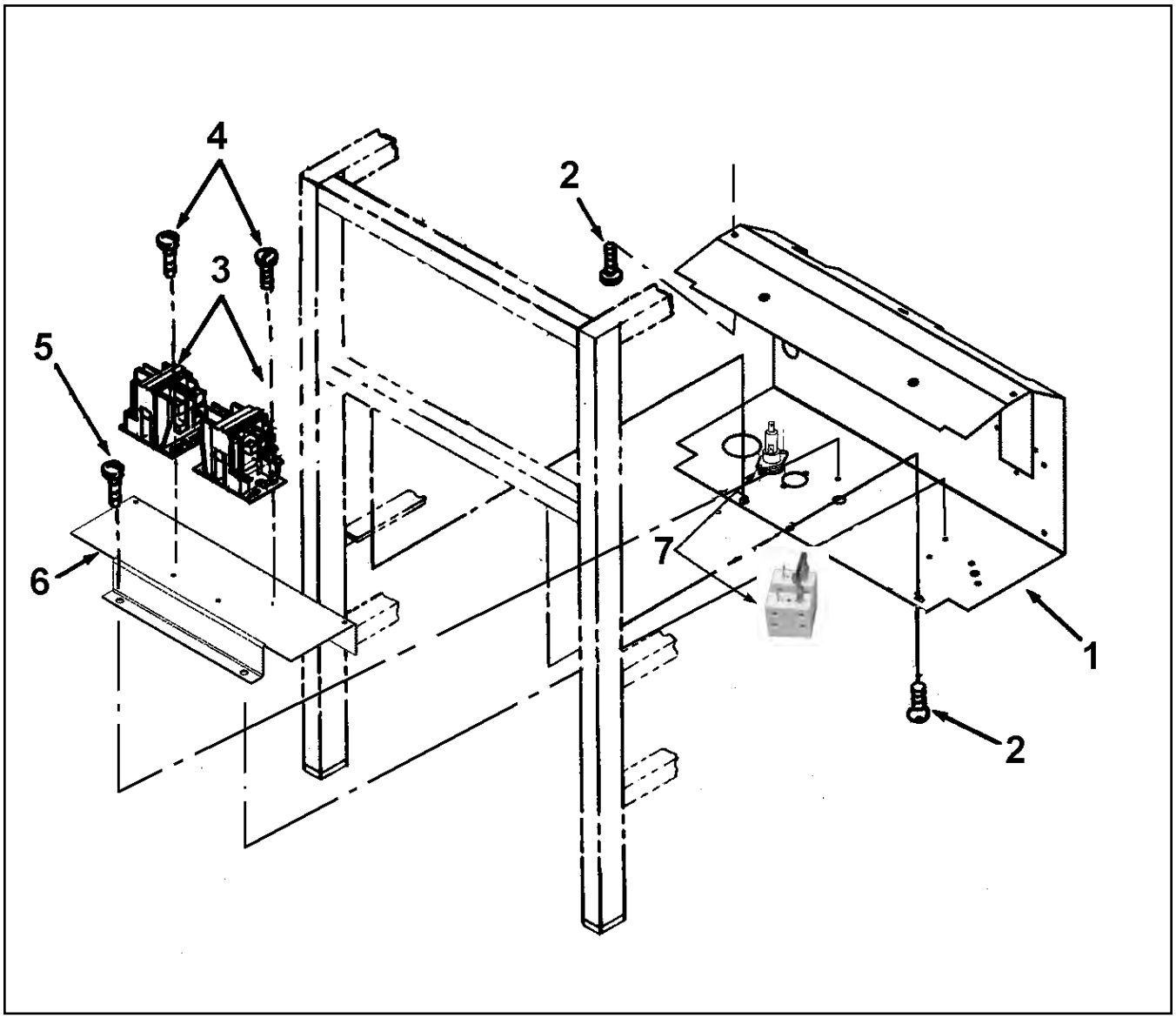


Figure 3-26. Contactor and Frame Assembly (Three Phase Electric Model)

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-26		CONTACTOR AND FRAME ASSEMBLY (Three Phase Electric Model)	
1	18514	SHROUD, Three Phase (KB020JJ & below)	1
1	59233	SHROUD, Three Phase (KB021JJ to HB013JB)	1
1	65864	SHROUD, Three Phase - 500 (HB014JB & above)	1
1	65863	SHROUD, CE-Three Phase (HB014JB-AA0605138)	1
1	65269	SHROUD, Three Phase (AA0605139 & above)	1
1	24800	SHROUD, Three Phase - 561 (HB014JB & above)	1
2	SC03-005	SCREW, Shroud	4
√ 3	19405	CONTACTOR - 208-240 Volt	2
3	29942	CONTACTOR, Mercury 208-240 VAC..... (Before SN: AA0909048 - 500 or AB0909007 - 561)	1
√ 3	65075	CONTACTOR, E/M Heat - Non-CE - 240V ..... (After SN: AA0909047 - 500 OR AB0909006 - 561)	1
√ 3	65074	CONTACTOR - 230 Volt - CE	2
4	SC04-002	SCREW, Contactor	4
5	SC01-052	SCREW, 1/4-20 x 3/8 Hex Hd C	2
6	58850	BRACKET, Double Contactor (KB021JJ & Above).....	1
√ 7	EF02-125	BREAKER, Push-Button Reset (10-23-06 & after-domestic) (AA0809149 & after - CE)	2
√ 7	18364	ASSY, Fuse Holder - 15 Amp (before 10-23-06).....	2
√ 7	EF02-007	FUSE, 15 Amp	2
√ 7	EF02-006	HOLDER, Fuse.....	2
√ 7	EF02-105	FUSE, 15 Amp - CE (AA0605139 to AA0809148)	2
√ 7	EF02-104	HOLDER, Fuse - CE (AA0605139 to AA0809148)	2
8*	14034	KIT - 1 Phase to 3 Phase Conversion (KB020JJ & below) ...	1
8*	14679	KIT - 1 Phase to 3 Phase Conversion (KB021JJ to HB013JB)	1
8*	14883	KIT - 1 Phase to 3 Phase w/ Fuses (HB014JB to AA0611084)	1
8*	14680	KIT - 1 Phase to 3 Phase Conversion (AA0611085 & above)	1
8*	140068	KIT - 500 C8000 - 3 Phase to 1 Phase Conversion	1

√ Recommended Parts

*not shown

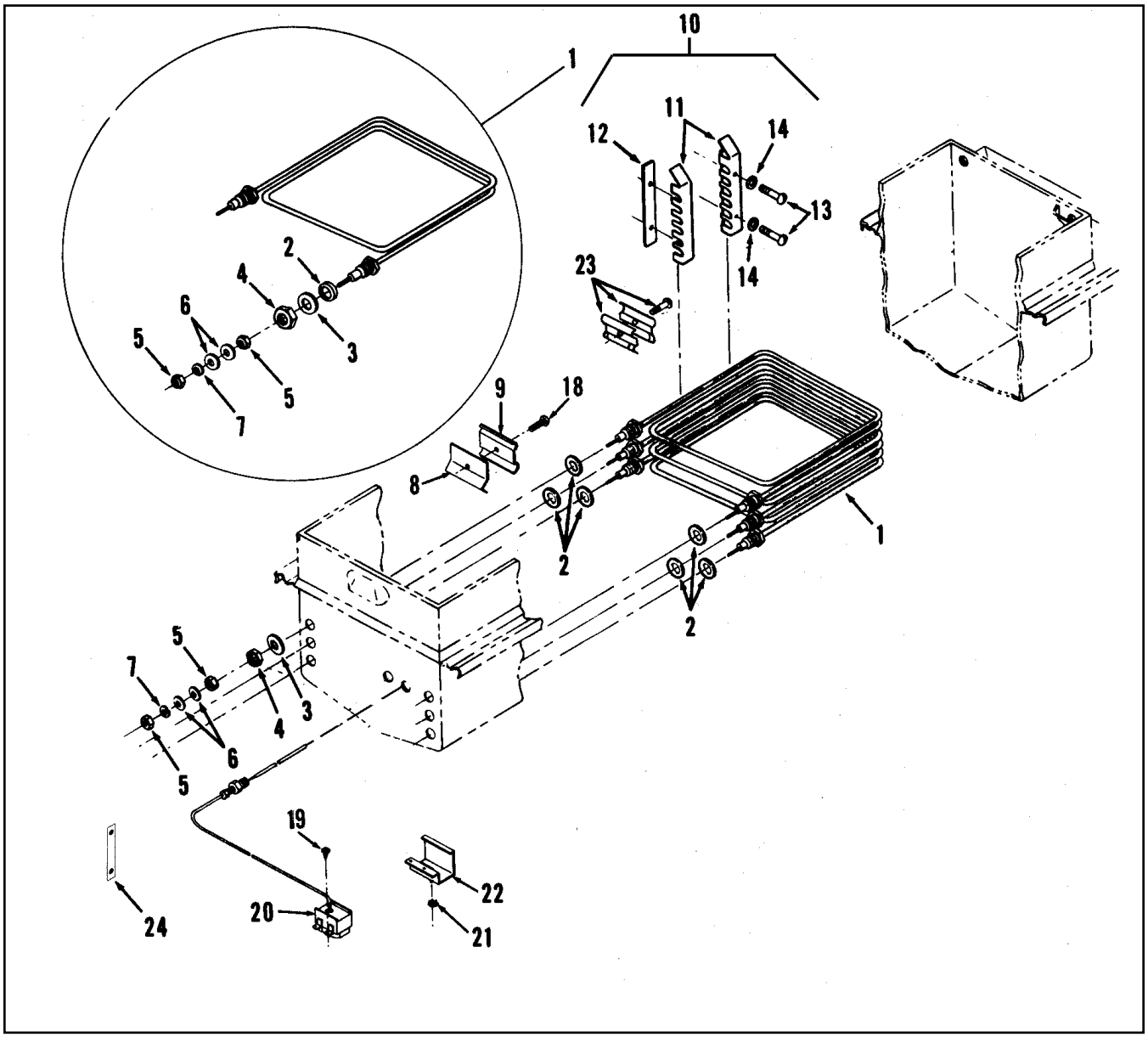


Figure 3-27. Heating Element and High Limit Assembly (Electric Model)

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-27		HEATING ELEMENT AND HIGH LIMIT ASSEMBLY, (Electric Model)	
√ 1	18233-1	ELEMENT COMPLETE, Heating ..... 208 Volts, 4500 Watts	3
√ 1	44756	ELEMENT - 208V-13.5kw-561 (units w/Firebars only)	1
√ 1	18233-2	ELEMENT COMPLETE, Heating ..... 230 Volts, 4500 Watts	3
√ 1	18233-5	ELEMENT COMPLETE, Heating ..... 230 Volts, 3750 Watts	3
√ 1	18233-4	ELEMENT COMPLETE, Heating ..... 208 Volts, 3750 Watts	3
√ 1	45268	ELEMENT - 240V-13.5kw-561 (units w/Firebars only)	1
√ 1	48169	ELEMENT - 220V-13.5kw-561 (units w/Firebars only)	1
√ 1	18233-6	ELEMENT COMPLETE, Heating ..... 480 Volts, 3750 Watts	3
√ 1	48159	ELEMENT - 480V-13.5kw-561 (units w/Firebars only)	1
√ 1	18233-7	ELEMENT COMPLETE, Heating ..... 480 Volts, 4500 Watts	3
2	16855	SEAL O-RING	6
3	WA01-005	WASHER, Heating Element, Metal	6
4	NS01-017	NUT, Heating Element, Brass	6
5	NS01-014	NUT, Heating Element	12
6	WA01-007	WASHER, Heating Element	12
7	LW01-008	WASHER, Lock, Heating Element	6
8	29295	HI Limit Bracket - Rear-561 (Firebars)	2
8	18720	CLAMP, Rear-Hi Limit	1
9	29297	HI Limit Bracket - Front-561 (Firebars)	2
9	18248	CLAMP, Front-Hi Limit	1
√ 10	14685	KIT, Spreader Module	4
11	18225	SPREADER, Element	4
12	18226	BAR, Spreader Lock	4
13	SC01-055	SCREW, Element Spreader (including Firebars)	8
14	LW02-005	WASHER, Lock, Element Spreader	8
15*	44914	SPREADER, Element (inner) - 561 (Firebars)	4
16*	44915	SPREADER Element (outer) - 561 (Firebars)	4
17*	SC01-201	SCREW, Element Spreader-561 (Firebars)	8
18	SC01-053	SCREW, 8-32 x 1/2 PH RD SS	2
19	SC02-018	SCREW, Thread Forming #8	2
√ 20	16738	CONTROL, Hi Limit Temperature	1
21	NS02-001	NUT, #10-32 Hex Keps	2
22	17216	BRACKET ASS'Y, Hi Limit Thermostat	1
23	18211	HOLDER, Thermostat Bulb	1
24	19604	BUSS BAR, 2-Hole	2
25*	63339	INSULATION, Pot Front-561	1

√ Recommended Parts/*not shown

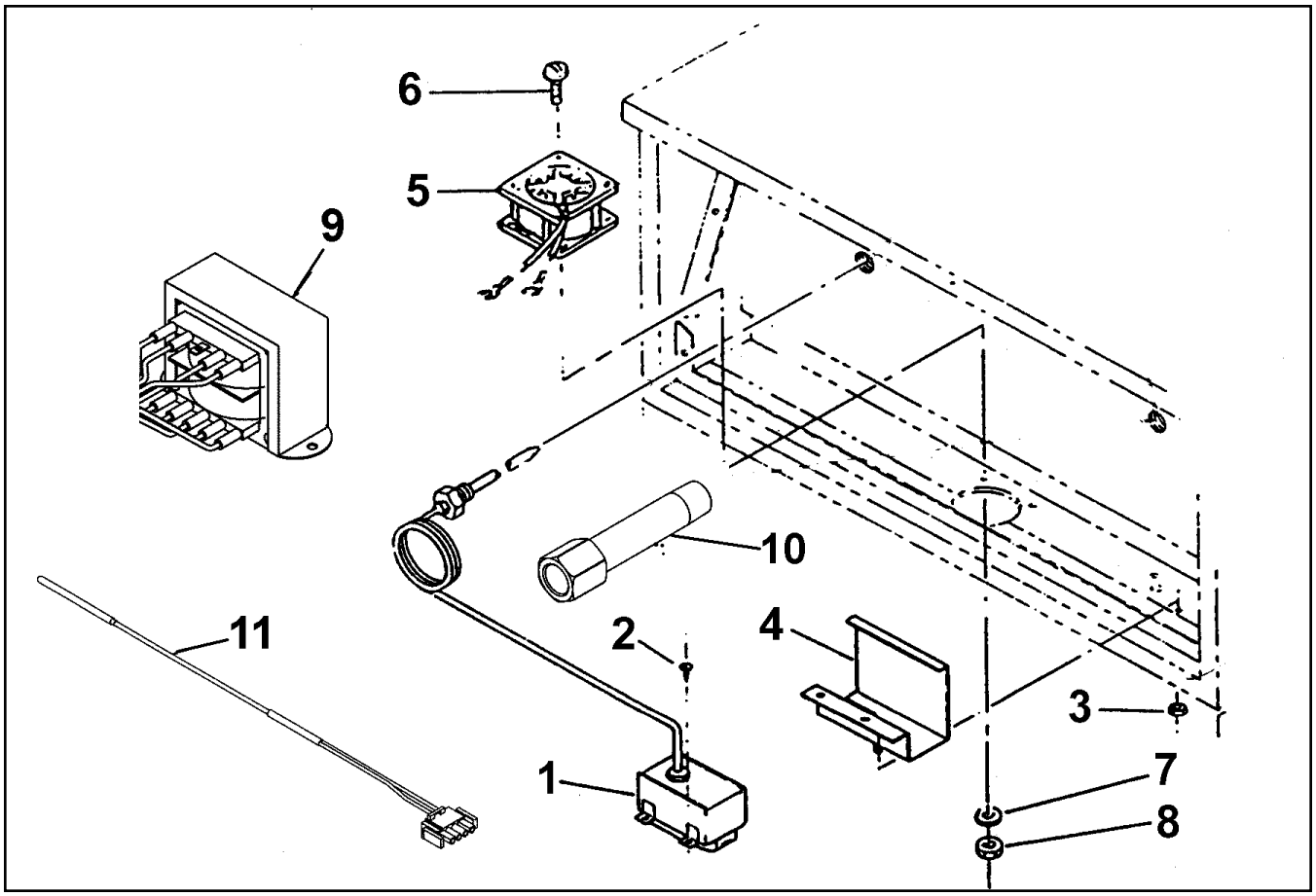


Figure 3-28. Fan and High Temperature Limit Control (Gas Model)

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-28		FAN AND HIGH TEMPERATURE LIMIT CONTROL (Gas Model)	
√ 1	16738	CONTROL, High Temperature Limit.....	1
√ 1	60241	CONTROL, High Temp. Limit-E.G.O.-CE and Australia..... SN: CA012JJ and above	1
√ 1	14267	KIT, High Limit - CE SN: CA011JJ and below.....	1
2	SC02-018	SCREW, Thread Forming #8	2
3	NS02-001	NUT, #10-32 Hex Keps	2
4	17216	BRACKET ASSY, High Limit Thermostat	1
√ 5	81208	FAN, 120 Volt	1
√ 5	16688	FAN, 240 Volt (SN: AN0810093 & Below)	1
√ 5	81117	FAN, 240 Volt (SN: AN0810094 & Above)	1
6	SC01-266	SCREW, Fan, 6-32 X1-3/4”.....	4
7	WA01-006	WASHER, Fan	4
8	NS02-005	NUT, Fan.....	4
√ 9	35916	TRANSFORMER, 120V-Pri./24V-Sec.....	1
√ 9	30614	TRANSFORMER, 208/240V-Pri./24V-Sec.....	1
10	51071	FITTING, Thermostat - SN: KA020JJ & Below.....	2
√ 11	68078	ASSY, FPS Temperature Probe (when applicable).....	1
12*	36097	PROBE GUARD	1

√ Recommended Parts

*not shown

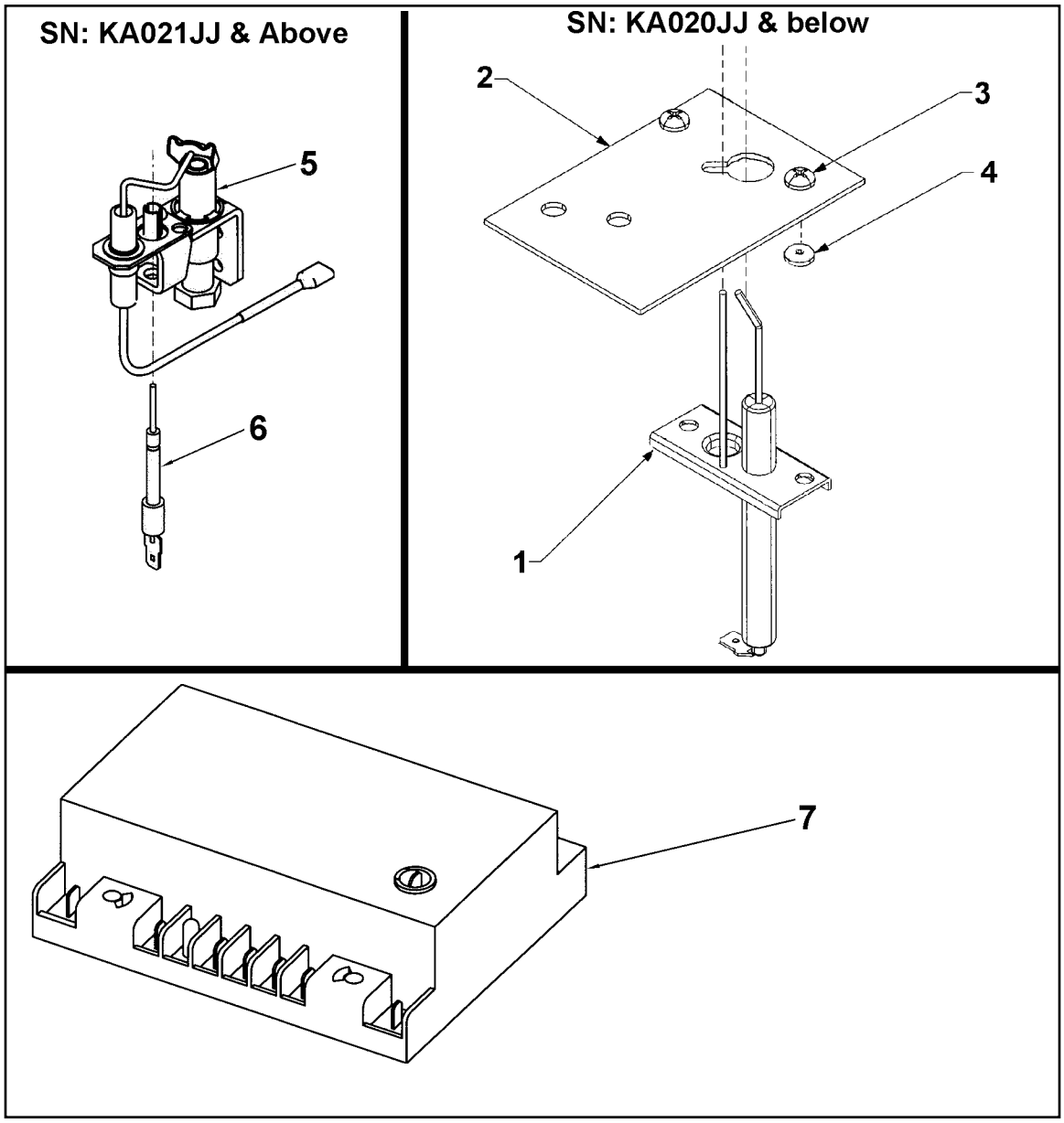


Figure 3-29. Electronic Ignition Assembly

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-29		ELECTRONIC IGNITION ASSEMBLY (only where applicable)	
√ 1	34380	ELECTRODE, Spark/Sense - SN: KA020JJ & below	1
2	34376	IGNITOR BRACKET - SN: KA020JJ & below	1
2	21522	IGNITOR BRACKET SN: KA021JJ & above.....	1
2	21325	IGNITOR BRACKET (Int'l) SN: KA020JJ & below	1
3	SC01-021	SCREW.....	2
3	SC01-076	SCREW (International) SN: KA020JJ & below	2
4	NS02-007	KEPS NUT.....	2
√ 5	79132-1	PILOT- PFG- 600 NATURAL (SN: AN1208071 & above)....	1
√ 5	140227	KIT- 600 NAT SSI PILOT ASSY (SN: KA021JJ-AN1208070)	1
√ 5	79132-2	PILOT- PFG- 600 LP (SN: AN1208071 & above).....	1
√ 5	14931	KIT, 600 SSI Pilot Assy-LP - SN: (SN: KA021JJ-AN1208070)	1
6	14899	KIT - 600 SENSOR FLM HARN FLM.....	1
√ 6	60292	SENSOR-FLAME, Pilot - SN: KA021JJ & above.....	1
√ 7	140133	KIT-IGNITION MODULE - SN: KA020JJ & below.....	1
√ 7	21318	IGNITION MODULE (Int'l) SN: KA020JJ & below	1
√ 7	14919	KIT-IGNITION MODULE-NON-CE-SN: KA021JJ to AN0711029	1
√ 7	77839	IGNITION MODULE-NON-CE-SN: AN0711030 & above	1
√ 7	14937	KIT-IGNITION MODULE -CE-SN: KA021JJ to AN0711029	1
√ 7	77602	IGNITION MODULE-CE - SN: AN0711030 & above....	1
√ 8*	21317	MOMENTARY RESET SWITCH SN: KA020JJ & below.....	1
9*	54472	POWER RELAY - 15A 120V.....	1
9*	56394	POWER RELAY - 10A 240V CE.....	1
10*	80854	BRACKET - IGNITION MODULE.....	1

