



**Henny Penny
Pressure Fryer-Electric
Model PFE-591**

TECHNICAL MANUAL

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
1-4 Error Code Table	1-11
Section 2. MAINTENANCE.....	2-1
2-1 Introduction	2-1
2-2 Maintenance Hints.....	2-1
2-3 Preventive Maintenance	2-1
2-4 High Temperature Limit Control.....	2-2
2-5 Fuse Holders.....	2-4
2-6 Power/Pump Switch	2-5
2-7 Temperature Probe Replacement.....	2-6
2-8 Complete Control Panel - Henny Penny	2-7
2-9 Pressure Regulation.....	2-7
2-10 Tilting the Lid Upright	2-8
2-11 Reversing the Lid Gasket	2-8
2-12 Lid Counterweight Cables.....	2-9
2-13 Pressure Pad	2-10
2-14 Lid Adjustment.....	2-11
2-15 Solenoid Valve.....	2-12
2-16 Deadweight Valve.....	2-14
2-17 Removal & Cleaning of Safety Relief Valve.....	2-15
2-18 Pressure Gauge.....	2-16
2-19 Contactors.....	2-17
2-20 Heating Elements	2-19
2-21 Drain Microswitch.....	2-22
2-22 Drain Valve and Extension	2-23
2-23 Nylatron Strips Replacement	2-24
2-24 Transformer	2-25
Wiring Diagrams	2-26
Section 3. PARTS INFORMATION.....	3-1
3-1 Introduction	3-1
3-2 Genuine Parts	3-1
3-3 When Ordering Parts.....	3-1
3-4 Prices	3-1
3-5 Delivery	3-1
3-6 Warranty	3-1
3-7 Recommended Spare Parts for Distributors	3-1
3-8 Index of Parts Lists Illustrations.....	3-2

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, recheck the installation per the Installation Section of this manual.

Before troubleshooting, always recheck the operation procedures per Section 3 of this manual.

1-2. SAFETY

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.
4. Refer to the maintenance procedures in the Maintenance Section to safely and properly make the checkout and repair needed.



If maintenance procedures are not followed correctly, injuries and/or property damage could result.

Problem	Cause	Correction
COOKING SECTION		
Product color not correct: A. Too dark	• Temperature too high • Faulty temperature probe • Shortening too old • Shortening too dark • Breeding product too far in advance	• Check temperature setting in the program mode; see Programming Section in Operator's Manual • Remove and replace temperature probe • Change shortening • Filter shortening • Change shortening • Bread product closer to actual frying period
B. Too light	• Temperature too low • Fryer incorrect preheat • Slow fryer heat-up/recovery • Wrong cook button pushed.	• Check temperature setting • Remove and replace temperature probe • Allow proper preheat time • Low gas pressure. Have gas pressure checked going to burners • Be sure to select the correct amount of product to be cooked
C. Product greasy	• Shortening old • Temperature too low • Faulty temperature probe • Frypot overloaded • Product not removed from frypot immediately after depressurization	• Replace shortening • Check temperature setting • Temperature not recovered when product was dropped in frypot • Remove and replace defective temperature probe • Reduce cooking load • Remove product from frypot immediately after depressurization

Problem	Cause	Correction
COOKING SECTION (Continued)		
D. Spotted product	• Improper separation of the product • Breeding not uniform on the product • Burned breeding particles on product • Product sticking together	• Load product into racks properly • Sift breeding regularly • Separate product during breeding • Filter the shortening more frequently • Separate product prior to pressure cooking
E. Dryness of product	• Moisture loss prior to cooking • Overcooking the product • Low operating pressure • Wrong product selected	• Use fresh products • Reduce cooking time • Reduce cooking temperature • Check pressure gauge reading, check for pressure leaks • Be sure to select the correct product to be cooked
Product flavor (taste):		
A. Salty taste	• Breeding mixture is too salty • Incorrect choice of breeding	• Sift breeding after each use • Incorrect breeding mixture • Discard old breeding • Use breeding designed for the desired product
B. Burned taste	• Burned shortening favor • Frypot not properly cleaned	• Replace shortening • Drain and clean frypot
C. Bland taste	• Raw product not fresh • Breeding mixture incorrect for product (spice content too low) • Cooking temperature too high (spice flavors lost)	• Use fresh raw product • Use breeding designed for desired product • Check temperature

Problem	Cause	Correction
COOKING SECTION (Continued)		
D. Rancid taste	• Shortening too old • Infrequent filtering • Non-compatible products cooked within the same shortening. • Raw product not fresh	• Replace shortening, and follow recommended care and use of shortening • Replace shortening and follow recommended care and use of shortening • Replace shortening • Use compatible products, and follow recommended care and use of shortening • Use fresh product
General:		
A. Meat separation from bone	• Incorrect meat cut • Overcooking • Product not fresh	• Use correct meat cutting procedures • Check cooking time • Use fresh product
B. Bone color not proper	• Using frozen product (black bone) • Improper processing of product (black bone) • Product not thoroughly cooked (red bone)	• Use fresh product • Use proper processing procedure for product • Check cooking time • Check cooking temperature
C. Breading falls off	• Incorrect breading procedures • Product partially frozen	• Use correct breading procedure • Thoroughly thaw the product, before breading
D. Product sticking together	• Product breaded too long prior to cooking • Improper loading procedure • Wrong product selected	• Refer to breading and frying instructions • Properly load product per loading procedures • Be sure to select the correct product to be cooked

Problem	Cause	Correction
POWER SECTION		
With switch in COOK position, the fryer is completely inoperative (NO POWER)	• Open circuit	• Check to see that unit is plugged in • Check the breaker or fuse at supply box • Check voltage at wall receptacle • Check MAIN POWER switch; replace if defective • Check cord and plug • Check 15 amp fuses
PRESSURE SECTION		
Pressure will not exhaust at end of Cook Cycle	• Exhaust line from solenoid valve to exhaust tank clogged	• Turn unit off and allow fryer to cool to release pressure from frypot; clean all pressure lines, exhaust stacks, and exhaust tank
Operating pressure too high	• Solenoid valve clogged • Deadweight clogged • Exhaust line to stack clogged	• Check and clean solenoid valve per maintenance section on solenoid valve • Turn unit off and allow fryer to cool to release pressure from frypot; remove dead weight and clean • Clean exhaust line to stack



DO NOT OPERATE UNIT IF HIGH PRESSURE CONDITIONS EXIST; SEVERE INJURIES AND BURNS WILL RESULT. PLACE THE POWER/PUMP SWITCH IN THE OFF POSITION IMMEDIATELY. RELEASE THE PRESSURE BY ALLOWING UNIT TO COOL. THE PRESSURE WILL THEN DROP. DO NOT RESUME USE OF UNIT UNTIL CAUSE OF HIGH PRESSURE HAS BEEN FOUND AND CORRECTED.

Problem	Cause	Correction
PRESSURE SECTION (Continued)		
Pressure does not build	• Not enough product in fryer or product not fresh • Metal shipping spacer not removed from dead weight • Lid open or not latched • Solenoid valve leaking or not closing • Dead weight valve leaking • Pressure not programmed • Lid gasket leaking • Safety relief valve leaking • Pressure pad broken or crushed	• Place proper quantity of fresh product within frypot to generate steam • Remove shipping spacer. See Unpacking Section of Operator's Manual • Close and latch lid • Check or clean solenoid valve per maintenance section on the solenoid valve • Repair per maintenance section on deadweight valve • Check programming • Reverse gasket or lid needs adjusted; see Reversing the Lid Gasket and Lid Adjustment Sections • Check and replace if necessary per maintenance section on the safety relief valve • Replace pressure pads

Problem	Cause	Correction
HEATING OF SHORTENING SECTION		
Shortening will not heat	• Blown fuse or tripped • Blown fuse in PC board • Faulty COOK/PUMP switch. • Faulty cord and plug • Faulty drain switch • Faulty PC Board • Faulty high limit control switch • Drain valve open • Possible faulty temperature probe • Faulty contactor	• Reset breaker or replace fuse circuit breaker at supply box or control panel • Replace glass fuse in board • Check COOK/PUMP switch per maintenance section on the COOK/PUMP switch • Check cord and plug • Check power at receptacle • Check drain switch per maintenance section on drain switches • Remove and replace control panel • Check high limit control switch per maintenance section on the high limit • Close drain valve • Replace temperature probe • Check contactor per maintenance section on contactors

Problem	Cause	Correction
HEATING OF SHORTENING SECTION (Continued)		
Heating of shortening too slow	• Low or improper voltage • Weak or burnt out element(s) • Points in contactor bad • Wire(s) loose • Burnt or charred wire connection	• Use a meter and check the receptacle against data plate • Check heating element(s) per Heating Elements Section • Check contactor per Heating Contactors Section • Tighten • Replace wire and clean connectors
Shortening overheating	• Programming wrong • Faulty PC board • Faulty temperature probe • Check contactor for not opening	• Check temperature setting in the program mode • Remove and replace control panel • Remove and replace temperature probe • Check faulty contactor per Heating Contactors Section

Problem	Cause	Correction
SHORTENING FOAMING/DRAINING SECTION		
Foaming or boiling over of shortening	• Water in shortening • Condensation line stopped up • Improper or bad shortening • Improper filtering • Cold zone full of cracklings • Improper rinsing after cleaning the fryer	• At end of a Cook Cycle, drain shortening and clean frypot; add fresh shortening • Remove and clean condensation line • Use recommended shortening • Refer to the procedure covering filtering the shortening • Filter shortening • Clean and neutralize the frypot; rinse with vinegar to remove the alkaline, then rinse with hot water and dry frypot
Shortening will not drain from frypot	• Drain valve clogged with crumbs	• Open valve - push cleaning rod through drain opening from inside of frypot
Shortening leaking through drain valve	• Obstruction in drain • Faulty drain valve	• Remove obstruction • Replace drain valve

1-4. ERROR CODE TABLE

In the event of a control system failure, the digital display shows an error message. These messages are coded: “E4”, “E5”, “E6”, “E10”, “E15”, “E41”, “E46”, “E47”, “E48”, “E70” “B” and “E92”. An alarm sounds when an error code is displayed, and to silence this alarm, press any button.

<u>DISPLAY</u>	<u>CAUSE</u>	<u>PANEL BOARD CORRECTION</u>
“E-4”	Control board overheating	Turn switch to OFF position, then turn switch back ON; if display shows “E-4”, the control board is getting too hot; check the louvers on each side of the unit for obstructions; check cooling fan, if present
“E-5”	Shortening overheating	Turn switch to OFF position, then turn switch back to ON; if display shows “E-5”, the heating circuits and temperature probe should be checked_
“E-6 A”	Temperature probe open	Turn switch to OFF position, then turn switch back to ON; if display shows “E-6”, have the temperature probe checked
“E-6 B”	Temperature probe shorted	Turn switch to OFF position, then turn switch back to ON; if display shows “E-6” have the temperature probe checked
“E-10”	High limit	Reset the high limit by manually pushing up on the reset button; if high limit does not reset, high limit must be replaced
“E-15”	Drain switch	Close drain, using the drain valve handle; if display still failure shows “E-15”, have the drain microswitch checked

1-4. ERROR CODE TABLE (Continued)

<u>DISPLAY</u>	<u>CAUSE</u>	<u>PANEL BOARD CORRECTION</u>
“E-41”, “E-46”	Programming Failure	Turn switch to OFF, then back to ON, if display shows any of the error codes, try to reinitialize the control; if error code persists, have the control board replaced
“E-47”	Analog converter chip or 12 volt supply failure	Turn switch to OFF, then back to ON, if “E-47” persists, have the I/O board, or the PC board replaced; if speaker tones are quiet, probably I/O board failure
“E-48”	Input system error	Have PC board replaced
“E-70 B”	Faulty power switch, or switch wiring; faulty I/O board	Have power switch checked, along with its wiring; Input/Output board replaced if necessary
“E-92”	24 VAC fuse on I/O board open	Have components, in 24-volt circuit (I.E., hi limit, drain switch) checked for shorts

SECTION 2. MAINTENANCE

2-1. INTRODUCTION

This section provides checkout and replacement procedures, for various parts of the fryer. Before replacing any parts, refer to the Troubleshooting Section to aid you in finding the cause of the malfunction.