√ Recommended Parts
*not shown

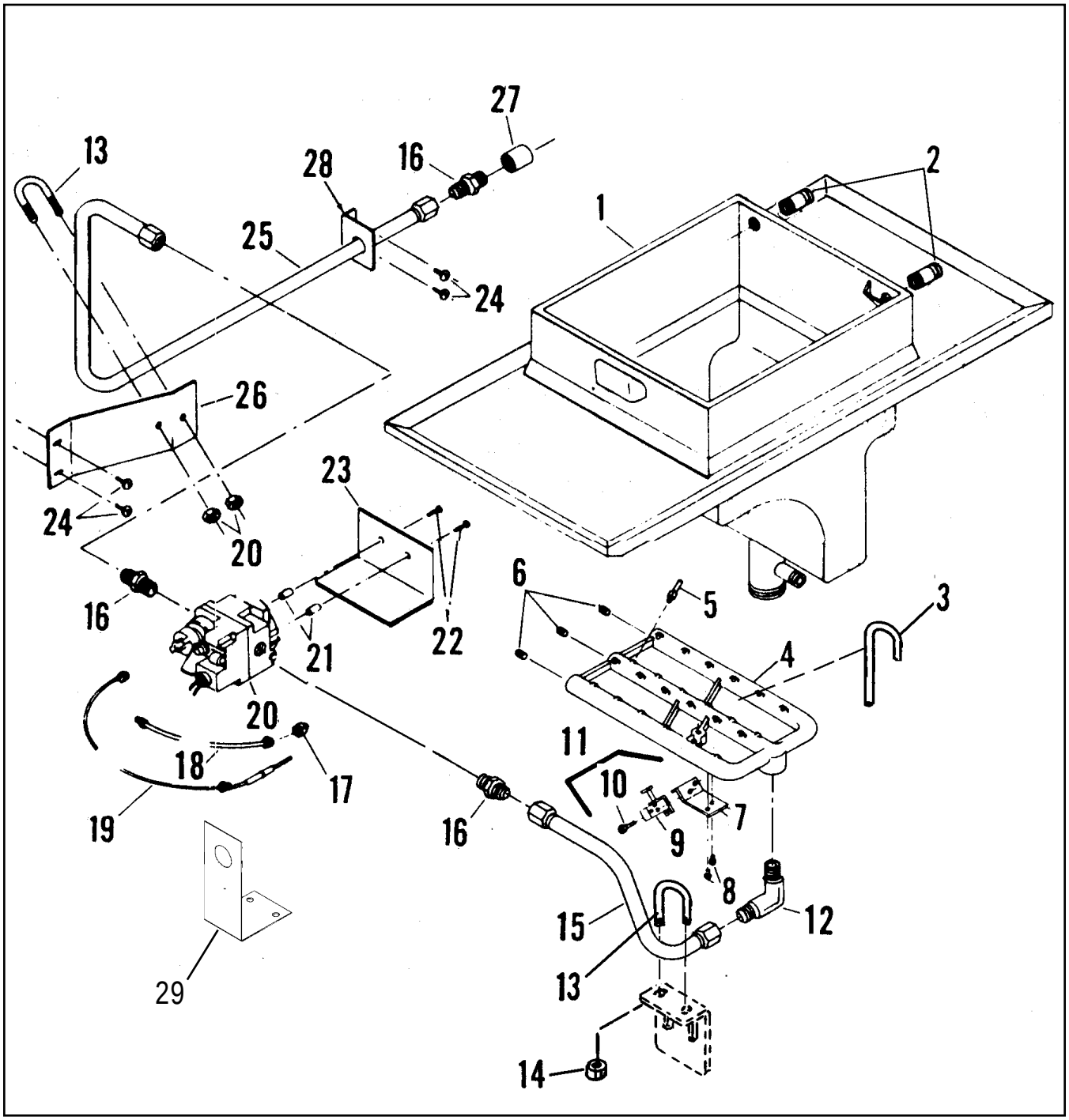


Figure 3-30. Frypot & Gas Burner Assy-Non-CE, Domestic, & Electronic Ignition

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-30		FRYPOT & GAS BURNER ASSY- NON-CE, DOMESTIC, AND ELECTRONIC IGNITION	
1	16889	TOP ASSY, Pot & Counter (SN: KA020JJ & below)	1
1	65007	TOP ASSY, Pot & Counter (SN: KA021JJ & above)	1
1	68568	TOP ASSY, Pot & Counter - FPS	1
1	65010	TOP ASSY, Pot & Counter-Pollo Campero (SN: KA021JJ & above)	1
1	65011	TOP ASSY, Pot & Counter-CE(SN: KA021JJ & above; use 16889 prior)	1
2	18816	NIPPLE, Pipe S.S	2
3	53834	J-BOLT, Burner Hold Down	1
4	16205	CASTING Burner	1
5	17013-1	SET, Orifice, Natural Gas	1
5	16561-1	ORIFICE, Natural Gas, S.S	1
5	16562-1	ORIFICE, Natural Gas, Brass	23
5	17013-3	SET, Orifice, Propane Gas	1
5	16561-3	ORIFICE, Propane Gas, S.S	1
5	16562-3	ORIFICE, Propane Gas, Brass	23
6	FP01-020	PLUG, Burner Casting	3
7	29969	BRACKET, Pilot Holder	1
8	SC01-184	SCREW, Pilot Holder Bracket	2
9	Use #11	PILOT & ORIFICE ASSEMBLY	1
10	SC01-047	SCREW, Pilot Holder	1
11	30904	PILOT & BRACKET ASSY, LP (SN AN0703021 & below)	1
11	30913	PILOT & BRACKET ASSY, Nat (SN AN0703021 & below)	1
12	16336	ELBOW, Male	1
12	FP01-014	ELBOW 1/8" (SN: AN0901029 & Above)	1
13	SC06-013	BOLT, U, Gas Line	2
14	NS02-002	NUT, Gas Supply Line Bolt	4
15	16333	LINE, Gas Burner to Control	1
15	67202	ASSY, Burner to Valve Tube - Solid State Ign.	1
15	79239	ASSY, Burner to Valve Tube (SN: AN0901029 & Above)	1
16	16335	NIPPLE, Close	3
17	29820	ORIFICE, Pilot, Natural Gas	1
17	32407	ORIFICE, Pilot, Propane Gas	1
18	69450	PILOT ASSEMBLY, Gas Tube	1
√ 19	16219	THERMOCOUPLE	1
√ 20	-------	VALVE, Gas Control - See Figure 3-32	1
21	16221	SPACER, Heat Shield	2
21	ME50-066	SPACER, Heat Shield (SN: AN0901029 & Above)	2
22	SC01-054	SCREW, Heat Shield	2
22	SC02-045	SCREW, Heat Shield (SN: AN0901029 & Above)	2
23	58866	SHIELD, Heat, Aluminum (SN: KA020JJ & below)	1
23	67111	SHIELD, Valve Heat - SSI (SN: KA021JJ to SN:AN0901028)	1
23	79197	SHIELD, Valve Heat (SN: AN0901029 & Above)	1
24	SC02-006	SCREW, Bracket	4
25	40304	LINE, Gas Supply (SN: KA020JJ & below)	1
25	16326	LINE, Gas Supply	1
26	16331	GAS LINE BRACKET	1
27	FP01-007	COUPLING, Pipe	1
28	16328	BRACKET, Gas Line	1
-	16329	Nut 37 Flare for 5/8 OD	2
-	16330	Sleeve 37 Flare for 5/8	2
29	24687	GUARD, Gas Valve Adjustment Screw	1
30*	14484	KIT, 3/4 in. x 5 ft. Gas Line w/quick-disconnect	1

√ Recommended Parts / * not shown

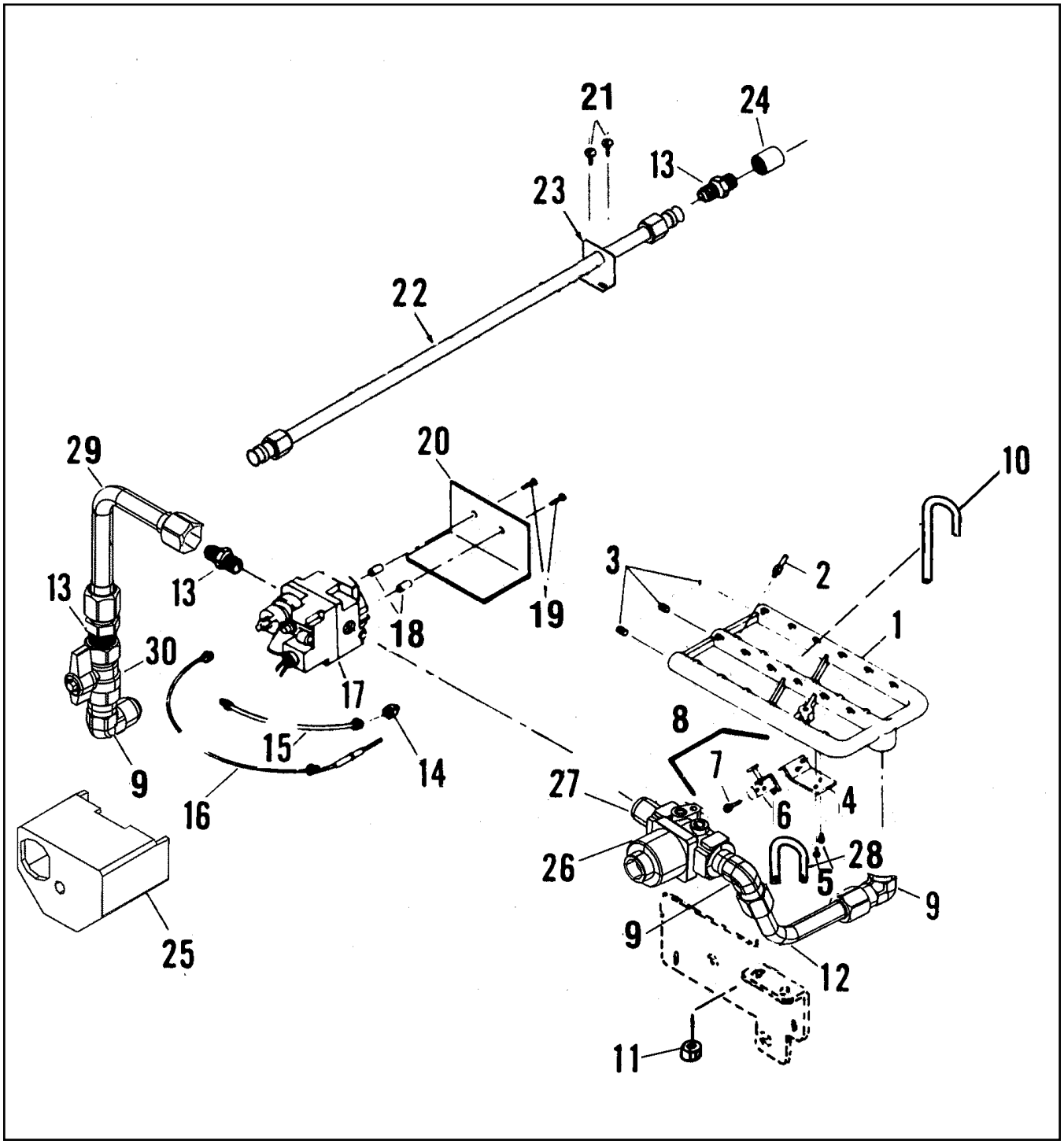
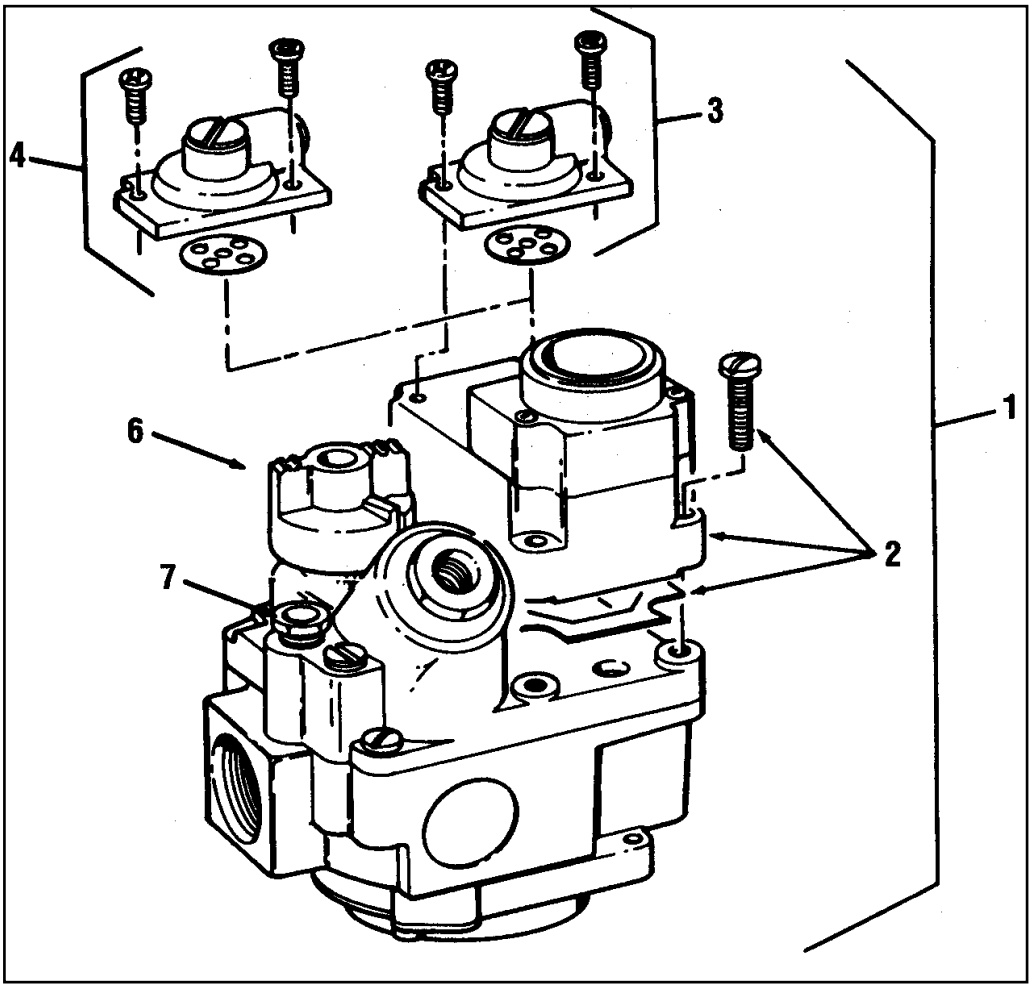


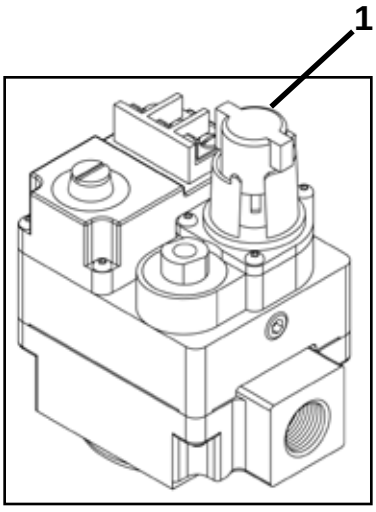
Figure 3-31. Gas Line and Burner Assembly - CE, Int'l, and Electronic Ignition

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-31		GAS LINE & BURNER ASSY-CE, INTERNATIONAL, & ELECTRONIC IGNITION	
1	16205	CASTING Burner	1
2	17013-1	SET, Orifice, Natural Gas	1
2	16561-1	ORIFICE, Natural Gas, S.S	1
2	16562-1	ORIFICE, Natural Gas, Brass	23
2	17013-3	SET, Orifice, Propane Gas	1
2	16561-3	ORIFICE, Propane Gas, S.S	1
2	16562-3	ORIFICE, Propane Gas, Brass	23
3	FP01-020	PLUG, Burner Casting	3
4	29969	BRACKET, Pilot Holder	1
5	SC01-184	SCREW, Pilot Holder Bracket	2
6	Use #8	PILOT & ORIFICE ASSEMBLY	1
7	SC01-047	SCREW, Pilot Holder	1
8	30904	PILOT & BRACKET ASSY, LP (SN AN0703021 & below)	1
8	30913	PILOT & BRACKET ASSY, Nat (SN AN0703021 & below)	1
9	16336	ELBOW, Male	1
10	53834	J-BOLT, Burner Hold Down	1
11	NS02-002	NUT, Gas Supply Line Bolt	4
12	38464	LINE, Gas Burner to Control	1
13	16335	NIPPLE Close	2
14	29820	ORIFICE, Pilot, Natural Gas	1
14	32407	ORIFICE, Pilot, Propane Gas	1
15	69450	PILOT ASSEMBLY, Gas Tube	1
√ 16	16219	THERMOCOUPLE	1
√ 16	34820	THERMOCOUPLE -CE	1
√ 17	-------	VALVE, Gas Control - See Figure 3-32	1
18	16221	SPACER, Heat Shield	2
19	SC01-054	SCREW, Heat Shield	2
20	16222	SHIELD, Heat, Aluminum	1
21	SC02-006	SCREW, Bracket	4
22	51429	LINE, Gas Supply-CE and Australia	1
22	19921	LINE GAS FLEX W/CONNECTOR	1
23	16328	BRACKET, Gas Line	1
24	FP01-007	COUPLING, Pipe	1
25	56229	WIRE COVER, Gas control valve - CE	1
√ 26	38446	SOLENOID, Gas - 120V	1
√ 26	38467	SOLENOID, Gas - 240V	1
√ 26	38468	SOLENOID, Gas - 24V	1
√ 26	34801	SOLENOID, Gas - 240V - CE and Australia	1
√ 26	34802	SOLENOID, Gas - 24V - CE and Australia	1
27	FP02-062	NIPPLE, 1/2 NPT x 1.75L BI	1
28	SC06-013	BOLT U, Gas Line	1
29	51428	TUBE, Gas Valve Supply	1
30	45401	VALVE, 1/2 Gas Ball	1
31*	FP01-014	ELBOW, 1/8 inch - Z	1
32*	FP01-200	FITTING - Gas Inlet BSPT	1
33*	16355	NIPPLE, PRESSURE TEST	1