2-2. MAINTENANCE HINTS

1. A multimeter will help you to check electric components.
2. When the manual refers to the circuit being closed, the multimeter should read zero unless otherwise noted.
3. When the manual refers to the circuit being open, the multimeter should read infinity.



Do not move the fryer with hot shortening in the frypot or filter pan. Severe burns can result from splashing hot shortening.

4. Remove weights from the frame to easily access rear of fryer.

2-3. PREVENTIVE MAINTENANCE

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

Frequency	Action
Daily	Clean deadweight cap, weight and orifice (See Deadweight Valve Section)
Twice Daily	Filter Shortening (See Filtering Instructions Section in Operator's Manual)
Annually	Lubricate Lid Rollers in back of fryer. (See Lubricating Lid Rollers Section)
Annually	Remove and Clean Safety Relief Valve. (See Removal and Cleaning of Safety Relief Valve Section)

2-4. HIGH TEMPERATURE LIMIT CONTROL



This high temperature control is a safety, manual reset control, which senses the temperature of the shortening. If the shortening temperature exceeds 425°F (218°C), this switch opens and shuts off the heat to the frypot. When the temperature of the shortening drops to a safe operation limit, manually reset by pressing the red reset button. The red reset button is located under the control panel, in the front of the fryer, to the right of the drain. Once reset, the frypot starts heating.

Checkout

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

NOTICE

The shortening temperature must be below 380°F (193°C) to accurately perform this check.

1. Remove electrical power supplied to the fryer.

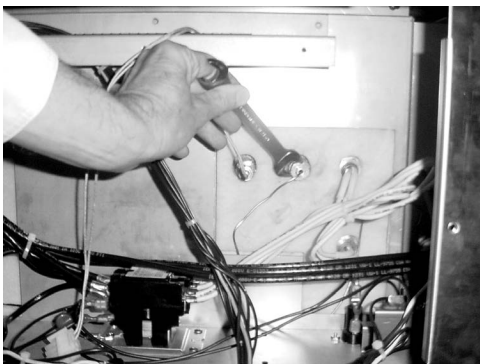
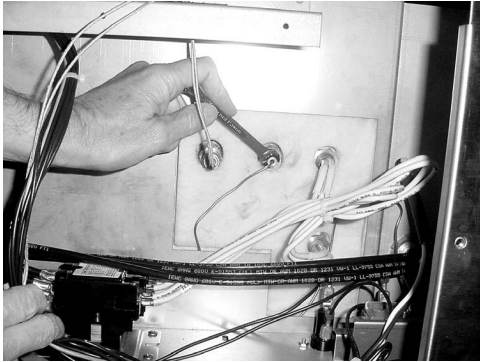


To avoid electrical shock or property damage, move the power switch to OFF and disconnect main circuit breaker, or unplug cord at wall receptacle.

2. Remove the control panel.
3. Remove the two nuts securing the high limit bracket to the unit, and pull the bracket from the unit.
4. Remove two screws securing the high limit to the bracket, and remove the high limit from the bracket.
5. Remove the two electrical wires from the high temperature limit control.
6. Manually reset control, then check for continuity between the two terminals after resetting the control. If the circuit is open, replace control, then continue with this procedure. (If the circuit is closed, the high limit is not defective. Reconnect the two electrical wires.)



2-4. HIGH TEMPERATURE LIMIT CONTROL (Continued)



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

Replacement

1. If the tube is broken or cracked, the control will open, shutting off electrical power. The control cannot be reset.
2. Drain shortening from the frypot and discard. A substance in the tube could contaminate the shortening.
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, and remove defective control from control panel area.
8. Insert new control and replace screws.
9. Uncoil capillary line, starting at capillary tube, and insert through frypot wall.



To avoid electrical shock or other injury, run capillary line under and away from all electrical power wires and terminals. The tube must never be in such a position where it could accidentally touch the electrical power terminals.

10. Carefully bend the capillary tube as shown in photo and place into bulb brackets.

2-4. HIGH TEMPERATURE LIMIT CONTROL (Continued)

11. Pull excess capillary line from pot and tighten nut into frypot wall.

CAUTION

Be sure capillary bulb of high limit is positioned so it doesn't interfere with the carrier or get damaged when cleaning the frypot.

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

13. Replace control panel.

14. Refill with shortening.

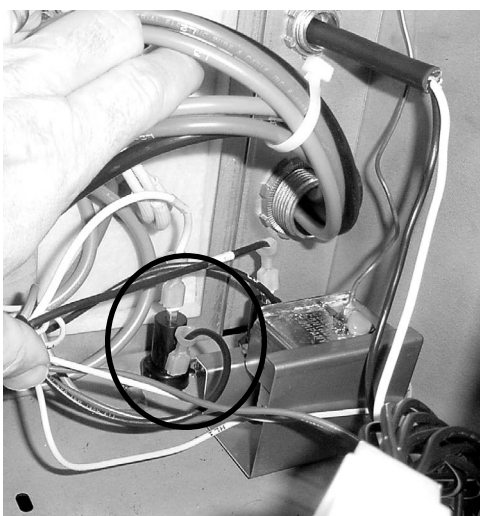
2-5. FUSE HOLDERS



There are two fuse holders on each model of the electric fryers. To check or change fuse, unscrew black fuse holder cap.



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 Fuse Holders

CONTROL PANEL FUSES 3 Phase

Remove the control panel and pull the wires from fuse holder terminals. Using a multimeter or continuity light, check across the terminals. The circuit should be closed. If not, replace the fuse (HP# EF02-007) or fuse holder (HP# EF02-006).

2-6. POWER/PUMP SWITCH

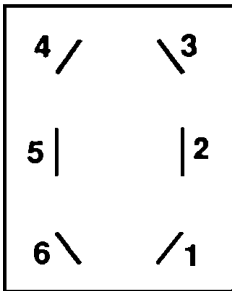
The POWER/PUMP switch is a three way rocker switch with a center OFF position. With switch in the POWER position, the fryer operates. With switch in the PUMP position, the filter pump operates, but the unit will not heat.



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

Checkout

1. Remove control panel.
2. Label and remove wires from the switch.
3. OFF position-should be open circuit anywhere on the switch.
4. Power position. Check from: #5 to #6 closed circuit
#1 to #2 closed circuit
5. Pump position. Check from: #4 to #5 closed circuit
#3 to #2 closed circuit



Check across the jumpers on the wires of the POWER/PUMP switch. These jumpers have resistors and capacitors which may be faulty.

Replacement

1. With control panel removed, and wires off of the switch, push in on tabs on the switch to remove from the panel.
2. Replace with new switch, and reconnect wires to switch following the wiring diagram.
3. Replace the control panel.



2-7. TEMPERATURE PROBE REPLACEMENT

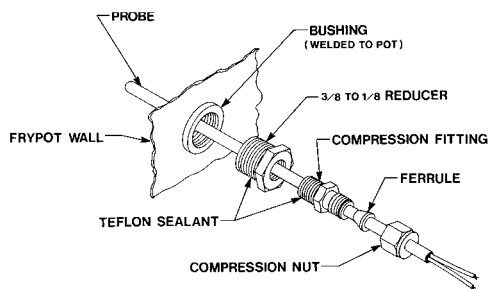
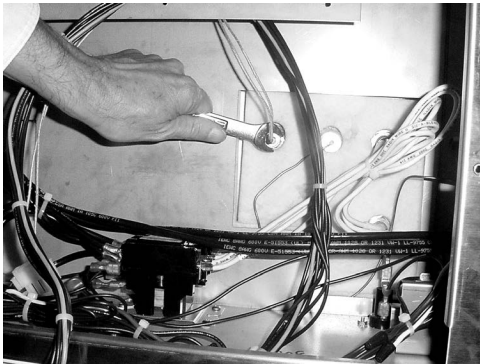


Figure 2-1

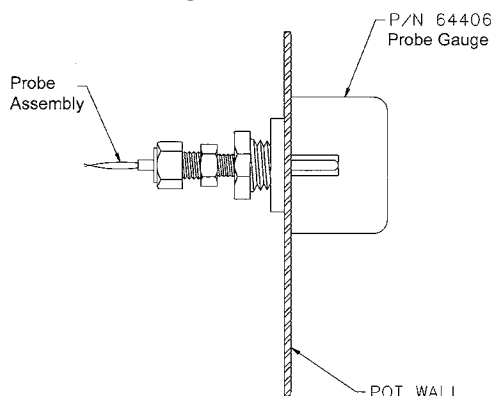


Figure 2-2

Temp. F	Temp. C	Resistance Ohms	Temp. F	Temp. C	Resistance Ohms
50	10.00	1039.02	250	121.11	1464.79
60	15.56	1060.65	260	126.67	1485.71
70	21.11	1082.24	270	132.22	1506.58
80	26.67	1103.80	280	137.78	1527.43
90	32.22	1125.32	290	143.33	1548.23
100	37.78	1146.81	300	148.89	1569.00
110	43.33	1168.26	310	154.44	1589.73
120	48.89	1189.67	320	160.00	1610.43
130	54.44	1211.05	325	162.78	1620.77
140	60.00	1232.39	330	165.56	1631.09
150	65.56	1253.70	340	171.11	1651.72
160	71.11	1274.97	350	176.67	1672.31
170	76.67	1296.20	360	182.22	1692.86
180	82.22	1317.40	365	185.00	1703.13
185	85.00	1327.99	370	187.78	1713.38
190	87.78	1338.57	380	193.33	1733.87
200	93.33	1359.69	390	198.89	1754.31
210	98.89	1380.79	400	204.44	1774.72
212	100.00	1385.00	410	210.00	1795.10
220	104.44	1401.84	420	215.56	1815.44
230	110.00	1422.86	430	221.11	1835.74
240	115.56	1443.85	440	226.67	1856.01

The temperature probe relays the actual shortening temperature to the control. If it becomes disabled, “E06” will show in the display. Also, if the temperature is out of calibration more than 10°F, or 10°C, temperature probe should be replaced. An Ohm check can be performed also. See chart at end of this section.

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.
3. Remove the control panel.
4. Using a 1/2” wrench, remove the nut on compression fitting.
5. Remove the temperature probe from the frypot.
6. Place nut and new ferrule on the new temperature probe and insert temperature probe into the compression fitting until it extends one-half (1/2) inch (1.3 cm) into the frypot. Use the temperature probe gauge provided in temperature probe kit, to ensure proper placement in frypot. See Figures 2-1 and 2-2.
7. Tighten hand tight and then a half turn with wrench.