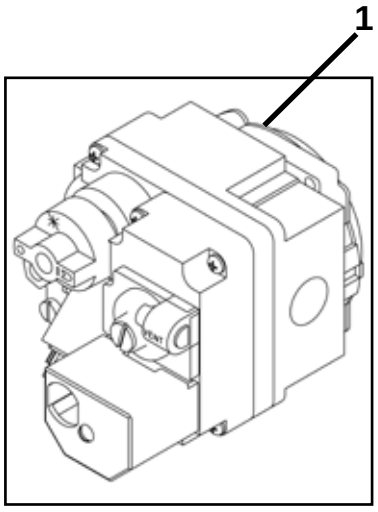
√ Recommended Parts/*not shown



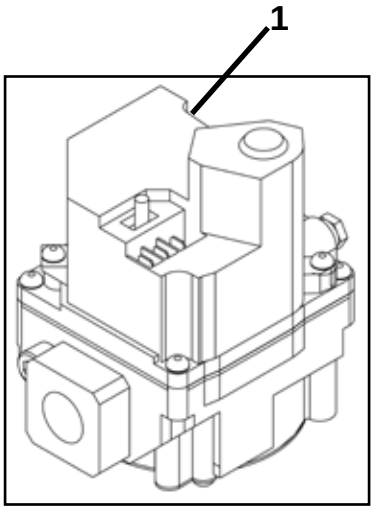
Style 1



Style 2



Style 3



Style 4

Figure 3-32. Gas Control Valve

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-32		GAS CONTROL VALVE	
√ 1	-------	VALVE, Gas Control - **See Table 1 Below**	1
√ 2	16254	ACTUATOR, Gas Control Valve, 120 Volt, Natural	1
2	16710	ACTUATOR, Gas Control Valve, 208-240 Volt, Natural.....	1
√ 2	16386	ACTUATOR, Gas Control Valve, 120 Volt, Propane	1
√ 2	16384	ACTUATOR, Gas Control Valve, 208-240 Volt, Propane.....	1
√ 3	16253	REGULATOR, Gas Control Valve, Natural Gas	1
√ 4	16352	REGULATOR, Gas Control Valve, Propane Gas.....	1
√ 6	16267	KNOB, Gas Control Valve	1
√ 7	16373	FITTING, Compression - Pilot Tube.....	2
8*	16247	KIT, Nat. to LP Conversion - **See Table 2 Below**	1
8*	16248	KIT, LP to Nat. Conversion - **See Table 2 Below**	1
8*	14324	KIT, Nat. to LP Conversion - **See Table 2 Below**	1
8*	14325	KIT, LP to Nat. Conversion - **See Table 2 Below**	1
8*	14723	KIT, 600SSI - Nat. to LP Conversion-SN: KA021JJ & above.....	1
8*	14724	KIT, 600SSI - LP. to Nat. Conversion-SN: KA021JJ & above	1

√ Recommended Parts / *not shown

Table 1

Voltage	Nat. Electronic Ign.	LP Electronic Ign.	Nat. Std. Ign.	LP Std. Ign.	Town Gas
120V	†34439 (SN: KA020JJ and Below)	--------	†16216	†16217	Use 16262 and 16254
240V	--------	†21316	†16380	†16381	†16262
24V	◊140043 (SN: KA021JJ to AN0901028)	◊140043 (SN: KA021JJ to AN0901028)	#29614 (SN: KA020JJ and Below)	#29728 (SN: KA020JJ and Below)	--------
24V	◊80761 (SN: AN0901029 and Above)	◊80858 (SN: AN0901029 And Above)	‡58863 (SN: KA021JJ and Above)	‡64036 (SN: KA021JJ and Above)	--------
24V/50Hz	--------	--------	#34806	#34805	--------
240V/50Hz	--------	--------	#34804	#34803	--------

† - Style 1, Integral lead wires
‡ - Style 2, 3 screw terminals
- Style 3, 2 screw terminals and/or cover
◊ - Style 4, 3 spade terminals and ON/OFF switch

NOTE: Part # 16216 and 16380 consist of items 2 and 3 and part # 16217 and 16381 consist of items 2 and 4.

Table 2

	(Pilot lit Manually)	(Pilot lit Manually)
SERIAL NUMBER	**Std. USA 120V/60Hz Power**	**Std. European & Non-Std. Power**
KA020JJ & Below	16247 & 16248	16247 & 16248
KA021JJ & Above	14324 & 14325	16247 & 16248

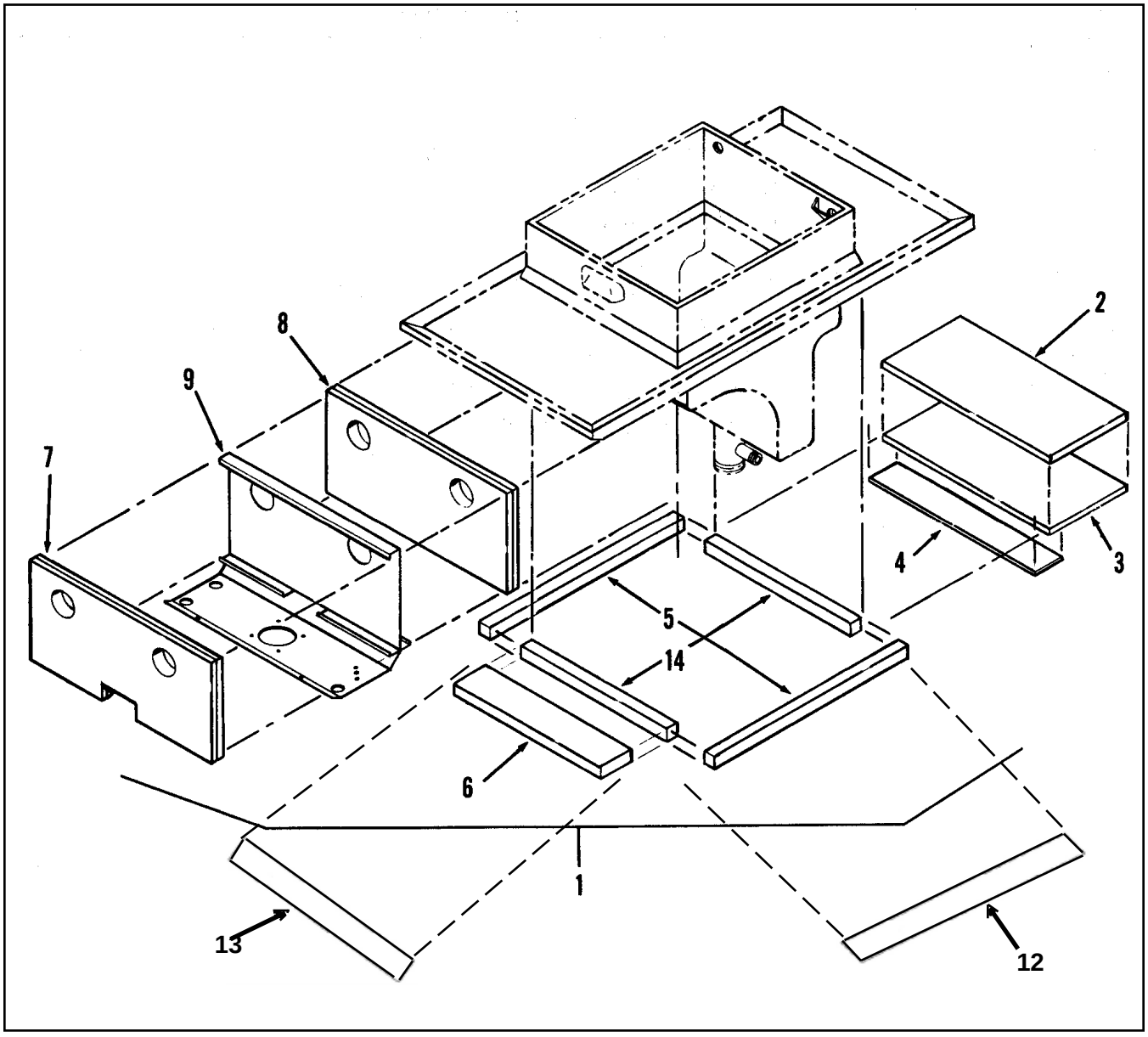


Figure 3-33. Countertop Insulation Assembly (Gas Model)

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-33		COUNTERTOP INSULATION ASSY (Gas Model)	
1	14698	KIT, Complete Set - SN: KA021JJ & Above.....	1
1	16518	INSULATION, Complete Set - SN: 35886 to KA020JJ.....	1
1	16310	INSULATION, Complete Set - SN: 35885 and Below ..... (Includes Part Nos. 16505,17605,16872, MS01-180, Bulk Cerefelt Insulation For Around Thermocouple, Pot Fittings, and Glue.)	1
1	14211	INSULATION, Complete Set-CE and Australia	1
2	63301	INSULATION, Fiberglass	1
2	63326	INSULATION-CE and Australia	2
3	63302	INSULATION, Cerefelt - Flue Top	1
3	63326	INSULATION, Cerefelt - Flue Top - CE	1
4	16308	BOARD, Aircell	1
4	54862	BOARD, Aircell-CE and Australia	1
5	53807	INSULATION, Countertop-sides	2
6	16303	INSULATION, Fiberglass	1
7	63699	INSULATION, Fiberglass Notched	2
7	68070	ASSY, Front Panel Insulation - SSI/FPS	1
8	63623	INSULATION, Heat Shield, Inner.....	1
9	59232	HEAT SHIELD	1
10*	53802	HEAT SHIELD, Middle-CE & Australia (SN:AN0810093 and Below)	1
11*	80861	HEAT SHIELD-CE & Australia (SN:AN0810094 & Up).....	1
11*	85512	HEAT SHIELD-240V SSI/FPS (SN:AN0810093 & Below)	1
11*	85518	HEAT SHIELD-240V SSI/FPS (SN:AN0810094 & Up).....	1
12	59965	INSULATION, Countertop Side.....	2
13	59966	INSULATION, Countertop Front	1
14	53808	INSULATION, Countertop-Front/Rear	2

* not shown

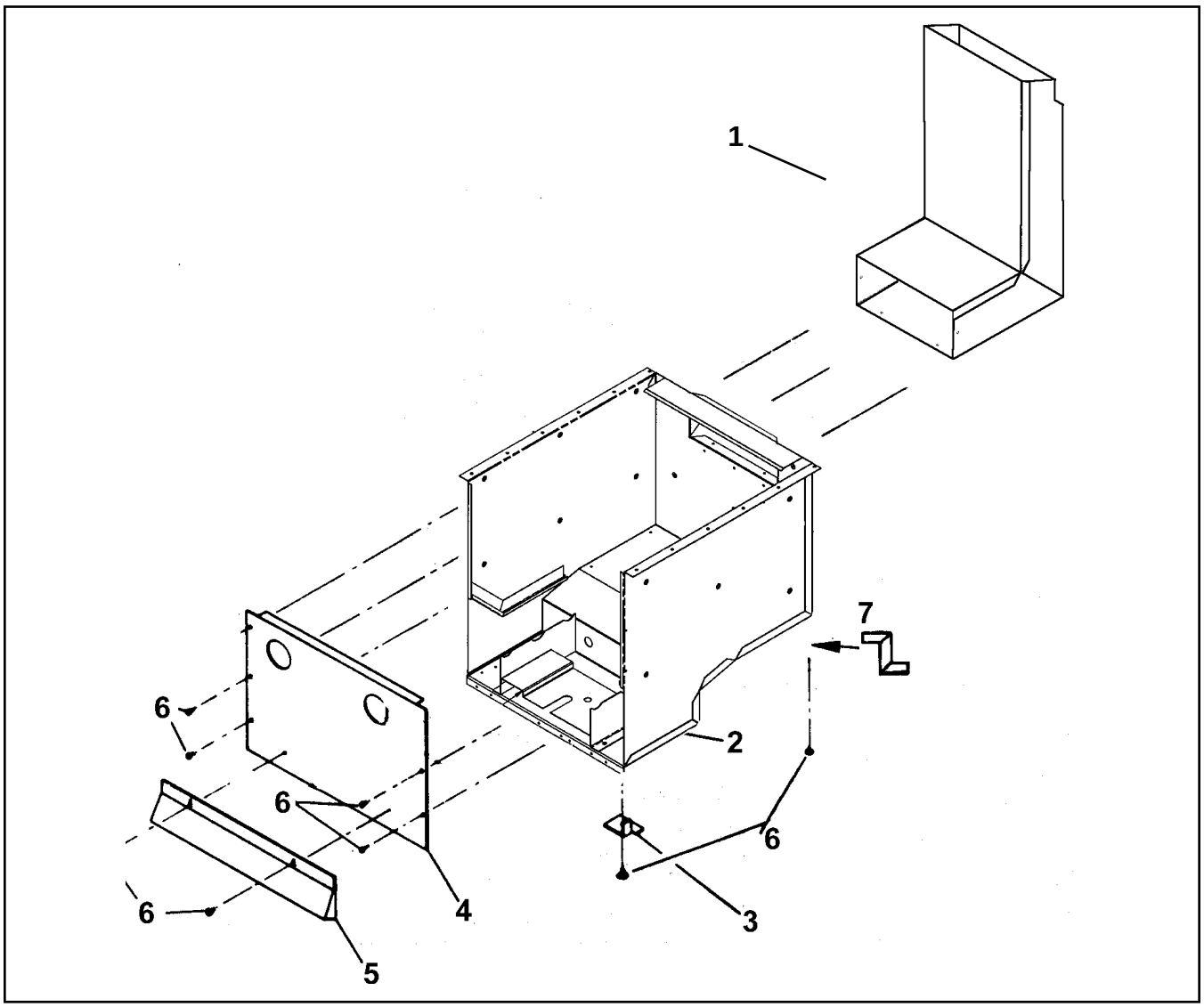


Figure 3-34. Firebox and Flue Assembly (Gas Model)

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-34		FIREBOX AND FLUE ASSEMBLY ..... (Gas Model)	
1	59728	STACK, Flue Exhaust - SN: KA021JJ & Above.....	1
1	54865	STACK, Flue Exhaust - SN: KA020JJ & Below.....	1
2	59223	CABINET ASSEMBLY, Firebox - SN: KA021JJ & Above	1
2	29679	CABINET ASSEMBLY, Firebox - SN: KA020JJ & Below	1
3	18625	BRACKET, Side Panel Insulation	2
4	87448	PANEL, Firebox Front	1
5	16406	DEFLECTOR, Heat Shield	1
6	SC03-005	SCREW, Sheet Metal	20
7	18626	BRACKET, Side Panel Insulation, Rear	2
8	63330*	FIREBOX ASSY, w/Insul-Japan-(SN: AN0902073 & Below)	1
8	63311*	FIREBOX ASSY, w/Insul-Japan-(SN: AN0902074 & Above)	1
8	63331*	FIREBOX ASSEMBLY, w/Insulation - CE and Australia.....	1
9	30857*	FRONT PANEL INSULATION ASSEMBLY (Export only)	1
10	53812*	INSULATION, Front Bracket, Firebox - CE and Australia...	2
11	53814*	INSULATION, Leg - CE and Australia	1
12	53816*	INSULATION, Outer Rear Firebox - CE and Australia.....	1
13	24239*	INSULATION, Outer Firebox, Side - CE and Australia	1

***** not shown

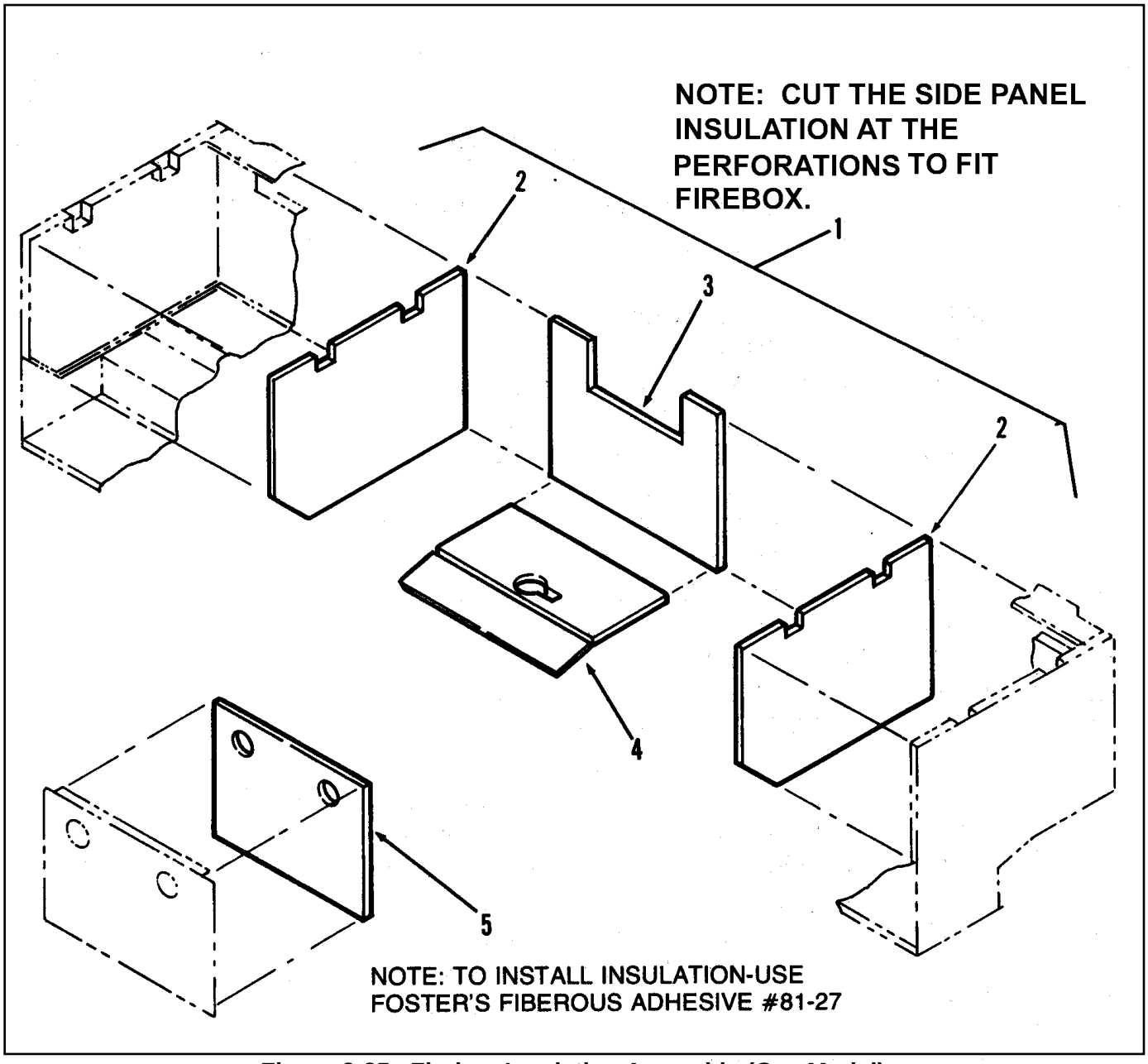


Figure 3-35. Firebox Insulation Assembly (Gas Model)

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-35		FIREBOX INSULATION ASSY (Gas Model)	
1	16505	INSULATION, Firebox - Complete Set ..... Cerefelt, Inside Firebox	1
2	63111	INSULATION, Side Panel , Cerefelt	2
3	16502	INSULATION, Back Panel, Cerefelt	1
4	16503	INSULATION, Bottom Panel, Cerefelt	1
5	29690	INSULATION, Front Panel, Cerefelt	1
6	24238*	INSULATION, Countertop, Sides - Japan - (SN: AN0902074 & Up)	2

***** not shown

The SMS control has been replaced by the SMS 20 control. The SMS control is no longer orderable. The SMS kits have been updated to include to the SMS-20. The kit numbers are the same execpt the SMS has been replaced by the SMS-20 and any additional hardware needed to install the SMS-20. Refer to the tables below when ordering a replacement SMS20 control.