Excess force will damage temperature probe.

8. Connect new temperature probe to PC board and replace control panel.
9. Replace shortening.
10. Turn power on and check out fryer.

2-8. COMPLETE CONTROL PANEL-HENNY PENNY

Should the control panel become inoperative, follow these instructions for replacing the board.

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 two screws securing the control panel and lift panel up and out
3. Unplug the connectors going to the control board.
4. Install a new control panel.

2-9. PRESSURE REGULATION

The Henny Penny Fryer uses pressure as one of the components of the cooking process. Once the lid is sealed to the frypot, and the solenoid valve closes, a deadweight valve maintains the correct pressure in the frypot.

The lid has minimal and limited maintenance and repair procedures, which are addressed in the following sections.

The following is a routine maintenance schedule for the Lid:

Every 90 days

- Clean and reverse the lid gasket

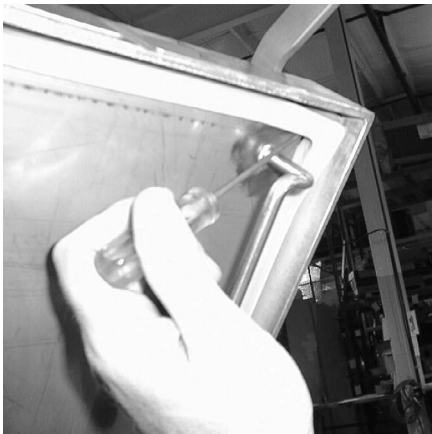
Yearly Inspection

- Check Lid Gasket for splitting and tears-replace, if necessary
- Check Pressure Pads for wear-rotate, if necessary
- Check Cam Slide Guides-replace, if worn or broken
- Check Lid Rollers-replace, if cracked or damaged

2-10. TILTING THE LID UPRIGHT



2-11. REVERSING THE LID GASKET



The Lid Assembly is easily tilted up for cleaning or servicing.

1. Raise the lid and remove racks and carrier.
2. Grasping the lid handle, lift the front of the lid up until it stops in an upright position.



Be sure the metal arm on the left side of the lid is in the vertical position holding the lid upright, or severe injuries could result. (See photo at left).

The gray rubber gasket surrounding the inside of the lid is designed to be reversed.

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

1. Put the lid in the upright position, as previously described.
2. Using a thin blade screwdriver, pry out the gasket at the corners. Remove the gasket.



Check the gasket for any tears or nicks. If the gasket is damaged it need to be replaced.



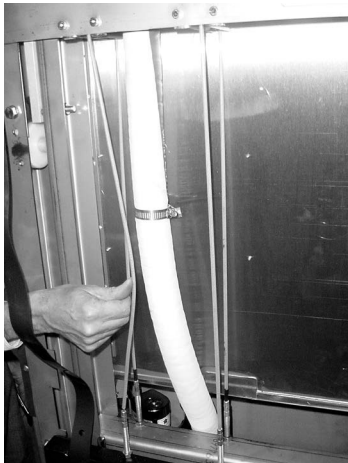
Be sure the metal arm on the left side of the lid is in the vertical position holding the lid upright, or severe injuries could result. (See photo in Tilting the Lid Up right Section)

3. Clean the gasket and gasket seat with hot water.
4. Rotate the gasket with the opposite side facing out.



Install the 4 corners of the lid gasket. Smooth the gasket into place, working from the corners towards the middle of each side.

2-12. LID COUNTERWEIGHT CABLES



The Lid Counterweight in the back of the fryer balances the weight of the lid system to allow easier opening and closing of the lid. The weight has two cables attached to it, and weighs about 150 lbs. (67.5 Kg).

1. Using a 3/8" socket, remove nuts securing the rear shroud of the fryer and remove the shroud.
2. Using Phillip's-head screwdriver, remove screws securing the top cap and remove cap.
3. Raise the lid.
4. Unscrew broken cable from the weight assembly and the bracket attached to the fryer, and remove broken cable.
5. Screw a 5/16" nut on each end of the new cable.
6. Using a wrench, screw new cable into the weight assembly until tight.
7. Using a 1/2" wrench, tighten nut (already threaded on the cable) against the weight assembly, securing cable into the weight assembly.
8. Pull cable over pulley and down behind weight assembly.
9. Insert cable into the hole in the bracket and screw a 5/16" nut onto end of cable. Tighten the cable, by screwing cable through this nut until the weight assembly becomes level.

NOTICE

The safety cable should now have slack in it with the weight assembly level.

10. Tighten nut against the top of bracket, securing the cable.
11. Replace top cap and rear shroud; repair is now complete.

2-13. PRESSURE PAD

The pressure pads are plastic strips that the lid cam presses against to seal the lid.



1. Raise the lid.

2. Remove 4 screws securing the lid cover and remove cover.



3. Push the lid cam back, off of the pressure pads.



4. Using an Allen wrench, remove the large bolt securing pad.



5. Using a Phillips head screw driver, remove the small screw securing the pad and remove the broken pad.

NOTICE

If the pressure pad is worn, but not broken, it can be reversed 180 degrees, and the other end of the pad used.

6. Install new pad in reverse order.

2-14. LID ADJUSTMENT

If steam leaks out from around the lid gasket, the pressure pads could be worn or broken. If the pressure pad is worn, but not broken, it can be reversed 180 degrees, and the other end of the pad used. See Pressure Pad Section.

If steam leaks, check for:

- Pressure pad wear
- Cracked or worn gasket
- Gasket installed improperly
- Fryer operating above 12 psi (827 mbar)



Fryer should be operating at 12 psi, or serious burns could result.

2-15. 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 opens automatically at the end of the Cook Cycle. If this valve should become dirty, or the Teflon seat nicked, pressure will not build up. The electric fryer uses a 208/240 volt 60 hertz coil (50 hertz internationally).



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

Remove the solenoid wires from the wire nuts which are found behind the control panel. Check across wires.

	RESULTS
208/240 Volt, 60 Hertz	150 Ohms
208/240 Volt, 50 Hertz	230 Ohms

Replacement

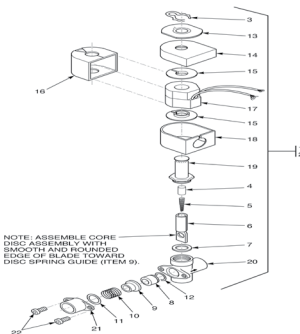
1. Remove the right side panel.
2. Remove “tru-arc” retaining clip on top of the coil housing.
3. Remove the cover.
4. If only the coil is to be replaced, disconnect two coil wires at the wire nuts in coil housing. Remove coil, insert new coil, and connect the wires at the wire nuts. Assemble in reverse order of disassembly.

NOTICE

The wires may be connected in any order.



2-15. SOLENOID VALVE **(Continued)**



5. If the core-disc assembly is sticking due to build up of shortening, breadings, and food particles, proceed with the following steps:
 - a. Unscrew the solenoid bonnet assembly from solenoid valve body.
 - b. Remove solenoid bonnet assembly and bonnet gasket.
 - c. Remove core-disc assembly, core spring retainer, and core spring.
 - d. Wash all these parts in hot water.

NOTICE

If Teflon seals need to be replaced, proceed to Step 6; otherwise, assemble in reverse order of disassembly. Assemble valve core and blade with smooth side and rounded edge of blade toward the disc spring guide.

6. Repair kit (Part No. 17120) is available if any of the seals need replaced. If any one seal is defective, replace all seals.

NOTICE

Solenoid body must be removed from fryer for replacement of seals. Continue onto step 7.

7. Loosen the wires on the strain relief and pull the wires through the relief.
8. With bonnet assembly and core-disc assembly removed, disconnect two nut fittings. One connects the solenoid valve to the deadweight, the other is attached to the condensation tank.
9. Remove the elbows from the solenoid valve.
10. Remove two adapter screws which attach the pipe adapter to the solenoid valve body.
11. Remove the disc spring, guide, and Teflon seat.
12. Clean the valve body.

2-15. SOLENOID VALVE
(Continued)

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

NOTICE

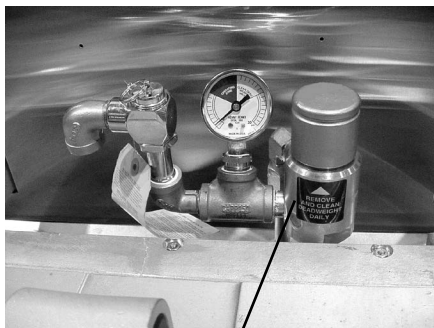
The smallest nick can cause a pressure leak. Replace all O-ring seals provided in the parts kit and reassemble valve.

13. If the complete valve is to be replaced, follow steps 1, 2, 3, 4, 5, 7, 8 and 9 in this section.

2-16. DEADWEIGHT VALVE



DO NOT ATTEMPT TO REMOVE DEADWEIGHT CAP WHILE FRYER IS OPERATING. SEVERE BURNS OR OTHER INJURIES WILL RESULT.



Deadweight valve

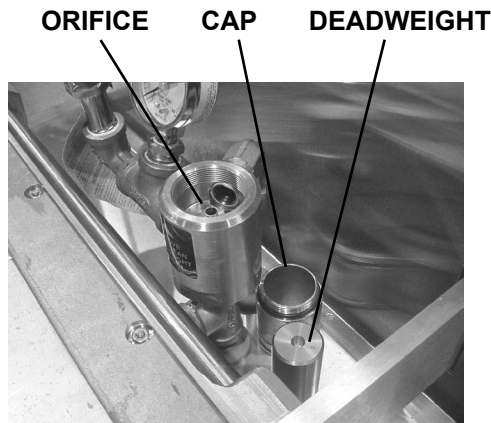
The operating valves are located behind the lid. The valve, left of the pressure gauge, is a 14 1/2 lb. (999 mbar) safety relief valve, and the one on the right is the deadweight valve.

Valves are working properly, when the pointer on gauge is in the “OPERATING ZONE” (green area). The gauge pointer should not normally exceed the operating zone. If the pressure builds to 14 1/2 lbs.(999 mbar), the safety relief valve will open to release steam pressure from inside the frypot.

2-16. DEADWEIGHT VALVE **(Continued)**



DO NOT PULL THE RING ON THE SAFETY RELIEF VALVE. HOT STEAM WILL BE RELEASED AND SEVERE BURNS WILL RESULT.



1. At the end of each day's usage of the fryer, the deadweight valve must be cleaned. Fryer must be OFF and the pressure released. Open the lid and then remove the deadweight valve cap and deadweight.

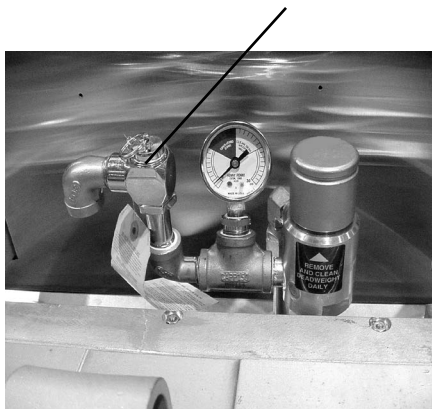


Failure to clean the deadweight assembly daily could result in the fryer building too much pressure. Severe injuries and burns could result.

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.