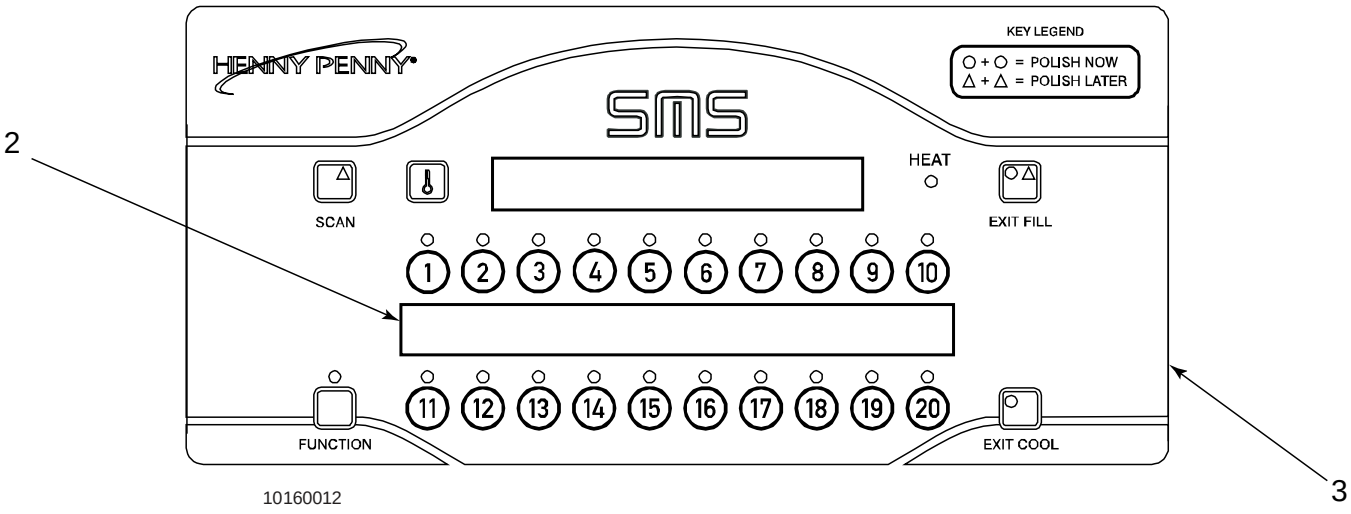


Figure 3-36. SMS-20 Control

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-36		PFE-500 KFC SMS-20 CONTROLS & SPARE PARTS	
1*	97924	SMS-20 Control, PFE-500	1
2	92495	CARD, Menu 580/590/690	1
2	97984	CARD, Menu KFC 600 SMS-20	1
3	97501	DECAL, KFC 600 SMS 20	1
4*	51877	SPEAKER, w/wire	1
5*	14789	KIT, SMS-20 Conversion Dom. (SN: KA020JJ & Below) (Units with wiring diagram 24853, 24718 or 63211)	1
5*	14792	KIT, SMS-20 Conversion Dom. (SN: KA020JJ & Below) (Units with wiring diagram 72860, 72831, or 71819)	1
5*	14795	KIT, SMS-20 Conversion Dom. (SN: KA021JJ to BA026JA) (Units with wiring diagram 24853, 24718 or 63211)	1
5*	14799	KIT, SMS-20 Conversion Dom.(SN: KA021JJ to BA026JA) (Units with wiring diagram 72860, 72831, or 71819)	1
5*	14801	KIT, SMS-20 Conversion Dom. (SN: BA026JA GA085JB) (Units with wiring diagram 24853, 24718 or 63211)	1
5*	14804	KIT, SMS-20 Conversion Dom. (SN: BA026JA GA085JB) (Units with wiring diagram 72860, 72831, or 71819)	1
5*	14819	KIT, SMS-20 Conversion Int'l (SN: KA020JJ & Below) (Units with wiring diagram 24853, 24718 or 63211)	1
5*	14822	KIT, SMS-20 Conversion Int'l (SN: KA020JJ & Below) (Units with wiring diagram 72860, 72831, or 71819)	1
5*	14825	KIT, SMS-20 Conversion Int'l (SN: KA021JJ to BA026JA) (Units with wiring diagram 24853, 24718 or 63211)	1
5*	14828	KIT, SMS-20 Conversion Int'l (SN: KA021JJ to BA026JA) (Units with wiring diagram 72860, 72831, or 71819)	1
5*	14831	KIT, SMS-20 Conversion Int'l (SN: BA026JA GA085JB) (Units with wiring diagram 24853, 24718 or 63211)	1
5*	14834	KIT, SMS-20 Conversion Int'l (SN: BA026JA GA085JB) (Units with wiring diagram 72860, 72831, or 71819)	1

√ Recommended Parts/*not shown

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
3-36		PFG-600 KFC SMS-20 CONTROLS & SPARE PARTS	
1*	97925	SMS-20 Control, PFE-600	1
2	92495	CARD, Menu 580/590/690	1
2	97984	CARD, Menu KFC 600 SMS-20	1
3	97501	DECAL, KFC 600 SMS 20	1
4*	51877	SPEAKER, w/wire	1
5*	14807	KIT, SMS-20 Conversion Dom. (SN: KA020JJ & Below)	1
5*	14811	KIT, SMS-20 Conversion Dom. (SN: KA021JJ to BA026JA)	1
5*	14815	KIT, SMS-20 Conversion Dom. (SN: BA027JA to GA085JB)	1
5*	14837	KIT, SMS-20 Conversion Int'l (SN: KA020JJ & Below) (Units with wiring diagram 29895)	1
5*	14838	KIT, SMS-20 Conversion Int'l (SN: KA020JJ & Below) (Units with wiring diagram 63748)	1
5*	14839	KIT, SMS-20 Conversion Int'l (SN: KA020JJ & Below) (Units with wiring diagram 29900)	1
5*	14840	KIT, SMS-20 Conversion Int'l (SN: KA020JJ & Below) (Units with wiring diagram 34809)	1
5*	14841	KIT, SMS-20 Conversion Int'l (SN: KA021JJ to BA026JA) (Units with wiring diagram 29895)	1
5*	14842	KIT, SMS-20 Conversion Int'l (SN: KA021JJ to BA026JA) (Units with wiring diagram 63748)	1
5*	14843	KIT, SMS-20 Conversion Int'l (SN: KA021JJ to BA026JA) (Units with wiring diagram 29900)	1
5*	14844	KIT, SMS-20 Conversion Int'l (SN: KA021JJ to BA026JA) (Units with wiring diagram 34809)	1
5*	14845	KIT, SMS-20 Conversion Int'l (SN: BA026JA GA085JB) (Units with wiring diagram 29895)	1
5*	14846	KIT, SMS-20 Conversion Int'l (SN: BA026JA GA085JB) (Units with wiring diagram 63748)	1
5*	14847	KIT, SMS-20 Conversion Int'l (SN: BA026JA GA085JB) (Units with wiring diagram 29900)	1
5*	14848	KIT, SMS-20 Conversion Int'l (SN: BA026JA GA085JB) (Units with wiring diagram 34809)	1
5*	14908	KIT SMS-20 Conversion Int'l from Fast to SMS20 (Japan)	1

√ Recommended Parts/*not shown

SECTION 4. PROGRAMMING

Programming information is provided in this section. Operator menus are described in the Operator's manual and are not included in this manual. All menus that pertain to maintenance are described in this section.

To enter the menus perform the following steps:

1. Press and hold the PROGRAM button for five seconds.
2. Release the PROGRAM button as soon as "LEVEL 2" shows in the display.
3. Press the PROGRAM button until TECH is displayed (you are in tech mode now).
4. Enter the access code 11221122.

The only menu used for maintnenace for the Computron 8000 control is tech mode.

Menu Step	Description
T-1 SOFTWARE ID'S	View Software ID's Press and hold [1]: HP P/N = 32609J (HP 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	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	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: Number buttons 1-0, Info, Down, Up, Prog, Left-side (Idle), Right-side (Timer)
T-4 ALL-ON DISPLAY TEST	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 SEGMENTS TEST	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	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	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.

Menu Step	Description
T-8 LED'S DISPLAY TEST	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. 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-9 OIL TEMP -- CALIB/ OFFSET/HIGHEST	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 Press and hold [3]: HIGHEST 341°F - View highest recorded oil temperature. Reset max temp by pressing the DOWN button while viewing.
T-9A AUX TEMP -- CALIB/OFFSET/ HIGHEST	View/set calibration offset for auxiliary (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	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 CHANNELS	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. <0> CPU temperature (thermistor) <1> Safety Circuit Comparator Ref. <2> Safety Circuit Comparator Output <3> Aux. RTD input (unused) <4> Oil Tmp RTD input

Menu Step	Description
T-11 VIEW A-D CHANNELS (continued)	<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) 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).
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-Hd Elec: F & M are hardwired on. P is hardwired off. **4-Head Electric Fryers:** DIGITAL INPUTS AB VHDSFPM Normal Display: A_ VHDSF_M 4-Hd Gas: F & P are hardwired on. M is hardwired off. **4-Head Gas Fryers:** DIGITAL INPUTS AB VHDSFPM Normal Display: A_ VHDSFP_ *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. --- 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*. 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.

Menu Step	Description
T-12 (continued)	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. 4-Head Electric and 4-Head Gas 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 fryers: This signal is hardwired OFF and should never be present. M = "Electric" auto-detect jumper. 4-Hd fryers: This signal is hardwired ON. 4-Hd Gas Fryers: This signal is hardwired OFF and should never be present. 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 gas burners -- the burners are not actually activated unless the controller turns the Heat output on.
T-13 OUTPUTS	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 4 Head fryer the #1 button toggles the Fan output on and off, while on an Electric 4 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.

Menu Step	Description
	4-Head Electric Fryers: OUTPUTS F* H * P _ (Fan output only used on PVS fryers) 4-Head Gas Fryers: OUTPUTS F* H * P _ (Fan output is for cooling fan)
T-13A OUTPUTS	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, and the #2 button toggles the Air Valve output on and off.
T-14 AMPS CALIBRATE	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 frypot and take care to not overheat it. Press the #0 button to view the uncalibrated readings. **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.

Menu Step	Description
	IF THE PASSWORD IS CHANGED & FORGOTTEN: There is a way to "unlock" a controller whose password has been forgotten. Contact Tech Services for details. To change the selected code, press the '1' button (i.e.1="YES"). The display shows: "ENTER NEW CODE" _ _ _ _ _ _ _ _ "P=DONE" "I = QUIT" Enter the new code sequence -- comprised of one to eight keystrokes -- using the number buttons 1 through 0. When the new code sequence is complete, press the [P] (PROG) button. The display now shows: "REPEAT NEW CODE" _ _ _ _ _ _ _ _ "P=DONE" "I = QUIT" Enter the new code sequence a second time in the same manner as the first. Again, press the [P] (PROG) button when the entry is complete. If the same key sequence is entered both times, the controller responds " * CODE CHANGED * ". From this point on, the new code sequence is required for access to Tech Mode functions. The previous code is erased and is no longer valid. If the first and second entries do not match exactly, the controller indicates "DID NOT MATCH", "NOT CHANGED". In this case, the access code will not be changed -- the previous value remains in effect. The code entry process may be abandoned at any point by pressing the "I" (INFO) button. The display immediately shows "X CANCELLED X" and returns to the initial "Change Code?" display. The previous code remains in effect. If no keys are pressed for 30 seconds, the entry process is automatically abandoned. The display shows "X CANCELLED X" and the previous code value remains in effect.
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.

APPENDIX A. ANNUAL PREVENTIVE MAINTENANCE

This Appendix contains the checklist and associated procedures to accomplish the annual preventive maintenace.

HENNY PENNY
Engineered to Last

4-Head Pressure Fryer Annual Inspection Checklist

INSPECTION #

Red Flag/Operation Number	Remove side panels and rear cover	OK	CLEAN	REPLACE
1	Inspect Frypot for any signs of leakage	☐	☐	☐
2	Inspect that the fryer sits level. Inspect casters and ensure fryer frame is not cracked or bent.	☐	☐	☐
	Rear of Fryer			
3	Inspect electrical cord and plug	☐	☐	☐
4	Inspect gas line, quick disconnect and tether (600 only)	☐	☐	☐
5	Perform a flue inspection (600 only)	☐	☐	☐
6	Disassemble condensation box and clean, seal seams w/silicone	☐	☐	☐
7	*Rear of Fryer and front of the fryer* - Check that the condensation box drain line, dead weight tube, pressure release tubing is free and clear from clogs. Also that each is not damaged or leaking.	☐	☐	☐
	Inspect drain pan, filter motor and drain oil.			
8	Verify the drain valve handle microswitch is in working condition	☐	☐	☐
9	Inspect that drain pan is empty, all components present (filter screen, clips, crumb catcher, standpipe, lid) and it is assembled correctly	☐	☐	☐
10	Test filter pump motor to ensure operation	☐	☐	☐
11	Drain oil to drain pan. Ensure no drain obstructions.	☐	☐	☐
	Heat System			
12	Tighten heating element spreader bars and high limit bracket – 500 only	☐	☐	☐
13	Inspect temperature probe, verify it is not bent or damaged. Check the insertion depth of the probe with a gauge – adjust if necessary	☐	☐	☐
14	Inspect Burner Jets (600 only)	☐	☐	☐
15	Inspect and clean pilot assembly. Adjust pilot if necessary (600 only)	☐	☐	☐
16	Inspect for excessive oil migration behind the control board	☐	☐	☐
17	Following all instructions, inspect the high limit.	☐	☐	☐
	Pump Oil / Fill Fry Pot			
18	Test filtration system when pumping oil back up – no obstructions, leaks or excessively slow pumping.	☐	☐	☐



19	Check amp draw of heating elements are consistent and when added up, match the amp draw listed on the data plate (500 only).	☐	☐	☐
20	Check that manifold pressure matches the data plate and gas type of the fryer (600 only)	☐	☐	☐
	Pressure System (front of fryer)			
21	Inspect Deadweight including orifice, O-ring, cap, and weight) ensure they are in good working condition.			
22	Following all instructions, perform lid latch, catch and latch spring inspection.			
23	Clean and lubricate safety pin, thrust ball, locking collar and spindle.	☐	☐	☐
24	Lubricate cross arm retaining pin			
25	Inspect the lid cross arm			
26	Inspect the lid gasket and reverse if wear is acceptable	☐	☐	☐
27	Perform a limit stop adjustment			
28	Clean safety relief valve			
29	Remove solenoid valve and clean and reassemble	☐	☐	☐
30	Verify the existing pressure gauge rests at zero and is free and clear from obstructions. (verify during pressure test)	☐	☐	☐
	Pressure test			
31	Following all instructions, pressure test with at least 2-Head OR and verify lid locks at pressures greater than 2psi and then unlocks only when pressure drops below 2 psi.			
	Verify in this test if pressure is regulating in the green zone. Verify that all pressure releases prior to the timer reaching 0:00. This will help to identify if there is still any pressure release and deadweight tubing obstructions.			
	During Pressure Test			
32	Verify pressure gauge is functioning in a similar range as the calibrated test fixture			
33	Inspect the oil return valve for leaks while under pressure. Verify there is no oil leaking back through the oil return plumbing to the drain pan while under pressure.			
34	Inspect the drain valve for leaks while under pressure.			
	General Fryer			
35	Verify all labels are in place and legible on fryer.	☐	☐	☐

What are the tools required prior to doing this job

- Temperature probe depth gauges



- 4-HD latch gauge
- Pipe snake
- Manometer
- Amp Clamp
- Imperial size Socket Set
- Imperial size set of hex key wrenches
- Full range pliers set from needle nose to 12” large slip joint
- Phillips and flat blade screwdriver set
- Pipe wrenches 8 – 12”
- wire stripping tool
- wire cutter
- crimping tool
- Adjustable wrench set 8 – 12”
- Open end wrench set (imperial sizes)

What parts should I take with me prior to doing this job?

- Safety relief valve (One per fryer)
- Latch spring
- Latch
- Pressure gauge
- Lid gasket
- Solenoid rebuild kit
- Temperature probe
- Spindle lube
- Pipe thread sealant
- Towels
- Steel and Teflon sleeve fittings
- Dead weight cap O-ring
- Pilot assembly
- Flame sensor
- Power cord for 600
- Plumbing elbows
- High limit
- Drain switch
- Splice connectors

Copyright © 2016 Henny Penny Corporation. All rights reserved. Henny Penny and the Henny Penny logo are registered trademarks of Henny Penny Corporation in the United States and other countries.

4-Head Fry Pot Inspection

Procedure

1. PFG-600 only - Remove the heat shield plate above the burner to gain better visibility inside the burner box. PFE-500 – Remove side panels of fryer.
2. Use a flashlight and inspection mirror to inspect the welds of the fry pot and drain stem weld indicated in figure 1 (PFG-600). For a PFE-500, use a flashlight to inspect the corner welds, drain stem and the pot to countertop welds. If oil accumulation can be seen from a weld, take the fryer out of service until the fry pot is replaced. Contact Henny Penny with any questions regarding fry pot warranty.



To avoid fire, if oil accumulation can be seen from a weld, take the fryer out of service until the fry pot is replaced.

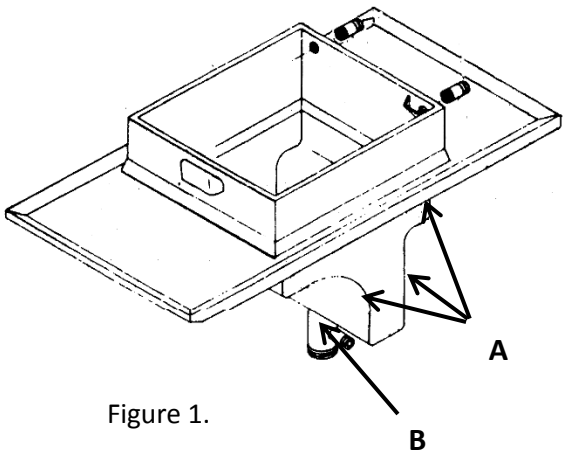


Figure 1.

A	Pot Welds (600 gas pot shown)
B	Drain stem weld

Inspect Casters, and Frame

Objective

- Inspect that the fryer sits level, casters are mechanically sound to hold the weight of the fryer and the tube steel frame is not cracked or bent. If the fryer is sitting out of level, inspect the condition of the floor. Have any missing or cracked tiles replaced. If there is a slope due to a floor drain, the fryer may need to be repositioned so the caster is not near this slope. Casters on the fryer cannot be adjusted. Inspect casters and the tube steel frame by removing side panels and using a flashlight to look for cracking or bent frame (figure 1). Replaced any damaged or broken casters following the procedure below.

WARNING **A cracked frame creates a tipping risk. If cracked frame is found, immediate attention is needed to repair the frame by having it professionally repaired by a welder, or having the fryer replaced**.

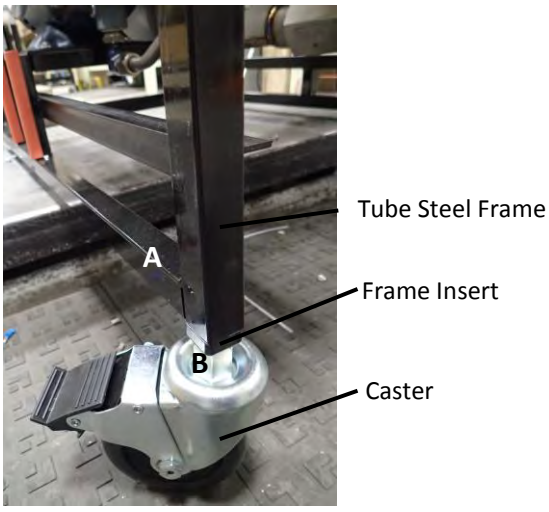


Figure 1. *Shown with left side panel removed*

Caster Replacement Procedure

1. Discard oil from the fryer.
2. Using two floor jacks, position jacks near casters under the frame (figure 1. Point A). Both jacks must be positioned near casters on the same side of the fryer. For example, lift both the front casters off of the ground if replacing a front caster.
3. Block the casters on the opposite side of the fryer with small wheel chocks.
4. Raise fryer approximately 2.5”inches (63mm)
5. Use an adjustable wrench at point B in figure 1. to remove the existing caster.
6. Install the new caster in reverse order.

Power Cord

Replace any power cord with torn or damaged sheathing, any exposed wire, or any fraying. Replace the plug if there are any signs of damage, loose wires showing, burnt connections. Guidelines from the manual are listed below.



Fire Risk and Electrical Shock Possible. If any of these conditions are found, take the fryer out of service until a new power cord or plug can be installed. Always adhere to local electrical code upon installation of the power cord.

2-6. ELECTRICAL REQUIREMENTS The electric fryer requires 208 or 240 volt, three phase, 50/60 Hertz service. The power cord may be already attached to the fryer, or provided at installation. Check the data plate mounted just above the lid, on the left side of the back shroud, to determine the correct power supply.

This fryer must be adequately and safely grounded (earthed) or electrical shock could result. Refer to local electrical codes for correct grounding (earthing) procedures or in absence of local codes, with The National Electrical Code, ANSI/NFPA No. 70-(the current edition). In Canada, all electrical connections are to be made in accordance with CSA C22.1, Canadian Electrical Code Part 1, and/or local codes.

To avoid electrical shock, this appliance must be equipped with an external circuit breaker which will disconnect all ungrounded (unearthed) conductors. The main power switch on this appliance does not disconnect all line conductors.

A separate disconnect switch with proper capacity fuses or breakers must be installed at a convenient location between the fryer and the power source. It should be an insulated copper conductor rated for 600 volts and 90° C. For runs longer than 50 feet (15.24 m), use the next larger wire size.

2-7. INTERNATIONAL ELECTRICAL REQUIREMENTS Units being used outside the United States may not be shipped with the power cord attached to the unit because of the different wiring codes. The fryers are available from the factory wired for 208, 240, 380 and 415 volts, 3 phase, 50 Hertz service. A terminal block is mounted inside the fryer for the cable wiring. A decal on the inside of the right side panel will help in the wiring of the unit. CE units require a minimum wire size of 4mm to be wired to the terminal block. If a flexible power cord is used, it must be

HO7RN type.
To install the power cord, follow these procedures:
1. Remove the right side panel of the unit.
2. Install the cord, with a strain relief, to the junction box.
3. Attach the wires to the terminal block according to the wiring diagram on the side panel.

CE units require a minimum wire size of 4mm to be wired to the terminal block. If a flexible power cord is used, it must be HO7RN type.
To install the power cord, follow these procedures:
1. Remove the right side panel of the unit.
2. Install the cord, with a strain relief, to the junction box.
3. Attach the wires to the terminal block according to the wiring diagram on the side panel.
4. Pull the slack out of the cord and thread it down through the the clamp on the frame, at the rear, left leg of fryer. Then run the cable under the frame and out the rear of the fryer, so it doesn't interfere with the filter drain pan.



The filter drain pan must be as far back under fryer as it will go, and the cover in place. Be sure the hole in the cover lines up with the drain before opening the drain. Failure to follow these instructions causes splashing of shortening and could result in personal injury.



The supply power cords shall be oil-resistant, sheathed flexible cable, no lighter than ordinary polychloroprene or other equivalent synthetic elastomer-sheathed cord.

• It is recommended that a 30 mA rated protective device such as a residual current circuit breaker (RCCB), or ground fault circuit interrupter (GFCI), be used on the fryer circuit.



(FOR EQUIPMENT WITH CE MARK ONLY!)
To prevent electric shock hazard this appliance must be bonded to other appliances or touchable metal surfaces in close proximity to this appliance with an equipotential bonding conductor. This appliance is equipped with an equipotential lug for this purpose. The equipotential lug is marked with the following symbol .

Gas Hose and Connection

Replace any gas connection that has a damaged hose, torn or damaged sheathing, or damaged fittings or quick disconnects that no longer function properly. Replace any damaged fittings or quick disconnects using appropriate pipe thread sealant that conforms to local code. Below are guidelines from the manual as reference.



If any of these conditions are found, take the fryer out of service until a new gas connection (hose, fitting, quick disconnect) can be installed. Always adhere to local code upon installation of the gas connection.

The gas fryer is factory available for either natural or propane gas. Check the data plate on the right side panel of the cabinet to determine the proper gas supply requirements. The minimum supply for natural gas is 7 inches water column (1.74 kPa), and 10 inches water column (2.49 kPa) for propane.
A separate disconnect switch with proper capacity fuses or breakers must be installed at a convenient location between the fryer and the power source. It should be an insulated copper conductor rated for 600 volts and 90° C. For runs longer than 50 feet (15.24 m), use the next larger wire size.



Do not attempt to use any gas other than that specified on the data plate. Incorrect gas supply could cause a fire or explosion resulting in severe injuries and/or property damage.

Please refer below for the recommended hookup of the fryer to main gas line supply.

To avoid possible serious personal injury:
• Installation must conform with local, state, and national codes, and be in accordance with Canadian Gas Authority Standard CSA B149-& 2, Installation Codes - Gas Burning Appliances and in accordance with Australian Gas Association current edition of AS5601 Gas Installations.
• The fryer and its manual shutoff valve must be disconnected from the

gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.45kPa) (34.47mbar)
(continued to next page)

The fryer must be located with provision for venting into adequate exhaust hood or ventilation system. This is essential to permit efficient removal of the flue gases and frying odors. Special precaution must be taken in designing an exhaust canopy to avoid interference with the operation of the fryer. We recommend you consult a local ventilation or heating company to help in designing an adequate system.



piping system by closing its manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.45 kPa)(34.47 mbar).
• A standard 3/4 inch, black steel pipe and malleable fittings should be used for gas service connections.
• Do not use cast iron fittings.
• Although 3/4 inch size pipe recommended, piping should be of adequate size and installed to provide a supply of gas sufficient to meet the maximum demand without undue loss of pressure between the meter and the fryer. The pressure loss in the piping system should not exceed 0.3 inch water column (0.747 mbar).

Provisions should be made for moving the fryer for cleaning and servicing. This may be accomplished by:

1. Installing a manual gas shutoff valve and disconnect union, or
2. Installing a heavy-duty (min. 3/4 inch) design A.G.A. certified connector which complies with standard connectors for moveable gas appliances. ANSI Z21.69 or CAN/CSA 6.16. Also, a quick-disconnect coupling which complies with the Standard for Quick-Disconnect Devices for use with Gas Fuel, ANSI Z21.41 or CAN 1-6.9. Also, adequate means must be provided to limit the movement of the fryer without depending on the connector and any quick-disconnect device or its associated piping to limit the fryer movement.
3. See the illustration on the following page for the proper

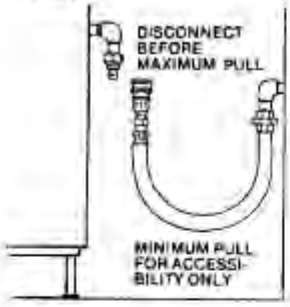
connections of the flexible gas line and cable restraint.



The cable restraint limits the distance the fryer can be pulled from the wall. For cleaning and servicing the fryer, the cable must be unsnapped from the unit and the flexible gas line disconnected. This will allow better access to all sides of the fryer. The gas line and cable restraint must be reconnected once the cleaning or servicing is complete.

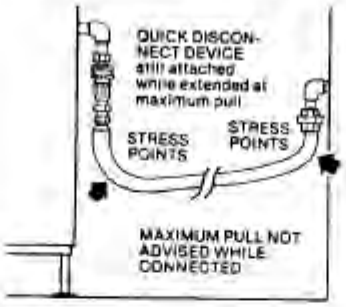
RIGHT

MINIMUM PULL of equipment away from wall permissible for accessibility to Quick Disconnect Device.



WRONG

AVOID SHARP BENDS AND KINKS when pulling equipment away from wall. (Maximum pull will kink ends, even if installed properly, and reduce Connector life.)





RIGHT

Couplings and hose should be installed in the same plane as shown at left. DO NOT OFFSET COUPLINGS—this causes torsional twisting and undue strain causing premature failure.





RIGHT

This is the correct way to install metal hose for vertical traverse. Note the single, natural loop.

Allowing a sharp bend, as shown at right, strains and twists the metal hose to a point of early failure at the coupling.





RIGHT

Maintain the minimum or larger bending diameter between the couplings for longest life.

Closing in the diameter at the couplings, as shown at right, creates double bends causing work fatigue failure of the fittings.

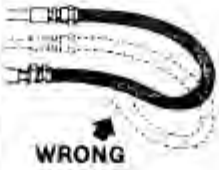




RIGHT

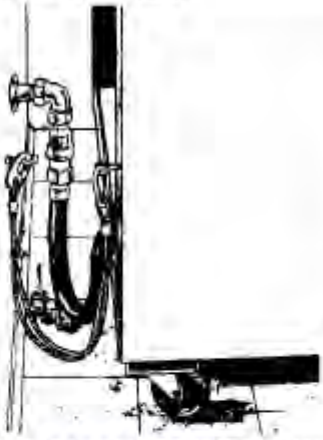
In all installations where "self-draining" is not necessary, connect metal hose in a vertical loop.

DO NOT CONNECT METAL HOSE HORIZONTALLY . . . unless "self-draining" is necessary, then use support on lower plane as shown at left.



CABLE RESTRAINT

Please refer to the illustration below when installing cable restraint on all moveable gas fryers.



I-bolt is to be secured to the building using acceptable building construction practices.

CAUTION

DRY WALL CONSTRUCTION

Secure I-bolt to a building stud. DO NOT attach to dry wall only. Also, locate the I-bolt at the same height as the gas service. Preferred installation is approximately six inches to either side of service. Cable restraint must be at least six inches shorter than flexible gas line.

CAUTION

Utilize elbows when necessary to avoid sharp kinks or excessive bending. For ease of movement, install with a "lazy" loop. Gas appliance must be disconnected prior to maximum movement. (Minimum movement is permissible for hose disconnection).

Flue Inspection (model 600 only)

Objective

Ensure the transition from the flue to the fire box is clean with no holes from corrosion.



Figure 1

1. Remove the left and right side panels from the fryer (figure 1).



Figure 2

2. Remove the rear cover (figure 2).

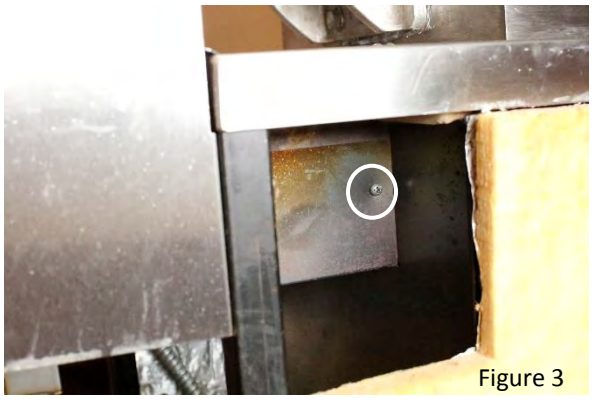


Figure 3

3. Remove the four screws holding the flue to the firebox. One on each side of the fryer as shown in Figure 3. Two underneath the flue as shown in Figure 4.

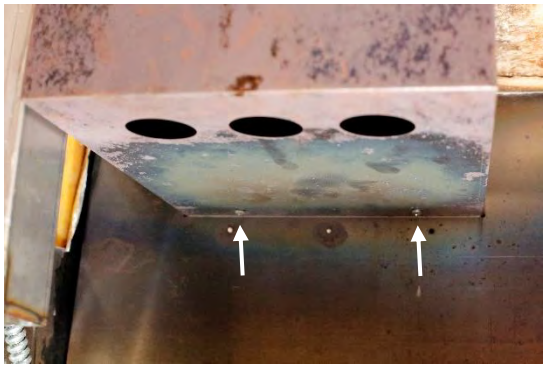


Figure 4

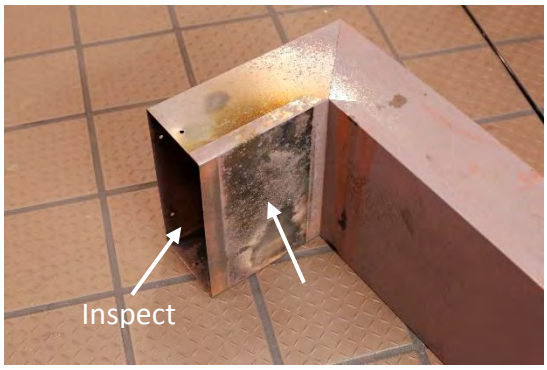


Figure 5

4. Once removed, Inspect the flue and transition assembly (figure 5). Clean out any debris or obstruction found in the flue assembly and inspect the integrity of the transition. If excessive corrosion casing holes to form in the transition are found, this step of the inspection does not pass until the flue assembly is replaced. The fryer would also need to be taken out of service until a new flue assembly is installed. Please refer to the parts manual for the part number.

Condensation Box

Objective

- Inspect that the condensation box and condensation drain line are clean, and free from debris. Use a flexible wire brush to remove debris from the condensation drain line.

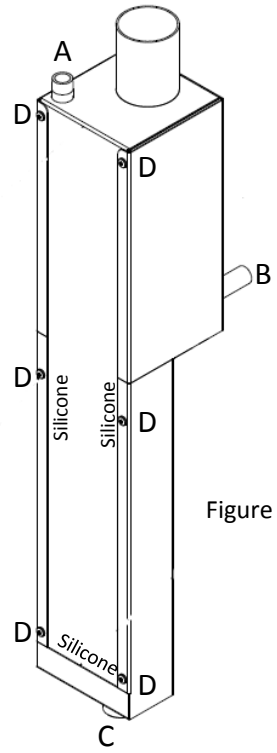


Figure 1.

A	Deadweight Tube
B	From Solenoid
C	Condensation Drain Outlet
D	Screws x6

Cleaning Procedure (refer to figure 1)

1. Remove rear cover of fryer
2. Disconnect deadweight tube
3. Disconnect condensation drain line
4. Disconnect plumbing from pressure solenoid
5. Remove condensation box mounting screws (figure 2).
6. Cut silicone (figure 2)
7. Remove the six screws fastening the interior of the box to the exterior.
8. Remove any debris from the inside of the condensation box and clean.
9. Remove any debris in the condensation drain line (not shown) and in the condensation drain outlet.
10. Slide assembly back together and seal with silicone
11. Reassemble in reverse order

Solenoid and Deadweight Plumbing

Objective

- Inspect that the plumbing from the dead weight valve and the pressure solenoid are clean, and free from debris. During the lid locking safety inspection if pressure exceeded 14psi, this would indicate blockage in either the dead weight assembly or in the dead weight plumbing. If pressure were slow to release at the end of the lid locking safety inspection, this would indicate that either the solenoid valve needs to be cleaned or remove build up or an obstruction in the pressure solenoid plumbing. Use a flexible wire brush to remove debris from this plumbing.



Figure 1.

A	Deadweight Tube
B	Deadweight Hose

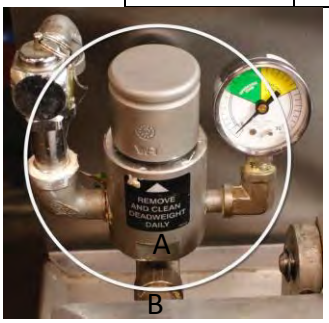


Figure 2.

A	Deadweight Assembly
B	Outlet from fry pot to deadweight

Dead Weight Plumbing Cleaning Procedure

1. Remove rear cover of fryer
2. Disconnect deadweight tube from dead weight hose (figure 1.)
3. Disconnect the dead weight tube from the dead weight assembly by loosening the compression nut at the rear of the dead weight assembly.
4. Clean the dead weight tube
5. Clean the dead weight valve using a small pipe snake
6. Clean from the outlet in the fry pot to the deadweight valve (figure 2.)
7. Reassemble in reverse order

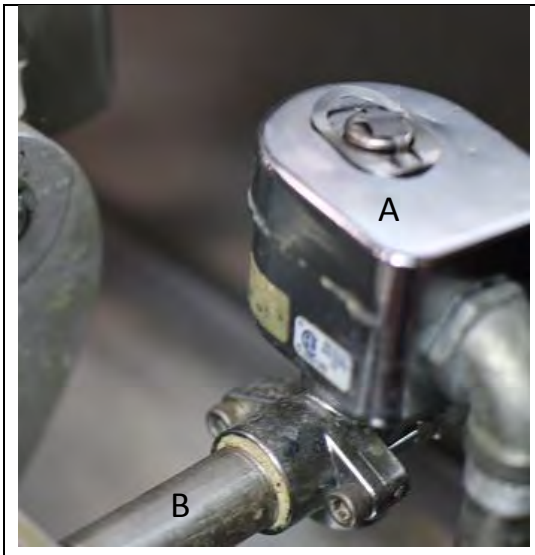


Figure 3.

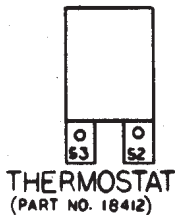
A	Solenoid Assembly
B	Outlet from fry pot to solenoid

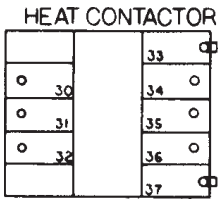
Solenoid Plumbing Cleaning

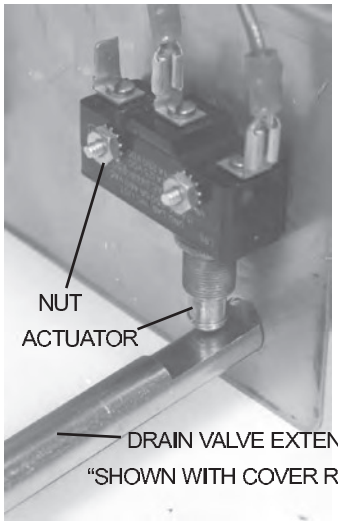
1. Inspect and clean the plumbing from the outlet in the fry pot to the pressure solenoid (figure 3.)
2. Clean from the solenoid to the condensation box. (see instructions for removal and cleaning of the condensation box)

2-15. ELECTRICAL COMPONENTS (Continued)

(See Wiring Diagrams paragraph 2-21)







Step 2

Drain Switch
(electric models)

All fryer models have a drain microswitch in line with the gas control valve or heat contactor and thermostat. When the drain valve is opened to drain the shortening, this causes drain switch to open, shutting off electrical power to the heating elements.



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

1. The following check should be made to determine if the drain switch is defective. All checks should be made with the drain valve in the closed position, with the actuator pushed in.

   a. Fryers with standard thermostat part number 18412, the continuity check must be made between terminal 52 on the thermostat, and terminal 33 on the heat contactor. If circuit is open, the drain switch is bad and needs to be replaced.

2. To replace the drain switch, remove the two screws and nuts securing switch and switch cover.

3. Label and disconnect wires.

4. Connect wires to new drain switch.

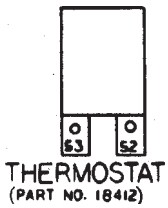
5. Position actuator and attach drain switch and switch cover with two screws and nuts. Tighten nuts to 3 - 4 inch-pounds of torque.

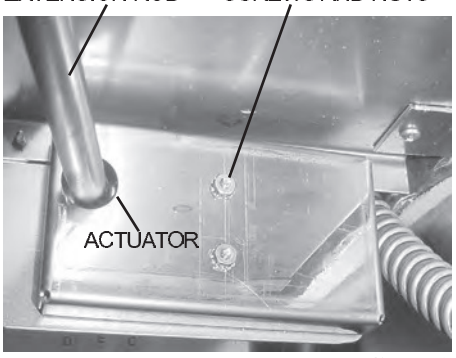
6. Test to see if drain valve extension rod actuates the switch.



Listen for an audible click of switch while rotating drain valve extension rod.

2-15. ELECTRICAL COMPONENTS (Continued)





"SHOWN WITH COVER IN PLACE" **Step 3**

Drain Switch
(gas models)

1. The following check should be made to determine if drain switch is defective. All checks should be made with drain switch in the closed position and the power off.



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

   a. For fryers with standard thermostat part number 18412, continuity check shall be made between terminal 52 on thermostat and wire nut between drain switch and gas control valve. If the circuit is open, the drain switch is bad and needs to be replaced.

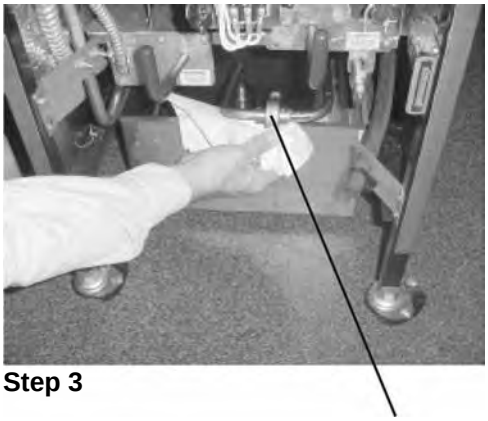
2. If the circuit is open, the drain switch is bad and needs to be replaced.

3. To replace the drain switch, remove the two screws and nuts securing the switch and switch cover.
4. Label and disconnect the wires.
5. Connect the wires to the new drain switch.
6. Position the actuator and attach the drain switch, and switch cover with the two screws and nuts.
7. Secure with the two screws and nuts.
8. Test to see if the drain valve extension rod actuates the switch.



Listen for an audible click of switch while rotating drain valve extension rod.

3-13. CHANGING THE FILTER ENVELOPE



Step 3



Step 4

The filter envelope should be changed after 10-12 filterings or whenever it becomes clogged with crumbs. Proceed as follows:

1. Move the main power switch to the OFF position.
2. Remove and empty the condensation drain pan.
3. Disconnect the filter union and remove the drain pan from under the frypot. If available, a drain pan may have casters under it, allowing easy transport of filter pan and filter assembly.



This union could be hot! Use protective cloth or glove, or severe burns could result.

If the filter pan is moved while full of shortening, use care to prevent splashing, or burns could result.

4. Lift the screen assembly from the drain pan.
5. Wipe the shortening and crumbs from the drain pan. Clean the drain pan with soap and water, then thoroughly rinse with hot water.

3-13. CHANGING THE FILTER ENVELOPE



Step 7

6. Unthread the suction standpipe from the screen assembly.



Step 8

7. Remove the crumb catcher and clean thoroughly with soap and water. Rinse thoroughly with hot water.
8. Remove the filter clips and discard the filter envelope.



Step 9

9. Clean the top and bottom filter screen with soap and water. Rinse thoroughly with hot water.

NOTICE

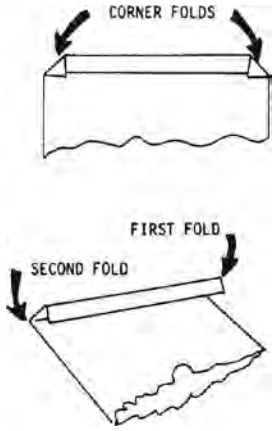
Be sure that the filter screens, crumb catcher, filter clips, and the suction standpipe are thoroughly dry before assembly of filter envelope as water will dissolve the filter paper.

10. Assemble the top filter screen to the bottom filter screen.

3-13. CHANGING THE FILTER ENVELOPE (CONT.)