2-17. REMOVAL & CLEANING **OF SAFETY RELIEF** **VALVE**

SAFETY RELIEF VALVE



The safety relief valve should be cleaned once a year.



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

1. Remove pressure gauge.

2-17. REMOVAL & CLEANING OF SAFETY RELIEF VALVE (Continued)

2. Use a wrench to loosen the valve from the pipe tee, turn counterclockwise to remove.
3. Clean the inside of the pipe tee with hot water.

NOTICE

Turn the safety relief valve towards the rear of the fryer when reinstalling safety relief valve.

4. Immerse the safety relief valve in a soapy water solution for 24 hours. Use a 1 to 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.



DO NOT DISASSEMBLE OR MODIFY THIS VALVE. TAMPERING WITH THIS VALVE COULD CAUSE SERIOUS INJURIES AND WILL VOID AGENCY APPROVALS AND APPLIANCE WARRANTY.

2-18. PRESSURE GAUGE

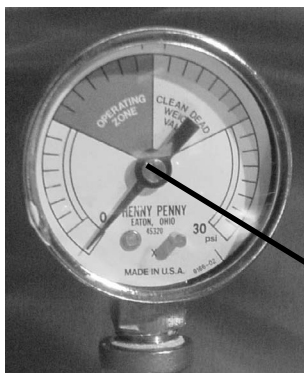
Calibration Steps

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

1. Remove the rim and glass.
2. If the indication 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 a proper "0" position.
3. Replace the rim and glass.

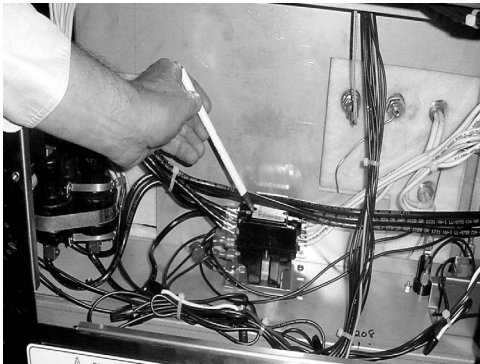
Cleaning Steps

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

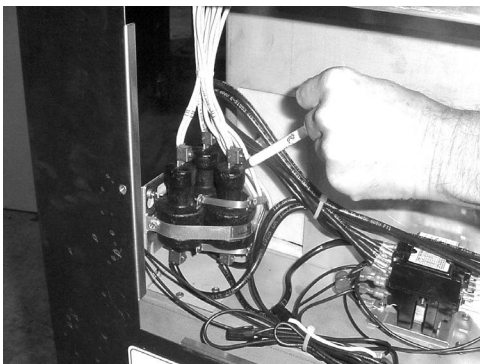


**Adjusting
Screw**

2-19. CONTACTORS



Primary



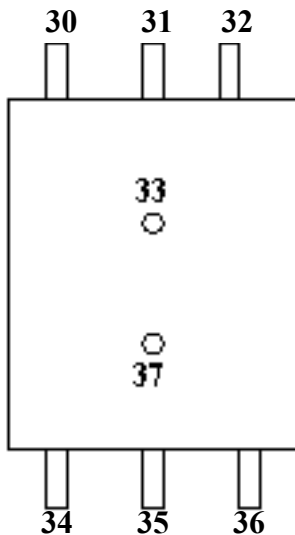
Heat

The electric fryer requires two switching contactors: a primary and a heat contactor. The primary contactor energizes (contacts close) any time the POWER/PUMP switch is in the POWER position, and the temperature of the shortening is below 420° F (215° C). The high limit cuts power at the primary contactor if the temperature of the shortening is above 420° F (215° C). The primary contactor supplies power to one side of the heat contactor.

The heat contactor is controlled by the computer controller. When the controller calls for heat, the heat contactor applies power to one side of the heating elements. When the heat contactor and primary contactor are energized (contacts closed) the electric heating elements heat the shortening.

NOTICE

The photo shows a mercury heat contactor, but CE countries will have an electromechanical heat contactor.



Primary Contactor

22		
23		29
24		23
25		27
26		

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.
3. Label and remove wires from contactors and perform a check on both contactors as follows:

Test Points

From 23 to 29
From 24 to 28
From 25 to 27
From 30 to 34
From 31 to 35
From 32 to 36
From 33 to 37
From 22 to 26

Results

open circuit
open circuit
open circuit
open circuit
open circuit
open circuit
ohm reading 1700
ohm reading 415

2-19. CONTACTORS **(Continued)**



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.

4. With power reapplied and in a heat-up mode, check the power going to both contactor coils. This is to be sure power is going to the contactors.

If no voltage is found going into the primary contactor coil, check wiring, high limit, and drain switch. If no voltage at heat contactor coil check wiring and connections at PC board.

Replacement

If either contactor proves defective, replace as follows:

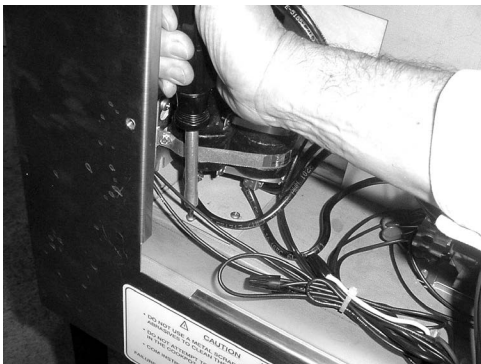


To avoid electrical shock or property damage, move the power switch to OFF and disconnect main circuit breaker, or unplug cord at wall receptacle.



1. Label and remove only those wires directly connected to contactor being replaced.

Hint: Removing the left side panel may be helpful in replacing the heat contactor.



2. Remove the mounting screws on base plate of the primary contactor and remove contactor. Proceed to step 5.
3. Remove the screws securing mercury contactor bracket to the mounting plate and remove bracket and contactor.
4. Remove the screws securing the contactor to bracket and remove contactor from bracket.
5. Install new contactor in reverse order.
6. Install control panel and reconnect power to fryer and test for proper operation.

2-20. HEATING ELEMENTS

The electric model fryer uses 2 heating elements.

NOTICE

Heating elements are available in 208, 220/240, 380 and 415 volts. Check the data plate, on shroud behind lid, to determine the correct voltage elements.

1. Remove the electrical power supplied to the unit.



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. Remove both side panels.

4. Remove upper screws and loosen the lower screws, to front control shroud, and hinge it down. (See photo at left)

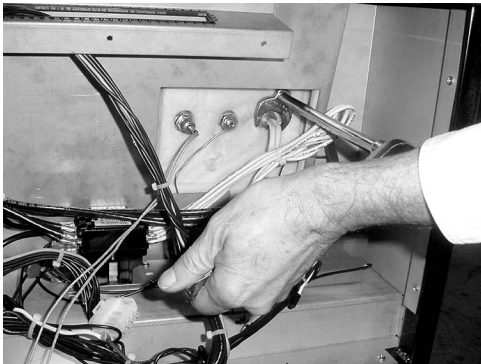


To avoid electrical shock, make connections before applying power, take reading, and remove power before removing meter leads. The following checks are performed with wall circuit breaker closed and main power switch in the ON position.

5. Perform an amp check on one heating element at a time with the wires connected to the contactors. The 2 heaters actually have 3 small heating elements on the inside of the outer plate. It is important to check between the correct wires to obtain the accurate amp reading. The wires are labeled for your convenience.

Wires	Power	Voltage	Amperage
L1-L3	8500W	208V	47.8
L3-L2	8500W	208V	47.9
L2-L1	8500W	208V	48.0
L1-L2	8500W	240V	39.4
L3-L2	8500W	240V	40.1
L2-L1	8500W	240V	39.9

2-20. HEATING ELEMENTS **(Continued)**



Replacement

1. Drain the shortening.
2. Remove the high limit bulb holder from the heating element inside the frypot.
3. Disconnect the heating element wires from the contactors. Label each so it can be replaced in the same position on the new element.
4. Remove heat contactor, as described in Contactors Section, to access the left side element nuts.
5. Loosen the screws on the element spreaders.
6. Slide the element spreaders to the center of the heating element.
7. Using a 7/8" crowfoot, remove brass nuts and washers which secure the ends of the elements through frypot wall.
8. Remove the heating elements from frypot as a group by lifting far end, and sliding them up and out towards the rear of the frypot.

NOTICE

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

9. Install new heating elements with new rubber O-rings mounted on terminal ends, and spreaders loosely mounted in the center of the stacked elements.
10. Replace the heating elements, terminal end first at an approximate 45° angle, slipping the terminal ends through the front wall of the frypot.

2-20. HEATING ELEMENTS
(Continued)

10. Replace the brass nuts and washers on heating element terminals. Tighten the nuts to 30 foot lbs of torque.
11. Replace heat contactor.
11. Move the element spreaders from the center of element, into a position which will spread each element apart evenly on all four sides, and tighten.
12. Replace the high limit bulb holder on the top element, and position 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 shroud and control panel.
15. Replace side panels.
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.

2-21. DRAIN MICROSWITCH

Upon pulling out on the drain handle, the microswitch should be activated and the unit will not heat, but when the handle is pushed back, the unit should operate properly. The bracket on the microswitch is slotted so it can be adjusted backward or forward.

1. Remove electrical power supplied to the unit.



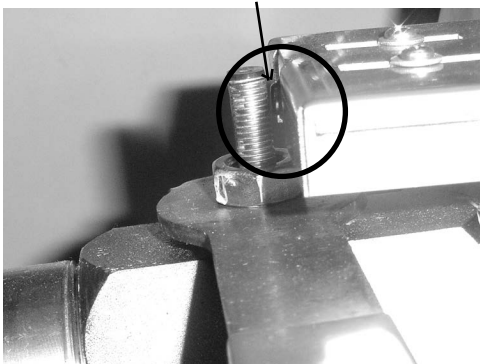
To avoid electrical shock or property damage, move the power switch to OFF and disconnect main circuit breaker, or unplug cord at wall receptacle.



2. The following check should be made to determine if the drain switch is defective.

- a. Remove bracket from the unit.
- b. Remove wires from the switch.
- c. Check for continuity across the two outside terminals on the drain switch. If circuit is open, the Drain Switch is bad. The circuit should only be opened by pressing on the actuator of the Drain Switch.

1/8" (4 mm) Gap



3. To replace switch, remove switch from the bracket, and install switch in reverse order.
4. Test to see if drain valve handle actuates switch. The gap between the switch and the shaft should be no more than 1/8" (3 mm).

HINT: Listen for audible click of switch while pulling drain valve handle.

2-22. DRAIN VALVE AND EXTENSION



The drain valve opens when the drain valve handle is pulled out and drains the shortening out of the pot.

Replacement

1. Using a 3/8" socket, remove the nuts securing drain switch bracket, and pull the bracket from the studs.
2. Remove the nut securing drain handle and pull the handle from the drain valve.
3. Using a large adjustable wrench, unscrew the drain valve and extension from the unit.
4. Replace the drain valve and extension.
5. Replace the drain switch bracket.
6. Adjust microswitch to be no more than 1/8" (3 mm) from the shaft of the drain valve.

HINT: Listen for audible click of switch while pulling drain valve handle.

2-23. NYLATRON STRIPS REPLACEMENT



1. Raise lid and remove the retention ring from one end of the lid pin.
2. Slide the lid pin from unit.
3. Lift the lid from unit.