Step 12



11. Slide the screens into a clean filter envelope.

12. Fold the corners in and then double fold the open end.

13. Clamp the envelope in place with the two filter retaining clips.

14. Replace the crumb catcher screen on top of the filter paper. Screw on the suction standpipe assembly.

15. Place complete filter screen assembly back into filter drain pan and slide pan back into place beneath the fryer.

16. Connect the filter union by hand. Do not use a wrench to tighten.

17. Slide the condensation drain pan back into place. The fryer is now ready to operate.

3-10. FILTERING OF SHORTENING

Frying breaded food requires frequent filtering. Taste the cold shortening every day for flavor. Watch the shortening for foaming during frying cycles. Discard the shortening as soon as it shows signs of foaming. Clean the frypot as follows each time the shortening is changed or filtered:

1. Turn the main power switch to the OFF position. Remove and clean the fry basket in soap and water. Rinse thoroughly.

NOTICE

The best results are obtained when the shortening is filtered at the normal frying temperature.



Step 2

2. Use a metal spatula to scrape any build-up from the sides of the frypot. Do not scrape heating element on electric units, or the curved portion of the gas frypot.

CAUTION

Scraping the electric fryer elements, or the curved portion of the gas frypot, produces scratches in these surfaces causing breading to stick and burn.

Do not bang the pot scraper, or other cleaning utensil, on the frypot rim. Damage to the frypot rim could result and the lid may not seal properly during a cook cycle.



Step 4

WARNING

The filter drain pan must be as far back under fryer as it will go, and the cover in place. Be sure the hole in the cover lines up with the drain before opening the drain. Failure to follow these instructions causes splashing of shortening and could result in personal injury.

Surfaces of fryer and basket will be hot. Use care when filtering to avoid getting burned.

3. Open the drain valve very slowly, half a turn at first and then slowly to the full open position. This will prevent excessive splashing of the hot shortening as it drains into the filter drain pan.
4. As the shortening drains from the frypot, use fryer brushes (Henny Penny part number 12105 includes both brushes) to clean the side of the frypot and the heating elements (if electric unit). If the drain fills with breading, use the white brush to push the breading into the filter pan.

3-10. FILTERING OF SHORTENING (CONT.)

5. When all of the shortening has drained, scrape or brush the sides and the bottom of the frypot.
6. Rinse the frypot as follows:
   a. Close the drain valve.
   b. Open the filter valve.
   c. Lower lid and hold closed.
   d. Move the main power switch to the PUMP position. Carefully open the lid to see if the shortening is returning properly. Fill frypot 1/3 full, then turn off pump.



Step 6e

DANGER

BURN RISK

FAILURE TO HOLD THE LID CLOSED SO THAT THE FIRST SURGE OF THE RETURNING SHORTENING WILL NOT SPLASH OUT OF THE FRYPOT, WILL RESULT IN SEVERE BURNS.

IF THERE ARE AIR BUBBLES COMING UP IN THE SHORTENING, IT'S POSSIBLE THAT THE FILTER CONNECTION AT THE UNION ON THE FILTER TUBE IS NOT TIGHTENED PROPERLY. IF SO, TURN OFF THE PUMP AND USE PROTECTIVE CLOTH OR GLOVE WHEN TIGHTENING THE UNION. THIS UNION WILL BE HOT AND SEVERE BURNS COULD RESULT.

   e. Wash down and scrub the sides of the frypot. Use "L" brush to clean the heating elements.
   f. After the sides and bottom are cleaned, open the drain valve.
7. If an optional filter rinse hose is available on your fryer, the following cleaning procedure may be used.
   a. Attach the filter rinse hose with its quick disconnect fitting to the male fitting inside the door next to the filter valve handle. To do this, slide back the spring ring on the female side of the quick disconnect fitting and let it snap into place over the male half of the fitting.



Step 7a

3-10. FILTERING OF SHORTENING (CONT.)



Step 7b



Step 7c



Step 7f

b. While holding the wooden handle, make sure the hose nozzle is pointed down into the bottom of the frypot. Pull the lid down over the nozzle, close the filter valve, and move the main power switch to the PUMP position. Hold nozzle carefully to avoid excessive splashing.

WARNING

BURN RISK

Use care to prevent burns caused by splashing of hot shortening.

c. Rinse the frypot interior. Especially work on hard to clean areas, like the frypot bottom. On electric models clean around heating elements.

d. After sufficient rinsing with shortening, close the drain valve. e.

e. Turn the main power switch to the OFF position.

DANGER

ONLY CONNECT AND DISCONNECT THE FILTER RINSE HOSE WHEN THE MAIN POWER SWITCH IS IN THE OFF POSITION. ALSO, USE A DRY CLOTH OR GLOVE TO AVOID BURNS. FAILURE TO DO THIS COULD RESULT IN SEVERE BURNS FROM HOT SHORTENING SPRAYING FROM THE MALE FITTING.

f. Detach the hose. Raise the fitting end of hose high for a minute to allow the remaining shortening in the hose to drain into the frypot.

8. Pump all the shortening out of the filter pan and back into the frypot. Close lid during first surge of pumping.

3-10. FILTERING OF SHORTENING (CONT.)



Step 9



Step 11

9. When the pump is pumping air only, the shortening in the frypot will appear to be boiling. Close the filter valve first and then move the main power switch from PUMP to OFF. This will keep the filter pump and lines from filling up with shortening.

NOTICE

When bubbling occurs, immediately close the filter valve. This prevents aeration of the shortening, therefore increasing shortening life.

10. Check the level of the shortening if necessary, until it reaches the level indicator line on the rear wall of the frypot, or the top level indicator line on model 500s.

11. After completing the filtering operation, empty and replace the condensation drain pan.

12. If frying is to be continued at this time, move the main power switch back to the ON position, and allow time for reheating of the shortening.

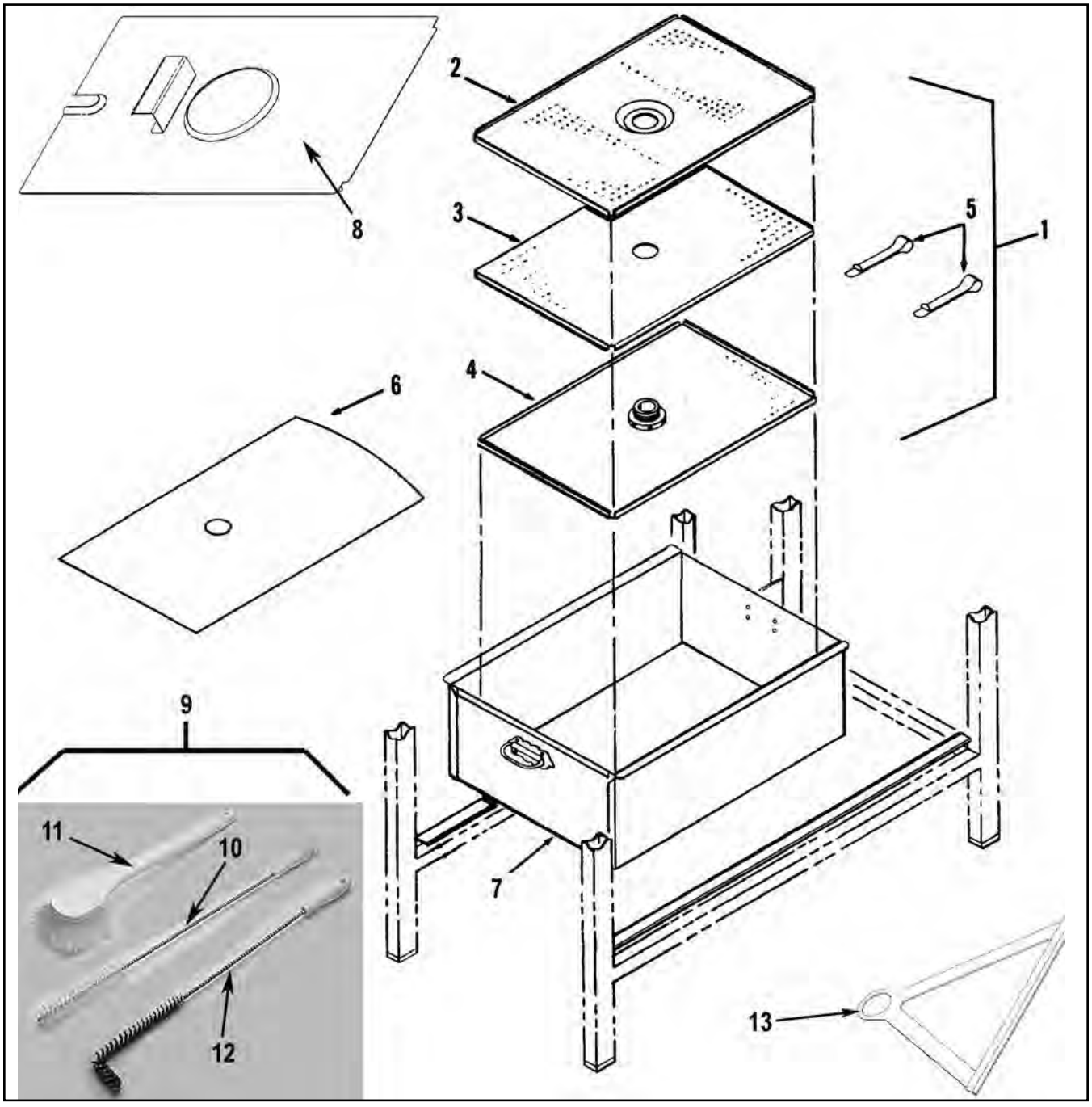


Figure 3-22. Filter Drain Pan and Filter Screen Assembly

Spreader Bar and High Limit Bracket Tightening

500 only

Objective

- The five heating element spreader bars and the high limit bracket loosen through normal heating and cooling of the oil. This heating and cooling of the oil causes the fry vat surfaces to expand and contract. Over time, this expansion and contraction may cause the element spreader bars and high limit bracket loosen. If this loosening is not addressed, the high limit bulb and capillary tube can shift. This can lead to interference with the basket as product is lowered into the oil, or unwanted capillary tube movement during cleaning and brushing the fry vat. Tightening prevents high limit issues and or heating element issues.

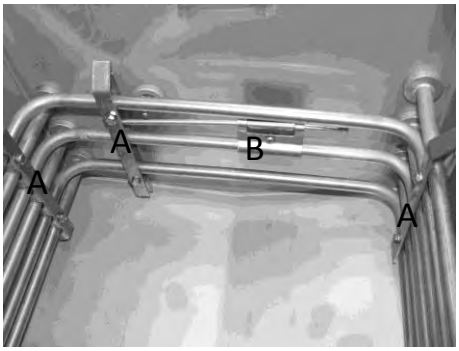


Figure 1.

A	Heating element spreader x5
B	High limit bracket

Inspection

1. Verify all five of the spreader bars are present and each spreader bar has two screws. Replace any damaged or missing parts. Do the same with the high limit bracket and screw. Part numbers can be found in each model's technical manual.

Procedure

1. Tighten all 10 spreader bar screws with a Philips screwdriver (two in each) (figure 1.). Do not over tighten.
2. Tighten the high limit bracket screw. Make sure the high limit bulb is seated in the bracket. Do not over tighten.

Temperature Probe Inspection

Objective

- Inspect the temperature probe for damage. If the probe is damaged or broken, replace it with the correct part. A damaged probe can lead to inconsistent cooking issues and intermittent temperature fluctuation. There are two probes for KFC units depending on which control board is installed in the fryer: Fastron or SMS. Fastron probes are not interchangeable with SMS probes.

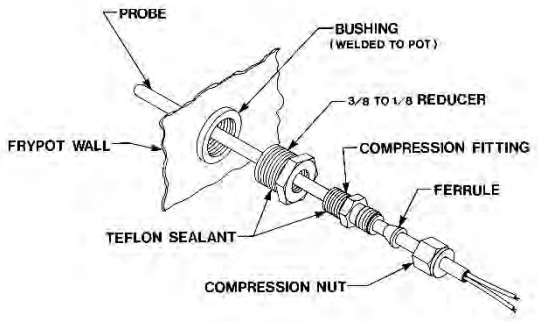


Figure 1.

Inspect the temperature probe

1. Drain the oil in the fry pot.

2. Visually inspect the temperature probe. The probe should be clean and straight, if not, the probe will need to be replaced. If the probe is not bent or damaged continue with the adjustment inspection.

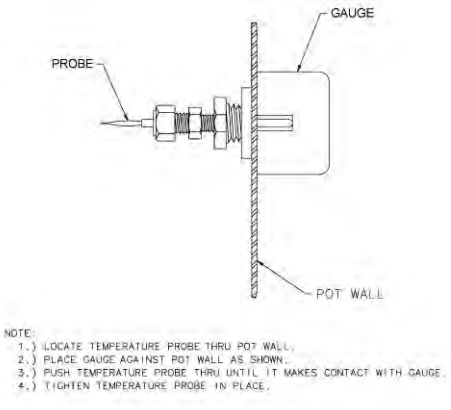


Figure 2.

Adjustment Inspection –

1. Fastron probes are set to a fixed depth into the frypot. For probes on SMS controls inspect that the depth is set correctly (500 electric units 5/8” and 600 gas units 7/8”). You can use either a probe gauge or a ruler to set the depth (figure 2.)

2. Adjust the depth if needed by loosening the compression fitting (figure 1.) on the probe and sliding the probe either in or out to the correct depth. Then tighten the probe’s compression fitting.

Cleaning Burner Jets (600 only)

Objective

- Remove breading, dust and obstructions from burner Jets. Partially obstructed burners lower the BTU / KW output of the fryer which can affect cook times, product quality, and doneness.

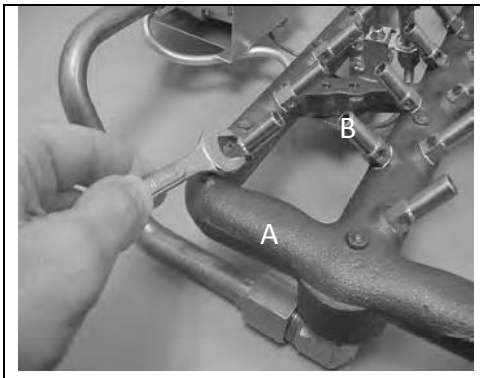


Figure 1.

A	Burner Casting
B	Burner Jet (typical)

Procedure

1. After checking and adjusting the fryer's manifold gas pressure. Visually inspect the burner for any signs of clogged or obstructed burner jets. The flame above each burner jet should be a consistent blue color and each jet should be about the same size. A burner jet without a flame or where the flame is yellow or small would be a sign of a clogged or partially clogged jet.
2. If there are any burner jets that our partially clogged or obstructed, turn off the gas supply to the fryer at the shut off valve.
3. Remove the burner assembly from the fryer following the removal procedure in the technical manual
4. Ensure the burner orifices shown in Figure 4. are clean and free from debris. If debris exists, gently remove it by hand with an orifice cleaning tool.
5. Re-install burners in reverse order.
6. Test gas connections for leaks.

Inspect and Clean Pilot Assembly (600 Only)

Objective

- Remove breading, dust and debris from pilot assembly to prevent flame sense issues due to plugged pilot orifices, or a plugged pilot venturri. It is best to perform this procedure when cleaning the burner jet (see burner cleaning instructions). Pilot and pilot orifice part numbers can be found in the corresponding technical manual's parts section.



Figure 1.

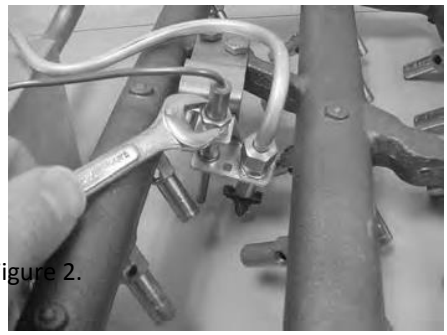
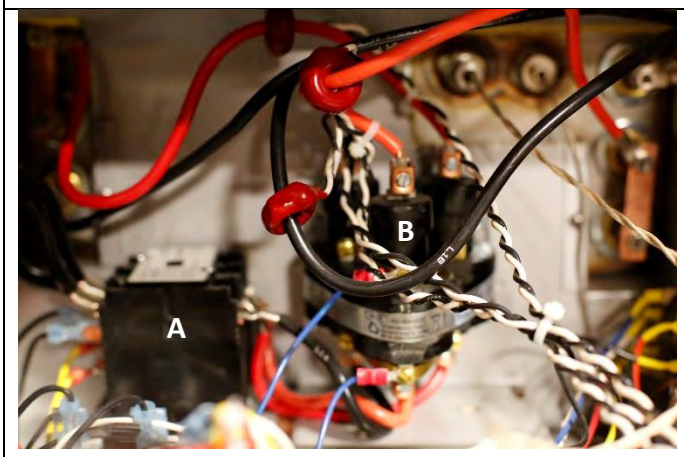
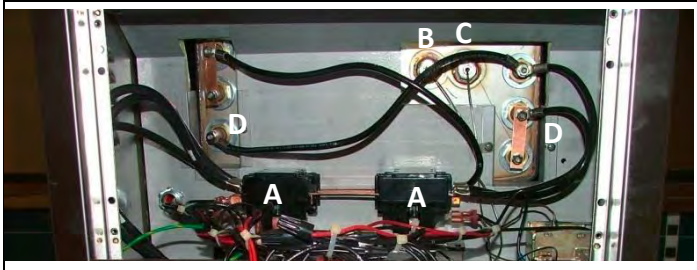


Figure 2.

Procedure

1. Disconnect the fryer from power.
2. Shut off the gas supply to the fryer.
3. Remove burner as per technical manual instructions.
4. Remove the pilot gas line and pilot mounting screws (figure 1 & 2.)
5. Remove any debris or carbon build up from the spark ignitor and flame sensor (thermocouple on older units)
6. Remove breading, dust and debris from the venturri and pilot orifice. If the orifice is plugged, either remove with a very small wire or orifice cleaning tool or replace the pilot orifice.
7. Reinstall in reverse order

PFE-500 Oil Migration Inspection

	1. Disconnect power to the fryer
	2. Lower the control board.
 Figure 1. A – Electro-Mechanical Contactor B – Mercury Contactor	3. Inspect the area behind the control board for oil that has seeped through any of the fittings (Figure 2).
 Figure 2. A – Electro-Mechanical Contactor B – Temperature probe / thermostat fitting C – High limit fitting D – Heating Element Fittings	4. Inspect if oil is seeping through the temperature probe / thermostat fitting, the high limit fitting or any of the six heating element fittings (Figure 2). If oil is found seeping through fittings but is not touching either contactor, this situation does not shut down the fryer, but would need to be cleaned as soon as possible. 5. If oil is excessive enough that it is touching either contactor (figure 1 & 2), shut down the fryer until the oil migration issue is taken care of. In this situation, the contactors need to be replaced, the oil needs to be cleaned up and the fittings need to be cleaned and resealed

High Limit Inspection PFE-500 and PFG-600

Objective

Ensure the high limit is mounted properly and functioning as intended



Figure 1.

1. Drain oil to drain pan and visually inspect the high limit bulb and capillary tube mounted inside the fry pot. Ensure the bulb is not dented, the capillary tube is not severed and the bracket matches figure 1. (PFE-500) or figure 2. (PFG-600). If the capillary tube or bulb is damaged, take the fryer out of service until it is replaced. Replace any missing bracket components. If there are no issues found with this step, proceed to step number 2.

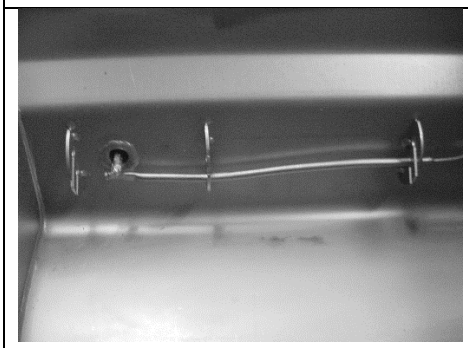


Figure 2.

2. Press the red reset button on the high limit several times. If this button clicks each time pressed, Take the fryer out of service until the high limit can be replaced and make sure it gets wired into the circuit upon replacement. Note this on the inspection form. If there are no issues found with this step, proceed to step number 3.

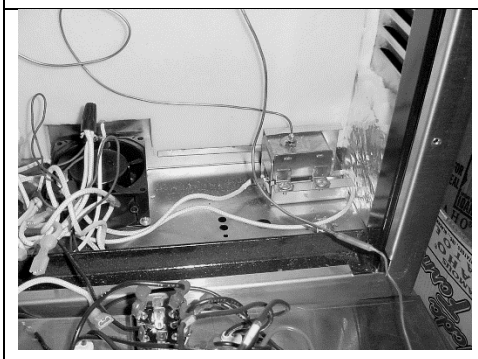


Figure 3.

3. With power disconnected from the fryer, lower the controls and remove the two mounting screws that secure the high limit body to the fryer (Figures 3). Remove the high limit and make sure the high limit wiring is properly connected to the high limit. To do this, inspect that each high limit wire is attached to separate terminals on the high limit. If both wires are attached to the same terminal, or if one of the terminals or both of the terminals have no wires connected, this would indicate that the high limit has been bypassed in the circuit. If bypassing is found, Take the fryer out of service until the wiring is corrected and high limit replaced if defective.

Inspect for Plumbing Leaks in the Filtration System

Objective and Inspection

- To identify if any leaks exist with the filtration system during filtration and then also during cooking. Also to ensure all of the components of the drain pan are present. Tip! A good time to inspect the filtration during cooking would be during the lid lock engagement / disengagement test by watching for drain valve leaks or oil return leaks to the drain pan. Filtration components can be found in the parts section of the corresponding technical manual.

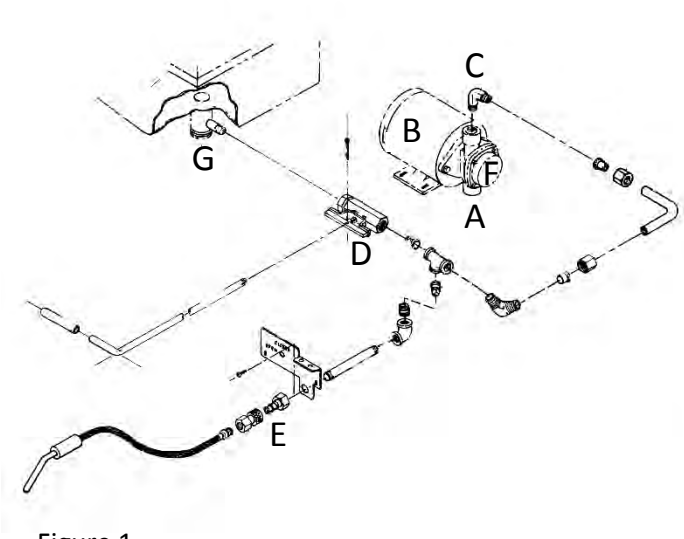


Figure 1.

A	Suction Side of Pump
B	Filter Pump
C	Pressure Side of Pump
D	Return Valve
E	Optional Filter Rinse Hose Connection
F	Pump
G	Drain Valve

Test Procedure for plumbing leaks during filtration

1. Remove the right side panel from the fryer.
2. Use a flashlight to inspect the fitings of the filtration plumbing and between the filter pump and motor for oil leaks (figures 1).
3. Drain about half the vat of oil to the drain pan.
4. Turn the power switch to the pump position to pump the oil back up to the fry pot.
5. While the oil is pumping, use a flashlight to inspect for oil leaks.
6. If leaks are detected with plumbing, disassemble, clean, and reassemble the fittings using pipe thread sealant on threaded fittings, or replacing any worn sleeve fittings on compression fittings.
7. If leaks are detected between the filter pump motor and the pump, replace the seal kit.



Figure 2.

A	Dairy Union

Test Procedure for plumbing leaks during cooking

1. Before test, disconnect the dairy unit where the drain pan connects to the oil return line. **Caution!** This connection could be hot and require PPE to remove.
2. While the fryer is pressurized to 12psi, inspect both the drain valve and the dairy union connection for leakage.
3. If there is significant leakage (more that just a drop every now and then) detected from the drain valve (figure 1), then it will need to be replaced.
4. If there is significant leaking (more that just a drop every now and then) detected from the oil return line, then the oil return valve, shown in figure 1, will need to be replaced.

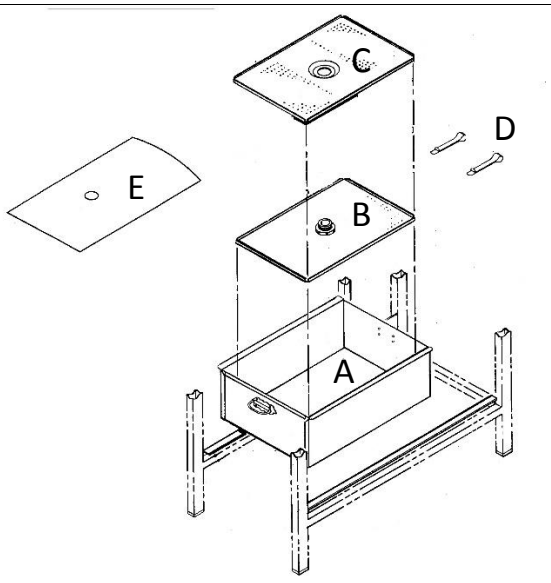


Figure 3.

A	Filter Pan
B	Filter Screen (2 pc filter screens used prior to 2007)
C	Crumb Catcher
D	Filter Clips (triangular sealer bar is also acceptable)
E	Filter Envelope

5. Inspect to make sure all of the filter pan components exist and are assembled correctly (figure 3.)

Measuring Amp Draw – 500 only

Objective

- Ensure that the amp draw of the fryer equals the amp draw listed on the data label.
- **Why is this important?** If amp draw is less than what is on the data label, this would be an indication that one of the phases that comes into the fryer may be missing, there may be an issue with one of the contactors, or there may be an issue in one of the heating elements.

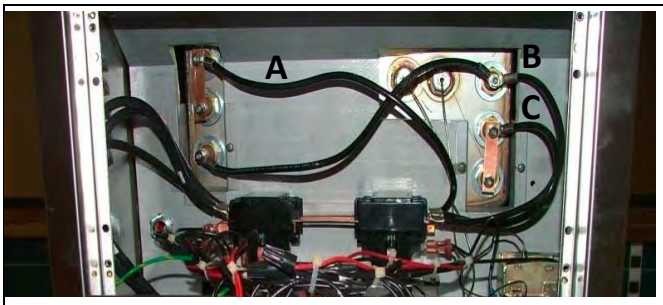


Figure 1.

Checking Amp Draw (see figure 1)

1. Disconnect power from fryer
2. Attach ammeter (amp clamp) to one wire of the upper heater (figure 1 point A).
3. Connect power to the fryer and turn on the controls to heat. Once the fryer calls for heat, note amp draw from meter.
4. Repeat steps 1 – 3 for figure 1 point B and C. The amp draw for each wire should be close to the same.
5. Add the amp reading from all three readings. This figure should equal what is on the data label.
6. If the amp draw measured is lower than what is on the data label, this is a sign that there is an issue with either incoming power, a contactor or a heater. Test each component separately to isolate the issue, then replace the faulty component.

2-8 Gas Pressure Regulator Setting

The gas pressure regulator on the gas control valve is factory set as follows:

Natural: 3.5 inches water column (0.87 kPa)
Propane: 10.0 inches water column (2.49 kPa)

NOTICE

The gas pressure regulator has been set by Henny Penny and is not to be adjusted by the user.

DANGER

MAKE SURE GAS PRESSURE IS SET CORRECTLY. FAILURE TO DO SO CAN RESULT IN SHORTENING OVERFLOWING THE FRYPOT, WHICH COULD CAUSE SERIOUS BURNS, PERSONAL INJURY, FIRE, AND/OR PROPERTY DAMAGE.

Measuring Gas Pressure

1. Locate the pressure tap hole or fitting on the side of the gas valve. Remove the pipe plug from the valve or fitting circled in Figure 1.



Figure 1.

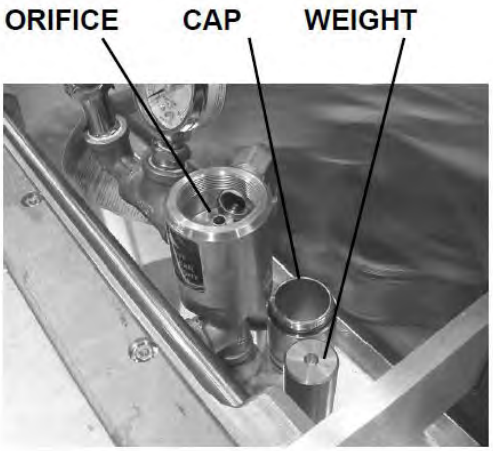
2. Screw a pressure tap fitting into the valve or the fitting on the side of the valve circled in Figure 2.
3. Place one end of a vacuum hose on the pressure tap fitting and the other end on the manometer as shown in Figure 3.
4. Turn the fryer “ON”.
5. Allow the fryer to reach full burn.
6. The pressure reading on the manometer should be 3.5” of water column for Natural gas and 10” of water column for LP gas.


Figure 2.

7. Turn the fryer off.
8. Remove the pressure tap fitting.
9. Place the pipe plug back into the valve or the fitting on the valve.

Deadweight Cleaning and Inspection

1. AT THE END OF EACH DAY'S USAGE OF THE FRYER, THE DEADWEIGHT VALVE MUST BE CLEANED. The fryer must be OFF and the pressure released. Open the lid and then remove the deadweight valve cap and deadweight.



WARNING

Failure to clean the deadweight assembly daily could result in the fryer building too much pressure. Severe injuries and burns could result.

2. Wipe both the cap and weight with a soft cloth. Make certain to thoroughly clean inside cap, the weight seat, and around deadweight orifice.

3. Dry the parts and replace immediately to prevent damage or loss.

PFE-500 and PFG-600 Latch, Catch and Latch Spring Inspection

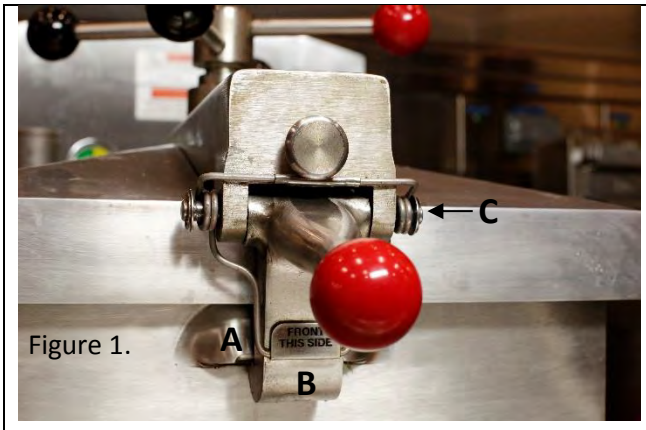


Figure 1.

Objective

To make sure the latch, catch and latch spring are properly installed and are within tolerances for safe operation.

A	Catch
B	Latch
C	Latch Spring

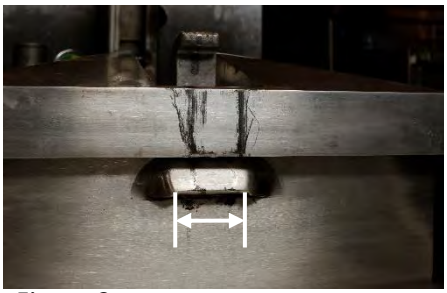

Figure 2.



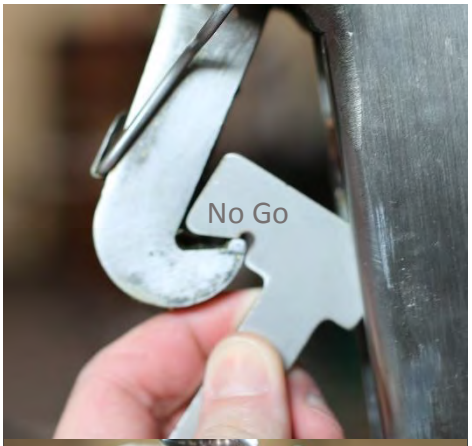
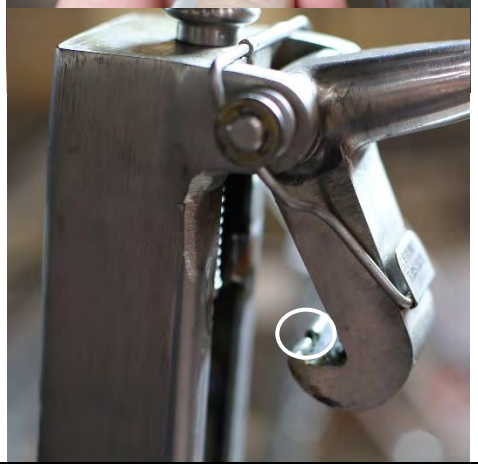
Figure 3.



Catch Inspection

1. Slide gauge #162410 along the entire width of the pot catch (figure 2).

2. If this gauge does not slide over the catch, or the lip of the catch does not match the profile of the gauge as shown in figure 3 and 4, the catch is out of tolerance. The pressure fryer would need to be taken out of service until the fry pot has been replaced.

	Latch Inspection
 Figure 5.	3. Separate the lid and the cross arm as shown in figure 5.
 Figure 6.	4. Slide the “go” side of the gauge over the entire width of the latch. The latch should fit in this groove as shown in figure 6. Ignore the gap highlighted in figure 8.
 Figure 7  Figure 8	5. Slide the “no go” side of the gauge over the entire width of the latch ignoring the gap highlighted in figure 8. Figure 7 shows that a properly sized latch will not fit into the “no go” side of the gauge. If the lip of the latch inserts into the cut out in the gauge, this latch fails inspection and needs to be replaced.

Latch Spring Inspection

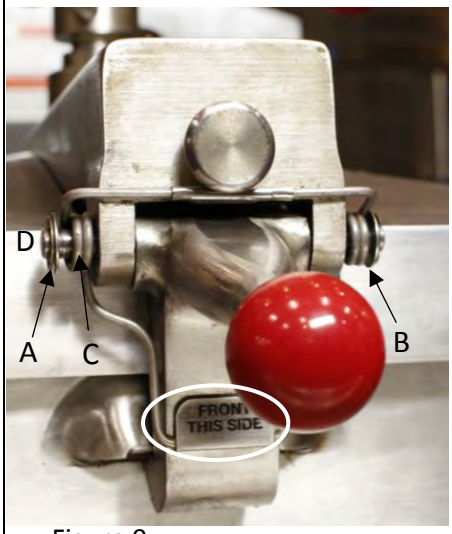


Figure 9

A	C-Clip Retainer
B	Spacers
C	Latch Spring
D	Latch Pin

Make sure the latch spring and all of its components (latch spring, latch pin, spacers, and C-clip retainer) are not broken, not missing and installed correctly. If any components are broken, damaged, missing or installed incorrectly, this fryer would need to be taken out of service until which time the components can be replaced and installed correctly. The latch spring is installed correctly if the label "Front this side" is mounted to the front of the latch (highlighted in figure 9).

Cross Arm Component Lubrication

Objective
Reduce wear on the spindle, thrust ball, ball seat, hinge spring, and locking pin.

1. Separate the lid and cross arm.
2. Use spindle lube (#12124) to lubricate the threads of the spindle and the thrust ball as indicated in figure 1.
3. Lubricate the top of the locking pin, and the ball seat (figure 2.).
4. Lubricate the coils of the hinge spring (remove and re-install the spring cover *figure 3*) figure 4.
5. Engage the lid back to the cross arm.

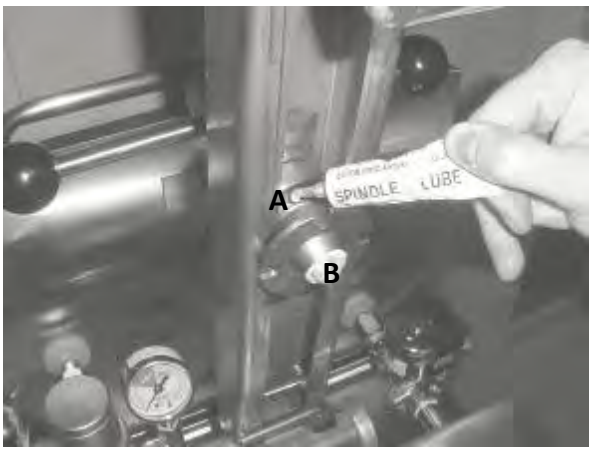
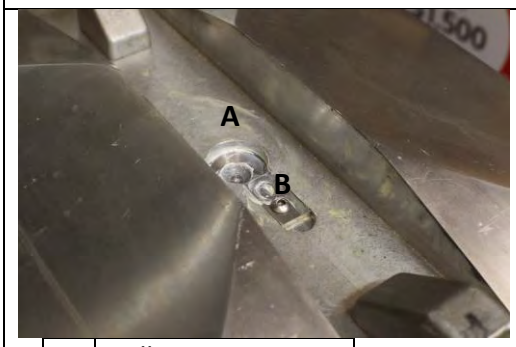


Figure 1.

A	Spindle Threads
B	Thrust Ball



A	Ball Seat
B	Locking Pin

Figure 2.

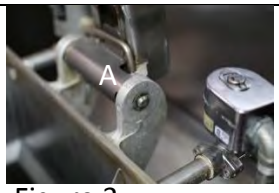


Figure 3.

A	Spring Cover

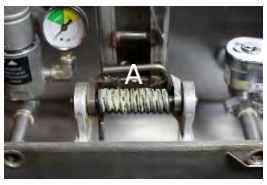


Figure 4.

A	Spring

Cross Arm Component Safety Inspection

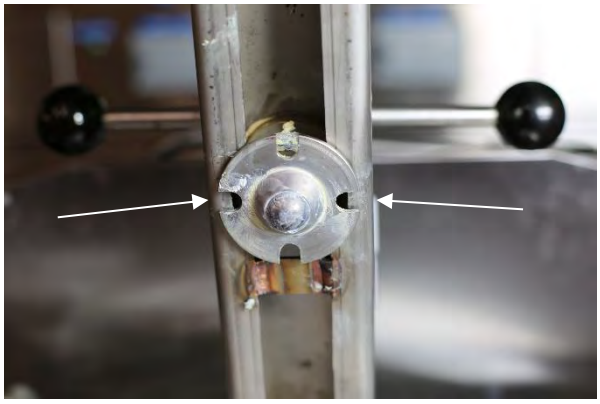


Figure 1.



Figure 2.

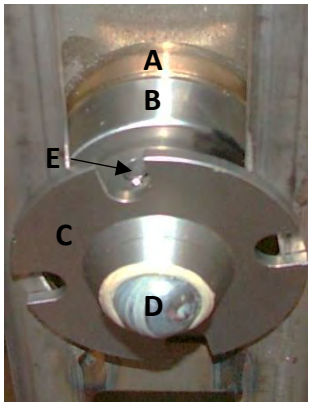


Figure 3.

A	Acme Nut
B	Idle Nut
C	Locking Collar
D	Thrust Ball
E	Locking Collar Pin

1. Separate the lid and cross arm.

2. Inspect the cross arm as indicated in figure 1. Cracks on the bottom surface of the cross arm are acceptable, but anything rounding the corners as shown in figure 2, coming up the sides, or found on top would fail inspection. If any cracks are found in the top or sides of the cross arm, the fryer would be taken out of service until the lid assembly is replaced.
3. Inspect to make sure all of the spindle components are in place: acme nut, idle nut, thrust ball, locking collar (figure 3). Inspect the gap between the acme nut and the idle nut. These two components should be within 1/16” of each other. If any of these components are excessively worn, damaged or missing, this step of the inspection would fail. The fryer would be taken out of service until the damaged or missing component is replaced.

4. Inspect the locking collar pin (figure 3). If the pin has shifted, is missing, broken, take the fryer out of service until a new pin can be installed and properly staked.

WARNING This pin should be staked on each side to prevent it from shifting. If this pin is not properly staked, severe burns could result.

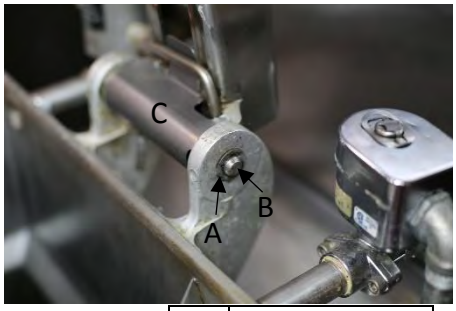


Figure 4.

A	Retaining Clip
B	Hinge Pin
C	Spring Cover

5. Inspect the hinge pin to ensure it is not missing, damaged or broken. Make sure that the retaining clips are securely in place on each side of the pin (figure 4). If any of these situations are true, take the fryer out of service until the components are replaced.

   If the hinge spring (figure 5) is broken. It will not fail the inspection but the spring would need to be replaced ASAP.

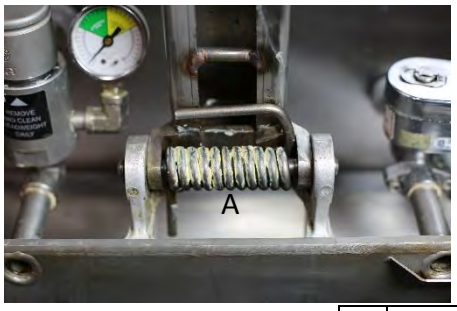


Figure 5.

A	Spring

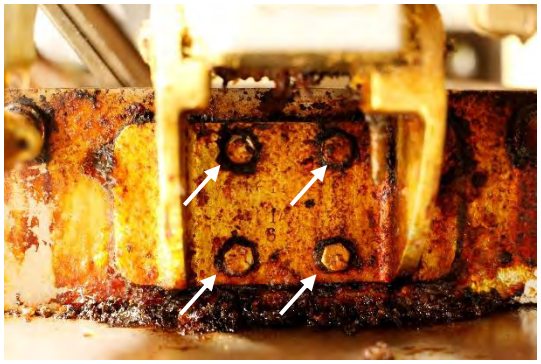
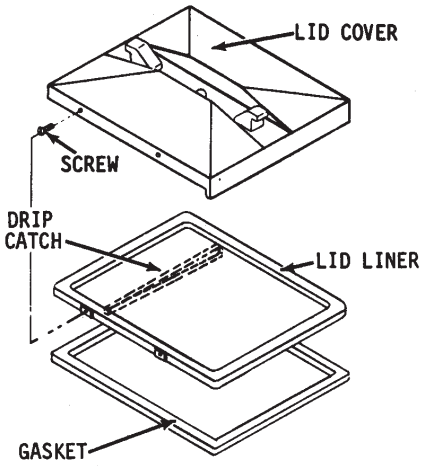


Figure 6.