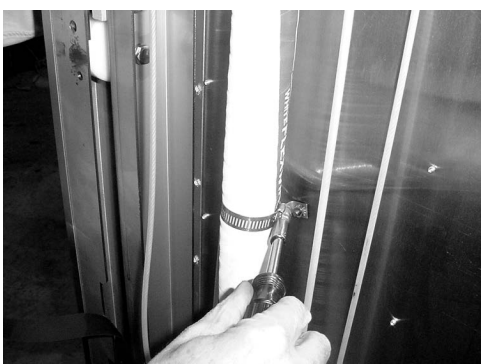
The lid weighs 80 lbs (36 kg). Take care when lifting lid to prevent personal injury.



4. Using a 3/8" socket, remove the nuts securing rear shroud and remove shroud.
5. Using a Phillip's-head screwdriver, remove screws securing the top cap and remove top cap.
6. Remove the bolts securing the nylatron strips to the weight assembly and remove strips from weight assembly.

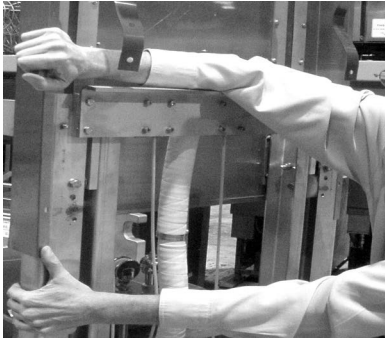


7. Using a Phillip's-head screwdriver, remove screws securing the front shroud.



8. Unfasten the exhaust hose from the hose clamp.

2-23. NYLATRON STRIPS REPLACEMENT



9. Lift the front shroud up and out, over the arm of the lid.
10. Thread the new nylatron strip through the track in the front shroud.
11. Lining up holes in the strips, fit the front shroud back over the lid arms.
12. Secure the strips to the weight assembly.
13. Replace back shroud, top cap, and lid, and replacement is complete.

2-24. TRANSFORMER



The transformer reduces the voltage down to accommodate those components with low voltage.

1. Remove electrical power supplied to the unit.



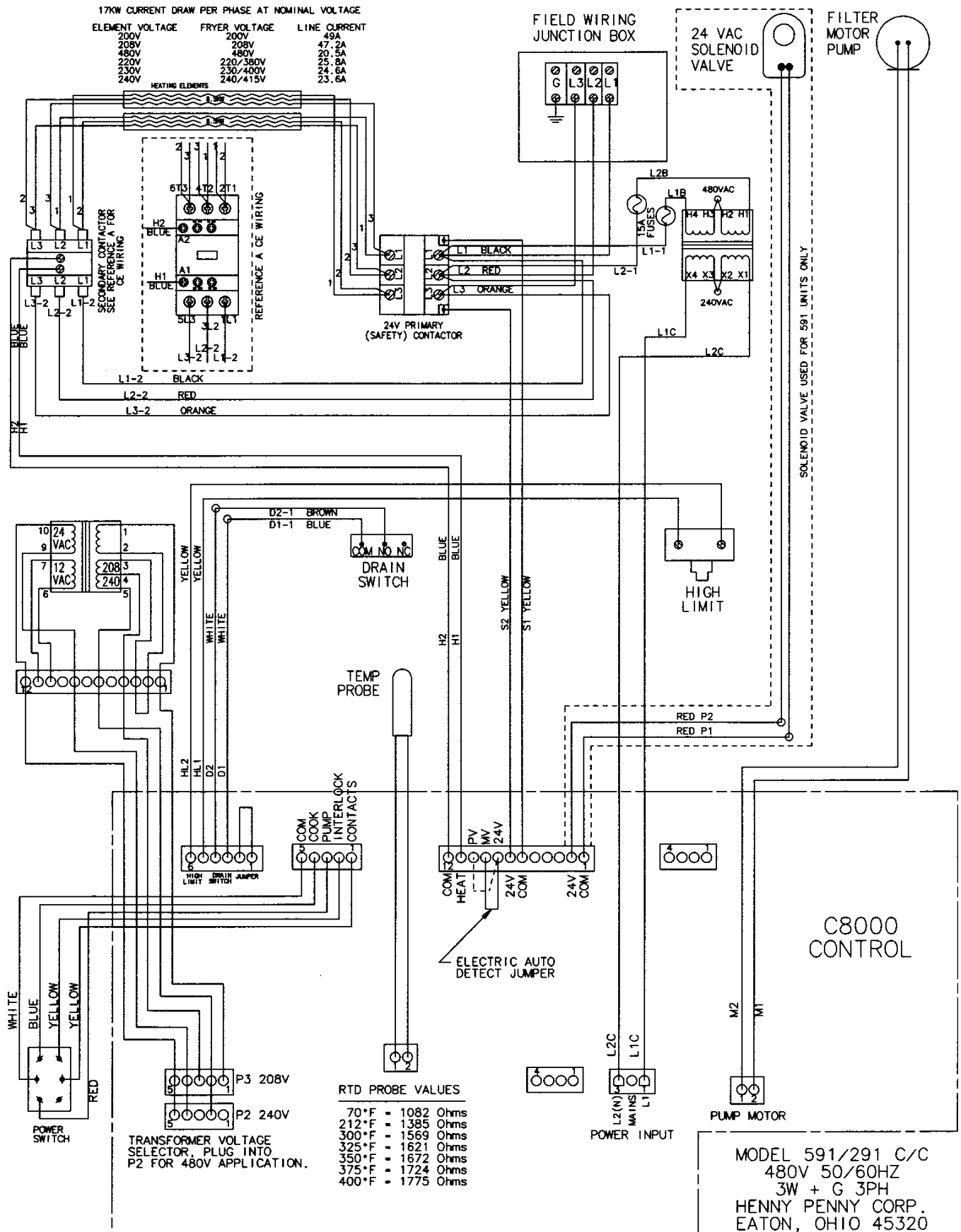
To avoid electrical shock or property damage, move the power switch to OFF and disconnect main circuit breaker, or unplug cord at wall receptacle.

2. Remove the control panel.
3. Remove the 2 screws securing the transformer to the unit and remove transformer.
4. Remove the wires from transformer.

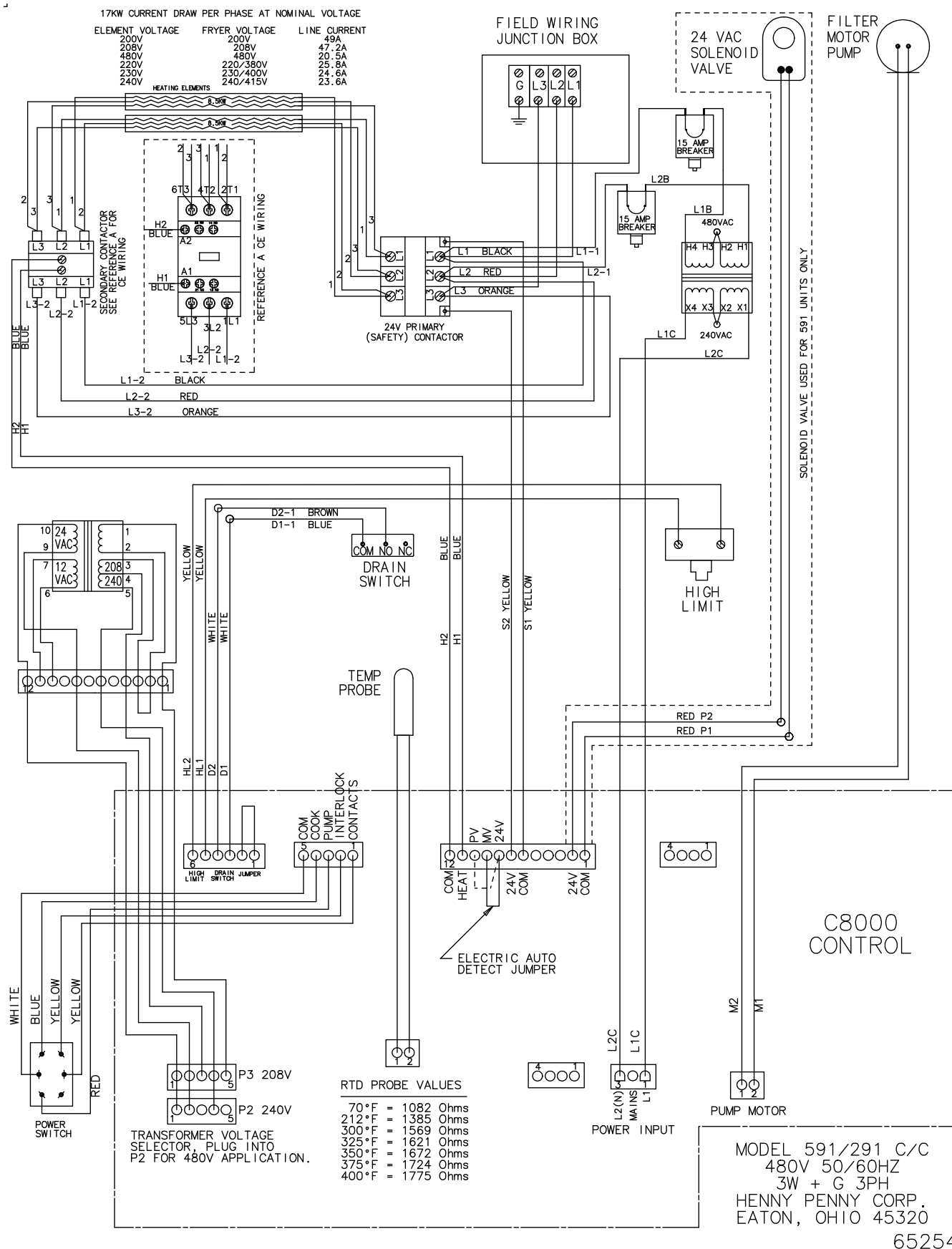


Mark wires before removal to ensure new transformer is wired correctly.

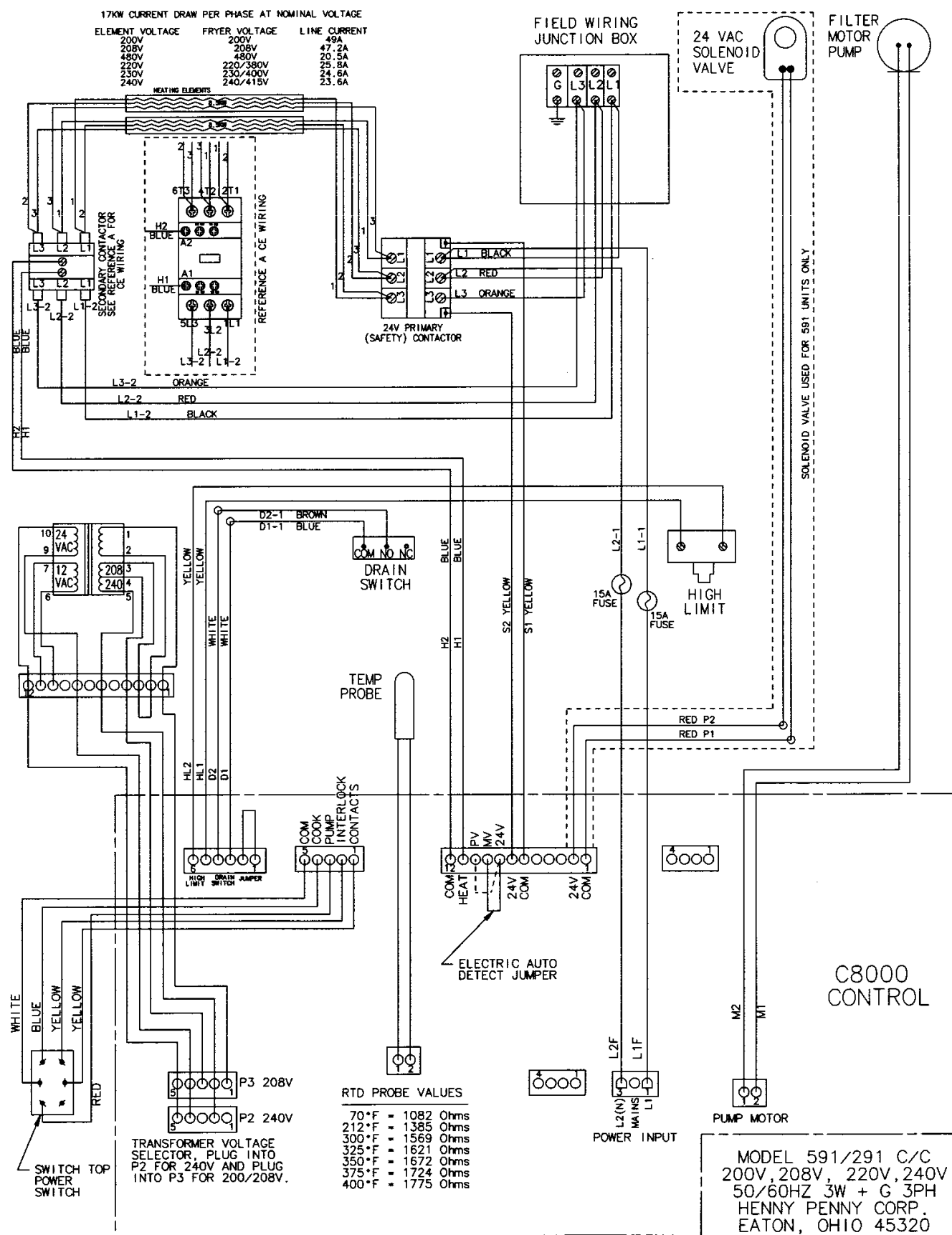
5. Replace with new transformer in reverse order.