6. Ensure four bolts are installed in the hinge plate at the rear of the fry pot (figure 6). Check to make sure these bolts are snug. If any bolts are missing, take the fryer out of service until they can be replaced.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)



Lid Liner

1. Remove the four lid liner screws.
2. Use a thin blade screwdriver to pry lid liner from the cover.
3. Clean the liner and the inside of the cover. Replace the liner and screws.

Reversing the Lid Gasket

The gray rubber gasket surrounding the inside of lid is designed to be reversed. Henny Penny recommends that this be done on a quarterly basis.

Purpose

Because of heat expansion and the pressure used for the cooking process, the gasket is constantly under extreme stress. Reversing the lid gasket on a quarterly basis will help to assure that the fryer will not lose pressure through leakage.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)

Reversing the Lid Gasket (Continued)



Step 1

1. There are two lid liner screws on either side of the lid cover. Back these four screws out about 1/2 inch.



Step 2

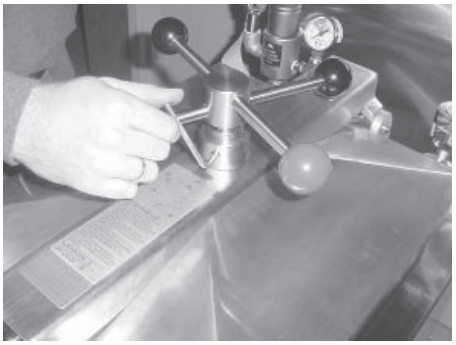
2. Open lid and, using a thin blade screwdriver, pry out the gasket at the corners. Remove the gasket.

3. Clean the gasket and gasket seat with hot water and cleaning detergent. Rinse with clean hot water.

4. Install the gasket with the good side facing out. Tighten the four screws.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)





Step 1



Step 2

Reversing the Lid Gasket (Continued)

NOTICE

Begin the installation by installing the four corners of the lid gasket.

Lid Limit Stop Adjustment

The lid limit stop, with proper adjustment, prevents unnecessary overtightening of the spindle, and as a result, extends the life of the lid gasket.

1. Loosen the Allen set screws on the bottom of the collar of the limit stop assembly.

2. Turn the inner collar of the limit stop clockwise as far as possible. Find the small hole in the inner collar and use a small Allen wrench or Phillips head to help in turning the collar.

3. Close lid and turn spindle until lid gasket meets the top of the frypot rim.

4. From this position, turn spindle at least 3/4 of a turn, but not over one full turn.

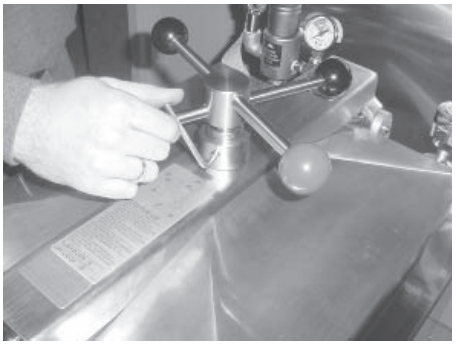
5. After rotating spindle to this point, slightly extend the spindle past this position. The spindle should then be at the seven o'clock position.

NOTICE

The seven o'clock position is only to allow slight additional turning of the spindle to relieve any side pressure that could hold the locking pin in the locking collar after all pressure has been released from the frypot.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)





Step 1



Step 2

Reversing the Lid Gasket (Continued)

NOTICE

Begin the installation by installing the four corners of the lid gasket.

Lid Limit Stop Adjustment

The lid limit stop, with proper adjustment, prevents unnecessary overtightening of the spindle, and as a result, extends the life of the lid gasket.

1. Loosen the Allen set screws on the bottom of the collar of the limit stop assembly.

2. Turn the inner collar of the limit stop clockwise as far as possible. Find the small hole in the inner collar and use a small Allen wrench or Phillips head to help in turning the collar.

3. Close lid and turn spindle until lid gasket meets the top of the frypot rim.

4. From this position, turn spindle at least 3/4 of a turn, but not over one full turn.

5. After rotating spindle to this point, slightly extend the spindle past this position. The spindle should then be at the seven o'clock position.

NOTICE

The seven o'clock position is only to allow slight additional turning of the spindle to relieve any side pressure that could hold the locking pin in the locking collar after all pressure has been released from the frypot.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)

Lid Limit Stop Adjustment (Continued)

It may be necessary to remove knobs and change their position in order to align the red knob with the red knob on the lid cover lid latch. When in the normal operating position, both red knobs should be aligned.

6. Adjust the limit stop by turning it counterclockwise until it stops against the bottom hub of the spindle.
7. Tighten Allen set screws.
8. If the lid cover fails to seal properly, steam will escape around the gasket during the frying operation. The limit stop should be readjusted. This time turn the spindle screw one full turn after the initial contact of the lid gasket against top of the frypot rim.

Spindle Screw Assembly

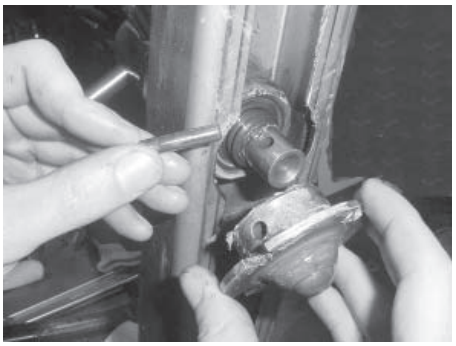
This assembly is used to tighten the lid cover against the frypot flange.

1. Loosen the set screw in the limit stop collar and loosen the limit stop.
2. Disengage the crossbar from the lid cover as described in the "Lid Cover Removal". Leave the lid cover in position on the frypot rim with the crossbar in the upright position.



Step 3

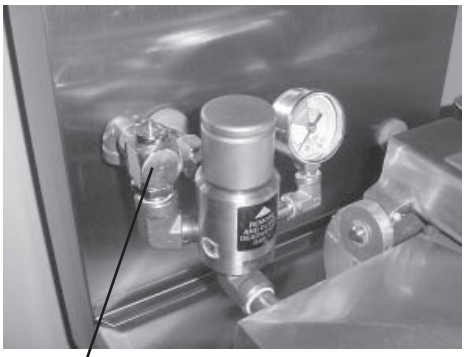
3. Turn the spindle so the pin in the locking collar will be exposed.



Step 4

4. Remove pin and locking collar. Use a small diameter punch and a hammer to drive out the pin from the locking collar. Remove the locking collar.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)



Safety Valve

Removal and Cleaning of Safety Relief Valve

The safety relief valve should be cleaned once a year.

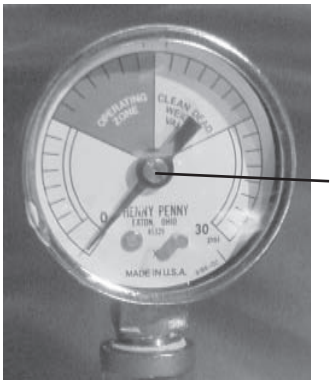


DO NOT ATTEMPT TO REMOVE VALVE WHILE FRYER IS OPERATING. SEVERE BURNS OR OTHER INJURIES COULD RESULT.

1. Open the lid and then remove the deadweight valve cap and deadweight.
2. Use a wrench to loosen the valve from the pipe elbow, turn counterclockwise to remove.
3. Clean the inside of the pipe elbow with hot detergent.
4. Immerse the safety relief valve in a soap water solution for 24 hours. Use a 1:1 dilution rate. The valve cannot be disassembled. It is factory preset to open at 14 1/2 pounds of pressure. If it does not open or close it must be replaced.



TO AVOID PERSONAL INJURY, DO NOT DISASSEMBLE OR MODIFY THIS VALVE. TAMPERING WITH THIS VALVE WILL VOID AGENCY APPROVALS AND THE APPLIANCE WARRANTY, AND COULD CAUSE SERIOUS INJURIES.



Step 2

Pressure Gauge

The pressure gauge can be recalibrated should it be out of adjustment.

Calibration Steps

1. Remove the rim and glass.
2. If the indicating hand shows a pressure or vacuum reading when it should stand at "0", turn the recalibrator screw in the same direction in which the indicating hand is to be moved until the hand stands at proper "0" position.
3. Replace the rim and glass.

2-17. PRESSURE REGULATION/ EXHAUST

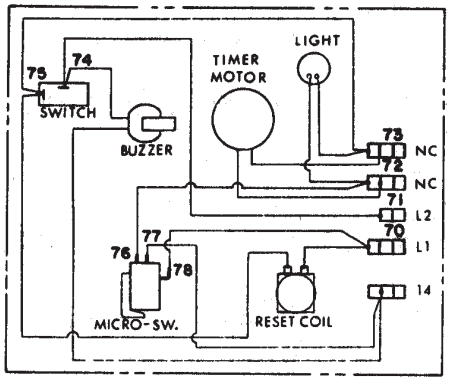
Solenoid Valve

This is an electromechanical device that causes pressure to be held in the frypot. The solenoid valve closes at the beginning of the cook cycle and is opened automatically by the timer at the end of the cook cycle. If this valve should become dirty or the teflon seat nicked, pressure will not build up. The solenoid valve used on all models is the same with the exception of the coil. The gas model fryer uses a 120 volt, 60 Hz, coil. The electric model fryer uses a 208/240 volt 60 Hz coil. The 440/480 volt electric model uses a transformer to drop voltage to 220/240 volts.



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

Coil Check Procedure

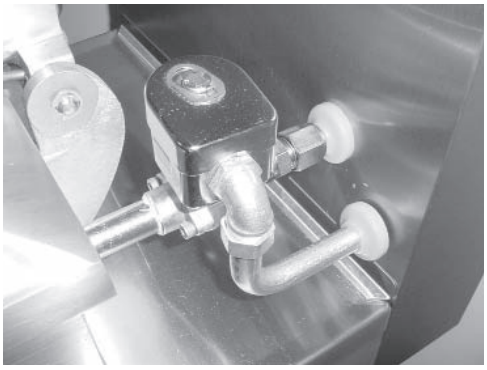


1. Remove wires from terminals 73 and 72 and check across solenoid wires.

Test Volts/Phase	Results
120 volt 60 Hz	50 ohms
208-240 volt 60 Hz	150 ohms
208-240 volt 50 Hz	245 ohms

2-17. PRESSURE REGULATION/ EXHAUST (Continued) Replacement

Solenoid Valve Assembly



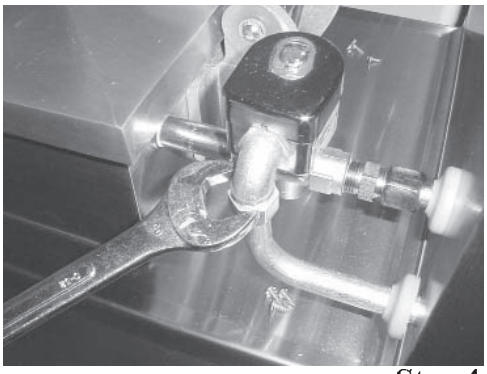
1. Remove Tru-Arc retaining clip on top of the coil housing.

2. Remove the nameplate and cover.

3. If only the coil is replaced, disconnect two coil wires at the wire nuts in the coil housing, and remove the coil from the housing. Then replace nameplate, cover, and Tru-Arc clip.

   If the complete solenoid, or seals are being replaced, continue on to step 4.

Conduit Connector



Step 4

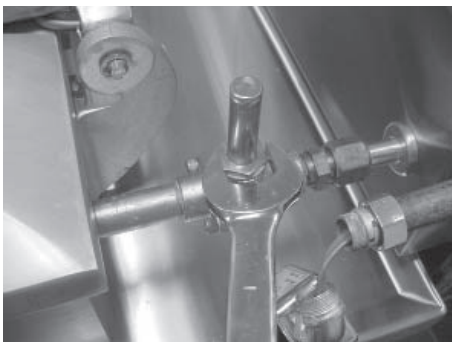
NOTICE

The wires may be connected in any order.

4. Loosen the nut on the 1/2 inch connector and pull piping conduit from the valve case. Leave enough slack to remove the coil housing and yoke.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)

5. If the core-disc assembly is sticking due to buildup of shortening, breading and food particles proceed with the following steps.



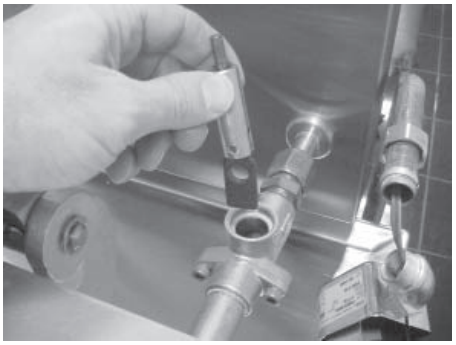
Step 5a

a. Unscrew the solenoid bonnet assembly from the solenoid valve body.



Step 5b

b. Remove the solenoid bonnet assembly and the bonnet gasket.



Step 5c

c. Remove the core-disc assembly, core spring retainer, and the core spring.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)

d. Wash all parts in soap and hot water.

NOTICE

If replacing Teflon seals, or complete valve, proceed to step 6, otherwise, assemble in reverse order of disassembly.

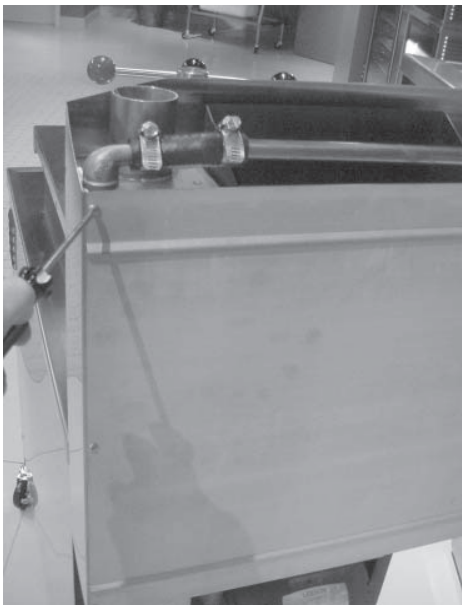
Assemble valve core and blade (6), with the smooth side of the hole towards the disc spring guide (9).
(See drawing on next page)

6. A repair kit (Part No. 17120) is available if any of the seals need to be replaced. If any one seal is defective, all seals should be replaced.

NOTICE

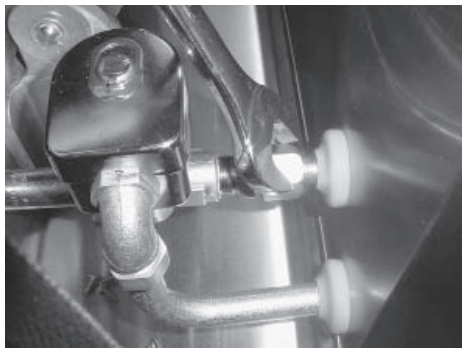
Remove the solenoid body from fryer to replace seals. Refer to exploded view of solenoid in figure 3-14 to help identify all parts.

a. Remove back cover.



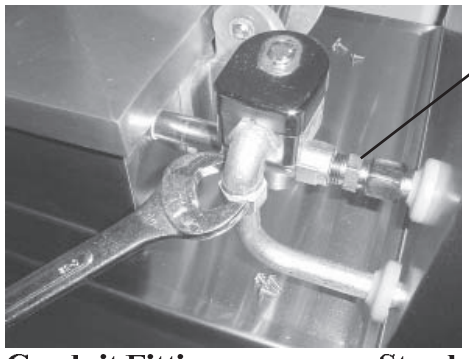
Rear Cover **Step a**

b. Loosen both conduit and exhaust fittings.



Exhaust Fitting **Step b**

c. Remove nipple from solenoid body.

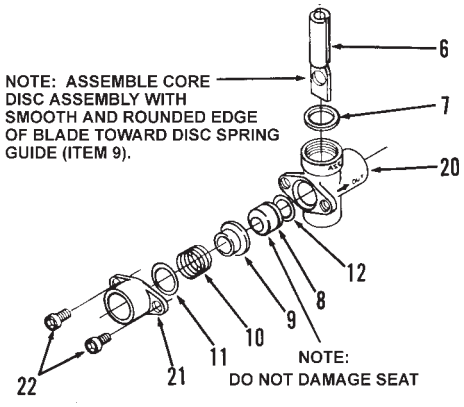


Conduit Fitting **Step b**

d. Unthread body from fryer.

e. A new solenoid can now be placed on the fryer, and reassembled in reverse order of previous steps, or continue onto step 7 to change the seals.

2-17. PRESSURE REGULATION/ EXHAUST (Continued)



7. To change seals:

   a. Remove the two adapter screws (22) which attach the pipe adapter (21) to the solenoid body (20).

   b. Remove the disc spring (10), guide (9), and seat (8).

   c. Clean the valve body.

   d. Wet O-ring (12) around seat with water and insert O-ring assembly (flat side first) in valve, through IN side of body. Use a pencil eraser, and press in Teflon seat until it snaps into place. Be careful not to mark or nick the seat.

NOTICE

The smallest nick can cause a pressure leak. Replace all O-ring seals, found in the parts kit, and reassemble valve.

4-Head Locking Pin Test Procedure

Objective

Ensure the lid locking pin engages the locking collar of the spindle when the pressure in the fry pot reaches 2psi and greater and also to ensure the lid locking pin remains engaged as pressure releases at 2psi.



Figure 1

1. Remove the reducer from the test fixture (figure 1)



Figure 2

2. Install the supplied elbow from the test fixture into the t-fitting with pipe thread sealant (figure 2.)

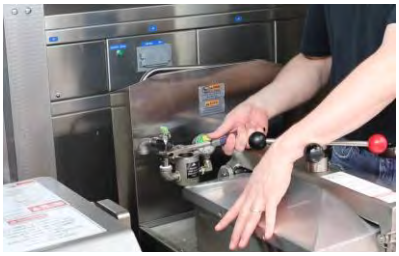


Figure 3

3. Remove the existing safety relief valve (figure 3.)

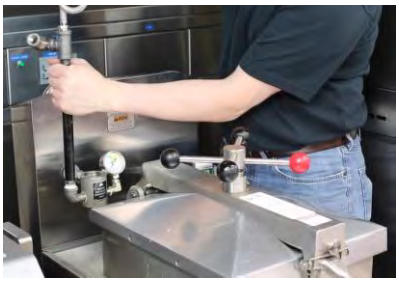


Figure 4

4. Install the test fixture into the safety relief valve elbow using pipe thread sealant (figure 4.)



Figure 5

5. Insert the existing pressure gauge into the elbow of the pressure test fixture (figure 5.)



Figure 6 - *Spindle in 7:00 Position*

6. Adjust the limit stop so that the red ball reaches the 7:00 position when closing and locking down the lid. *See the limit stop adjustment procedure.*

7. Have the store bread and cook at least 2hd of Original Recipe



Figure 7 *Spindle in 6:00 position*

8. When the pressure on the calibrated test gauge reaches 2 psi, gently turn the spindle counter clockwise using two hands so the red ball lines up with the 6:00 position (figure 7). The locking pin should engage the locking collar causing the spindle to lock in place (red ball at 6:00). If the spindle continues to turn past the 5:00 position (figure 8), The locking pin test would fail. Take the fryer out of service until the locking pin issue is addressed or the lid replaced.

9. During the cook cycle when pressure reaches the 12psi range. Compare the existing pressure gauge with the calibrated test gauge. The existing pressure gauge should read in a similar range. If it is not, replace the existing pressure gauge after the test.



Figure 8 *Spindle in 5:00 position*

10. If pressure during the cook cycle exceeds 14 psi, this does not fail the test as long as the locking pin engagement and disengagement steps pass. However, after the test, the deadweight and all related plumbing would need to be thoroughly cleaned or replaced.

11. When pressure exhausts and nears the 2psi mark, using two hands, gently turn the spindle counterclockwise. If you are able to turn the spindle to the 5:00 position (figure 8), this inspection fails. Take the fryer out of service until the lid assembly can be replaced. To pass the inspection, the spindle should remain locked at 2 psi when trying to turn counterclockwise. If the lid is locked, the spindle should remain in the 6:00 position (figure 7).

12. If the pressure was slow to release during the cook cycle and did not reach 0psi when the timer reached 0:00, this does not fail the inspection, however this is an indication that the pressure solenoid and/ or its related plumbing may be sticking or obstructed. After the test, clean the solenoid and the related solenoid plumbing back to the steam exhaust stack.

13. Remove the test fixture

14. If the existing safety relief valve passed the inspection, re-install it. If not, install a new valve with pipe thread sealant.

HENNY PENNY
Engineered to Last

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

1-937-456-8400
1-937-456-8402 Fax

Toll free in USA
1-800-417-8417
1-800-417-8434 Fax

www.hennypenny.com

*FM06-009-C Henny Penny Corp., Eaton, Ohio 45320, Revised 04-01-17

Commercial Kitchen Equipment Parts

Find more Henny Penny equipment resources at

parthubz.com/equipment/henny-penny

Need parts or service?

Call 833-700-8006

support@parthubz.com

parthubz.com