SN: AC0608030 & BELOW

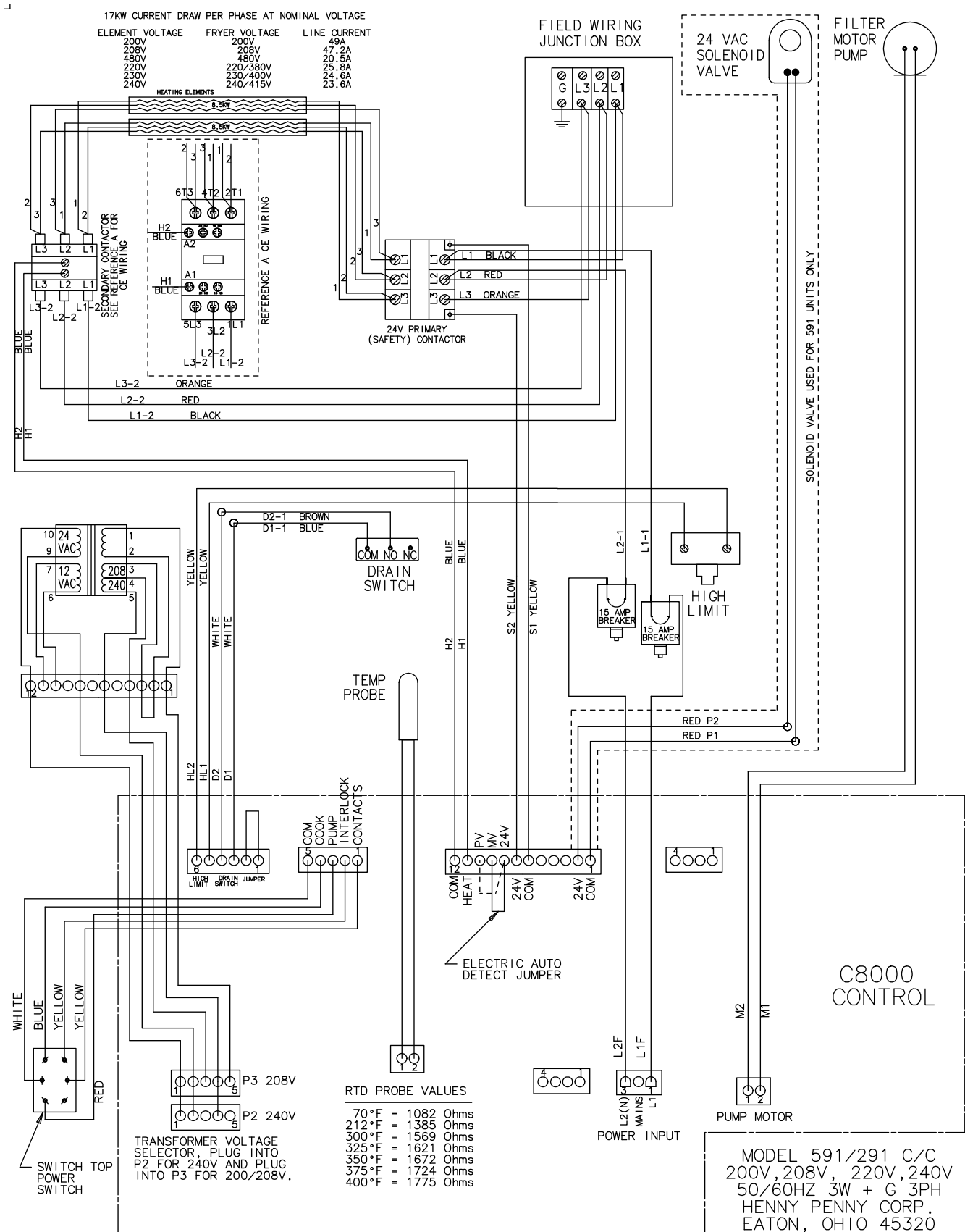


SN: AC0608031 & ABOVE



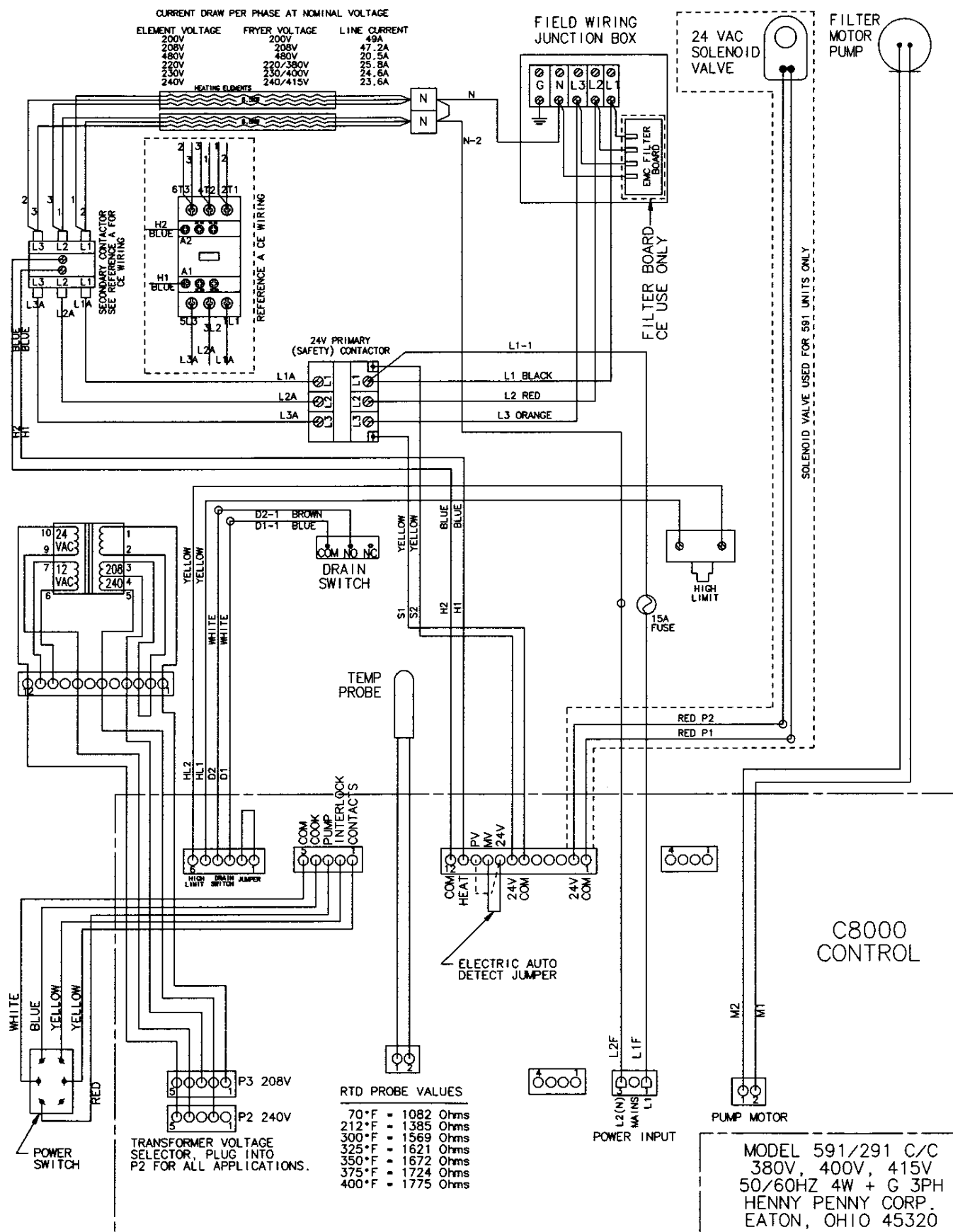
65252

SN: AC0608030 & BELOW

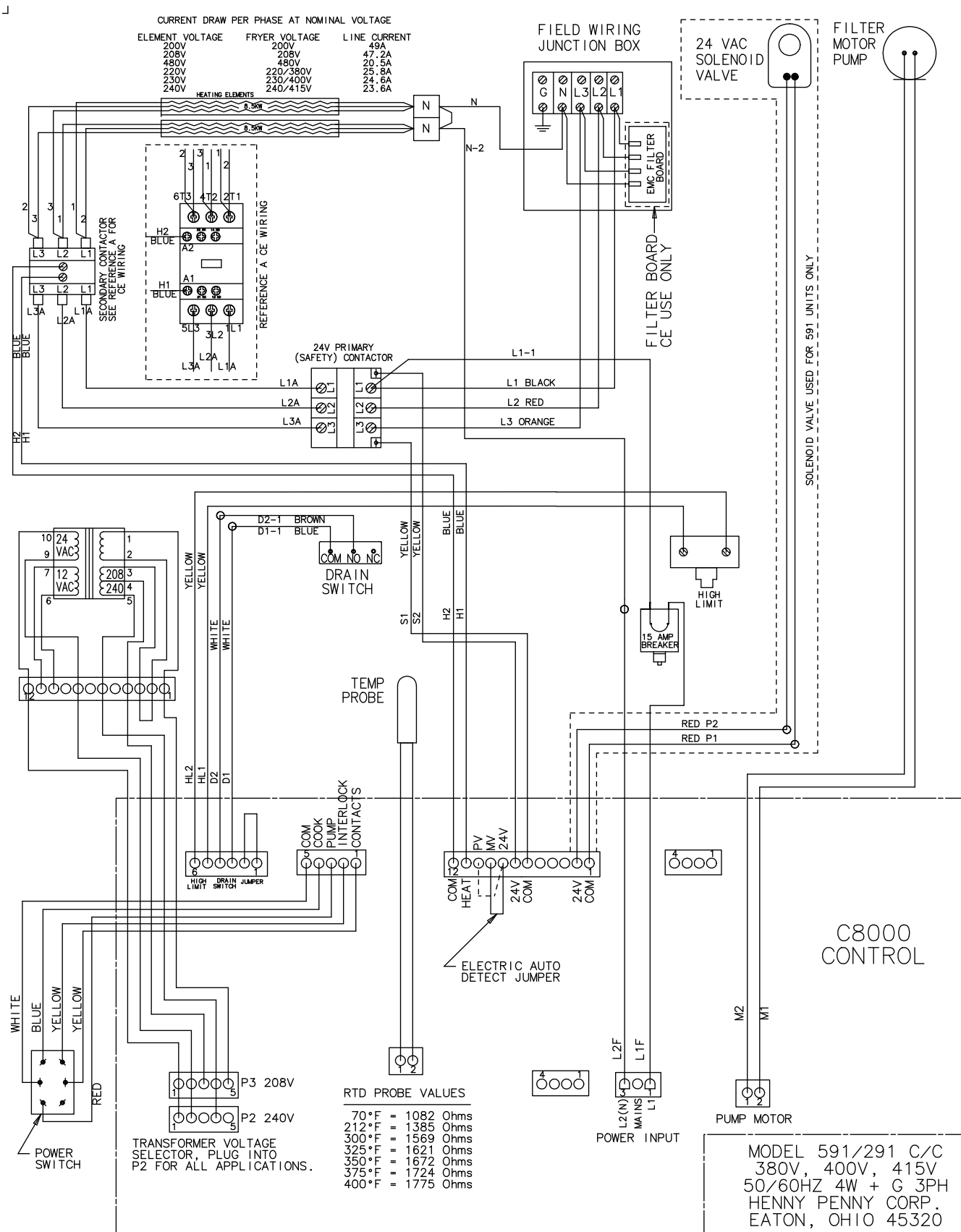


65252

SN: AC0608031 & ABOVE

**SN: AC0608030 & BELOW**

65250



65250

SN: AC0608031 & ABOVE

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 3. PARTS INFORMATION

3-1. INTRODUCTION

This section lists the replaceable parts of the Henny Penny Model 591 fryer.

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 damage to the unit or personal injury.

3-3. WHEN ORDERING PARTS

Once the parts that you want to order have been found in the parts list, write down the following information:

Item Number	<u>2</u>	Example:
Part Number	<u>16738</u>	
Description	High Limit	

From the data plate, list the following information:

Product Number	<u>01100</u>	Example:
Serial Number	<u>0001</u>	
Voltage	208	

3-4. PRICES

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

3-5. DELIVERY

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

3-6. 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 carrier at once so that a claim may be properly filed. Refer to warranty in the front of this manual for other rights and limitations.

3-7. 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.

3-8. INDEX OF PARTS LIST ILLUSTRATIONS

Title	Fig. No.	Page No.
FRAME & COVER ASSEMBLY.....	3-1	3-3
ELEMENT ASSEMBLY	3-2	3-5
COUNTERWEIGHT SYSTEM	3-3	3-6
LID & COVER ASSEMBLY	3-4	3-7
STEAM BOX & HOSE ASSEMBLY	3-5	3-9
DEADWEIGHT & SOLENOID ASSEMBLY	3-6	3-10
SOLENOID VALVE ASSEMBLY	3-7	3-12
CONTROL PANEL ASSEMBLY.....	3-9	3-14
BEHIND CONTROL PANEL COMPONENTS	3-10	3-15
FILTER PUMP ASSEMBLY (SN: LG012JC & BELOW)	3-11A	3-16
FILTER PUMP ASSEMBLY (SN: LG013JC & ABOVE).....	3-11B	3-18
OPTIONAL RINSE HOSE ATTACHMENTS (SN: LG012JC & BELOW)	3-12A	3-20
OPTIONAL RINSE HOSE ATTACHMENTS (SN: LG013JC & ABOVE).	3-12B	3-21
DRAIN VALVE & DRAIN SWITCH ASSEMBLIES.....	3-13	3-22
DRAIN PAN & FILTER ASSEMBLY	3-14	3-23
CARRIER, RACKS & JUNCTION BOX ASSY.....	3-15	3-25
OPTIONAL DIRECT-CONNECT KIT (SN: LG014JC & ABOVE).....	3-16	3-26

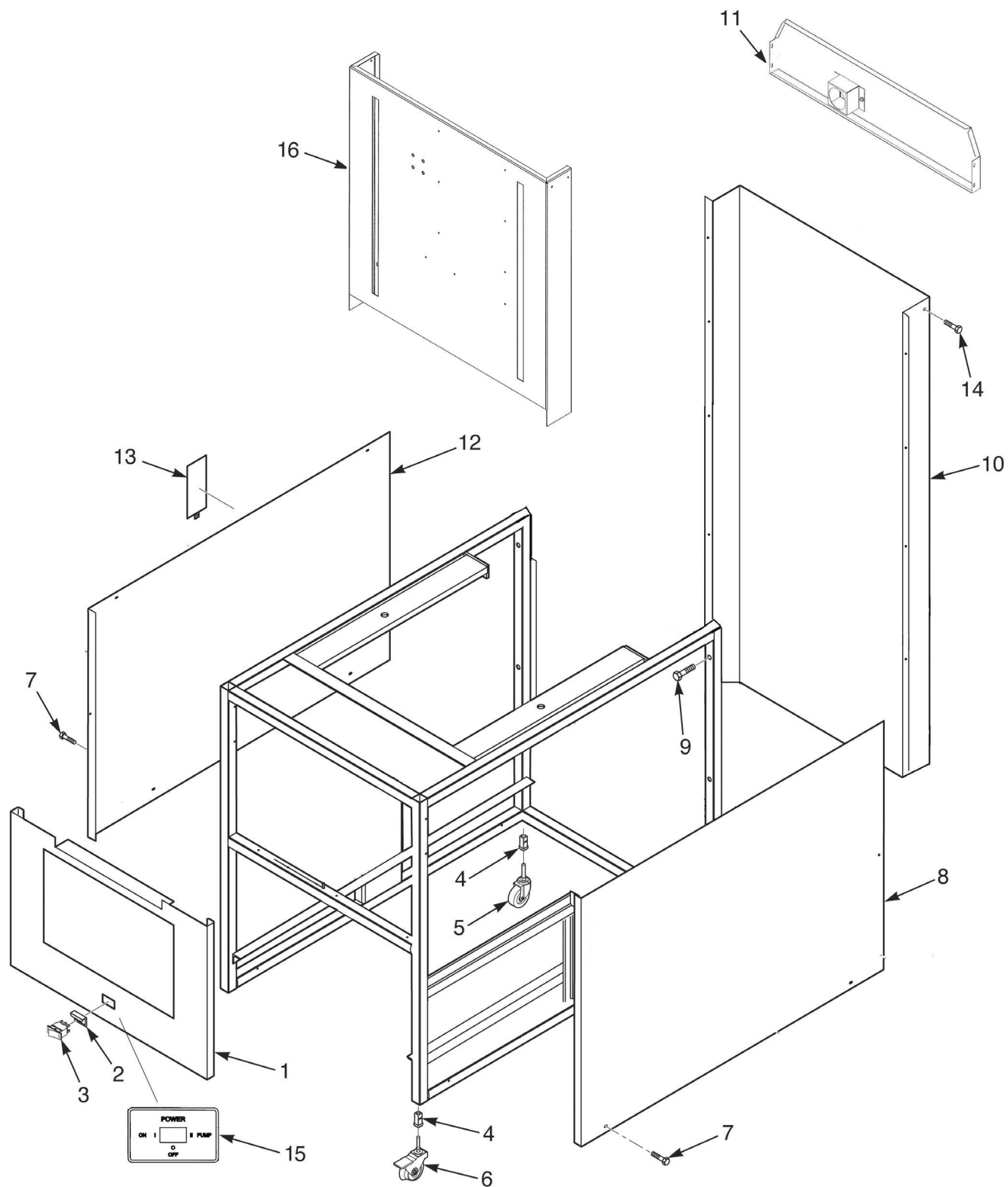


Figure 3-1. Frame and Cover Assembly

Figure & Item No.	Part No.	Description	Qty.
3-1		FRAME & COVER ASSEMBLY	
1	39796	WELDMENT – CONTROL PANEL FRONT.....	1
2	53669	GUARD – POWER SWITCH.....	1
√ 3	29898	SWITCH – POWER.....	1
4	54225	1” INSERT – LEG MACHINED.....	4
5	35154	CASTER, SWIVEL 4”.....	2
6	37246	CASTER W/BRAKE & SWIVEL LOCK.....	2
7	SC03-005	SCREW - - #8 x 1/2” PH PHD.....	4
8	66934	SIDE PANEL – RIGHT.....	1
9	SC01-215	SCREW - 5/16-18 x 2.5” HEX HD BOLT.....	4
10	37291	REAR SHROUD – ACCESS ASSEMBLY.....	1
11	35726	TOP COVER – REAR SHROUD.....	1
12	66933	SIDE PANEL – LEFT.....	1
12	14457	KIT - SOUND DEADENING.....	1
13	36337	DOOR – ACCESS.....	1
14	SC02-023	SCREW - #8-B x 3/8” PH THD SS.....	5
15	75696	LABEL - POWER/PUMP - ENGLISH.....	1
16	62085	REAR SHROUD.....	1

√ recommended part

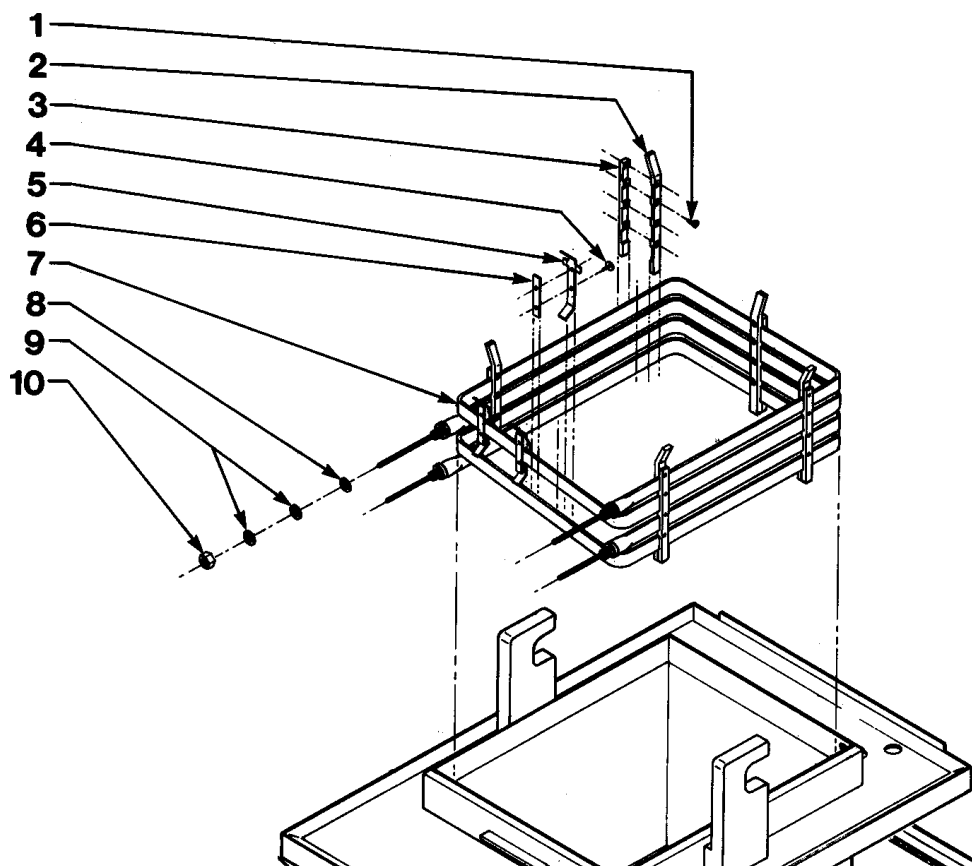


Figure & Item No.	Part No.	Description	Qty.
3-2		ELEMENT ASSEMBLY	
1	SC01-083	SCREW, (#10-32 x 1/2 PH FHD).....	As Required
2	35101	SUPPORT, ELEMENT - LONG	5
3	35100	SUPPORT, ELEMENT - SHORT.....	5
4	SC01-074	SCREW, (#10-32 x 1/2 PH THD S).....	As Required
5	35435	BRACKET, HI LIMIT PROBE.....	3
6	35462	BRACKET, HI LIMIT PROBE.....	3
√ 7	35234	HEAT ELEMENT ASSEMBLY, 8.5 KW 208V	2
√	35598	HEAT ELEMENT, 8.5 KW 240V	2
√	36407	HEAT ELEMENT, 8.5 KW 480V	2
√	48367	HEAT ELEMENT, 230 V(Int'l Only)	2
√	36290	HEAT ELEMENT, 220 V(Int'l Only)	2
8	16855	SEAL, O-RING	4
9	WA01-005	WASHER, (5/8 DIA. TYPE A - SERIES N).....	8
10	NS01-017	NUT, (5/8-18 B HEX)	4

√ recommended part

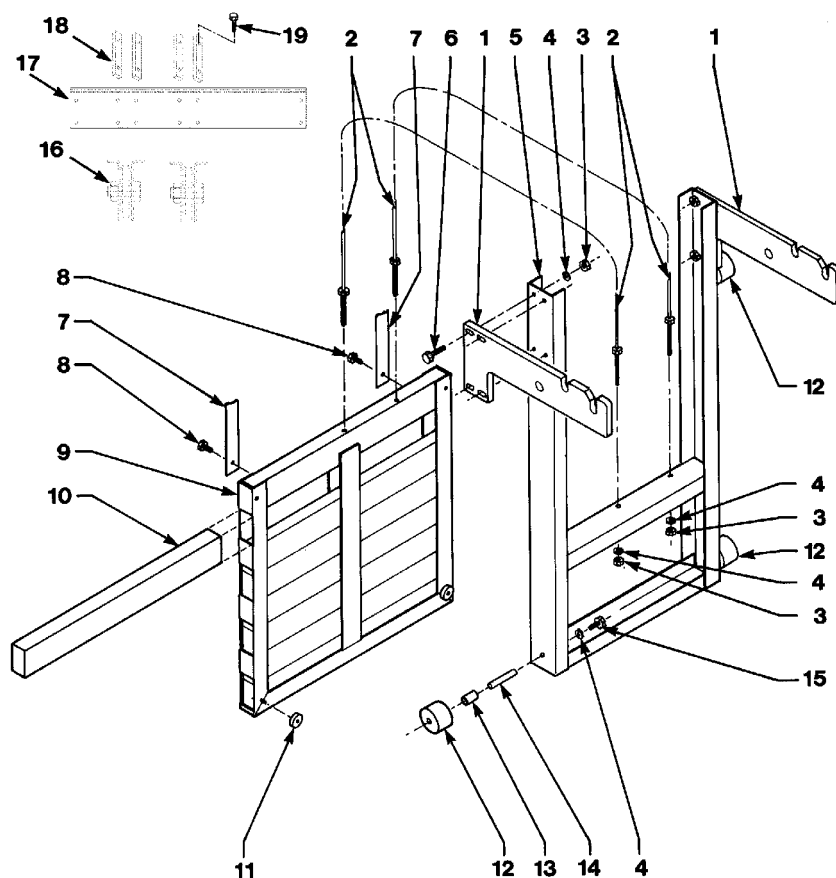
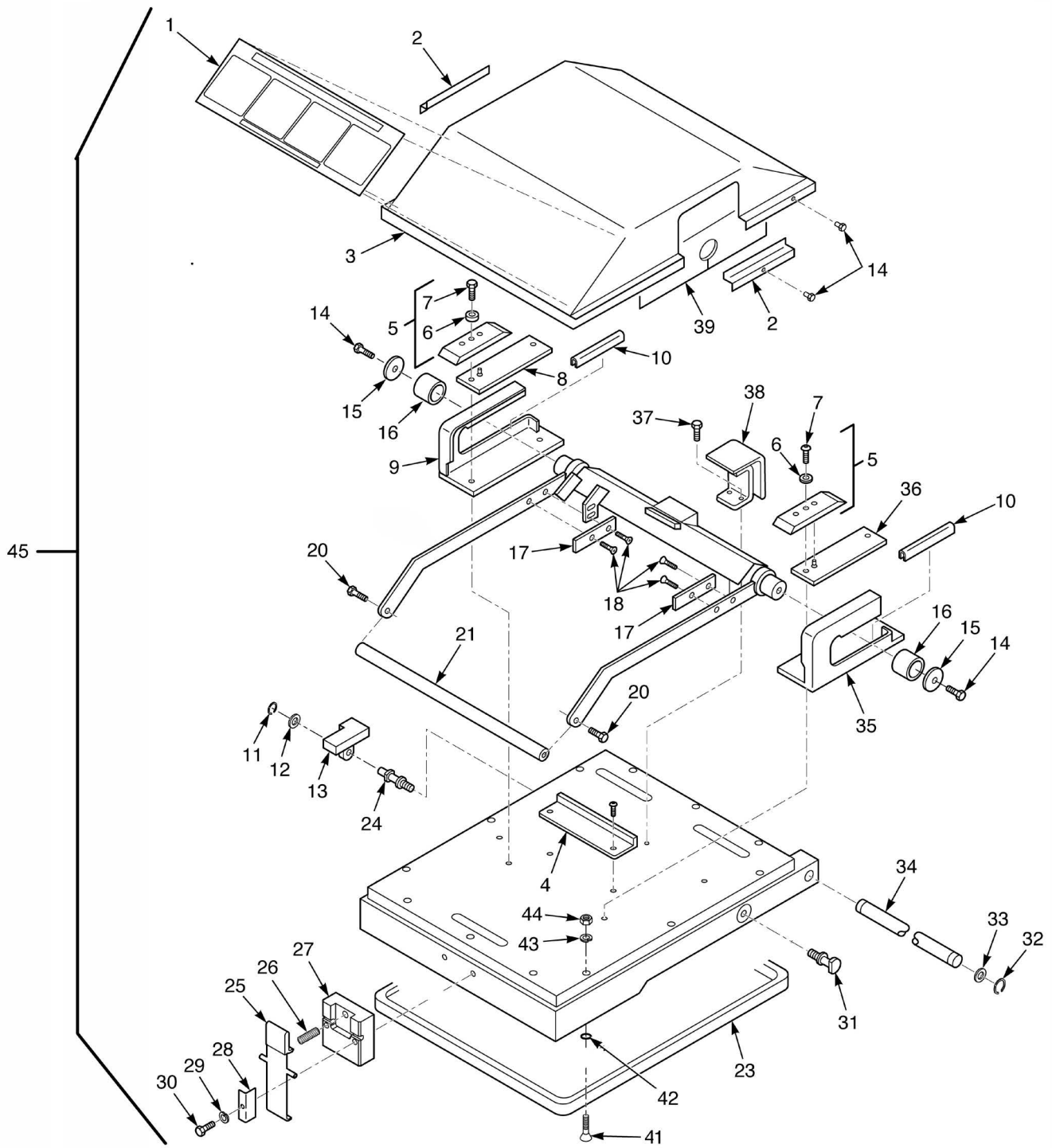


Figure & Item No.	Part No.	Description	Qty.
3-3		COUNTERWEIGHT SYSTEM	
1	35026	ARM, LID SUPPORT	2
√ 2	35207	CABLE	2
3	NS01-025	NUT, HEX 5/16-18 SS	10
4	LW01-010	WASHER, 3/8 SPLIT RING SS	10
5	35092	CARRIAGE	1
6	SC01-069	SCREW, 3/8-16 X 1-1/2 HEX HD S2P	8
7	36839	SLIDE	2
8	SC01-042	SCREW, 3/8-16 X 1 HEX C	2
9	36625	WELD ASSEMBLY, C/W CARRIAGE	1
10	36627	COUNTERWEIGHT BAR	7
11	36626	SPACER, C/W FRAME	2
12	37362	WHEEL, CARRIAGE	4
13	37363	SPACER, CARRIAGE WHEEL	4
14	37364	SPINDLE	4
15	SC01-081	SCREW, 3/8-24 X 3/4 HEX HD SS	4
16	35962	BRACKET/WHEEL ASSY	2
17	36561	BRACE, TOP FRAME	1
18	35954	PLATE, SUPPORT PULLEY	4
19	SC01-132	SCREW, CAP, SOC HD, 1/2-20 X 5/8	8

√ recommended part



3-4. LID & COVER ASSEMBLY

Figure & Item No.	Part No.	Description	Qty.
3-4		LID & COVER ASSEMBLY	
1	35792	LID INSTRUCTION LABEL	1
2	35675	FILLER-LID.....	2
3	35243	COVER-MAIN LID.....	1
4	35413	PLATE-TRIP	1
√ 5	52627	PRESSURE PAD ASSY.	2
6	49852	BUSHING-PRESSURE PAD	2
7	SC01-204	SCREW 1/4-20X1.00 SOCK BUTT	2
8	49962	PLATE, SHIM ASSY. (L.H.).....	1
9	49890	PLATE, CAM GUIDE (L.H.).....	1
10	35359	SLIDE (6")	2
11	RR01-004	RING, RETAINING 1/2"	1
12	WA01-020	WASHER, LID STOP	1
13	51531	CAST, LID STOP.....	1
14	SC01-074	SCREW, #10-32 x 1/2 PH THD SS.....	8
15	35223	WASHER, SPECIAL.....	1
16	35227	ROLLER, LINKAGE SHAFT	2
17	35339	GUIDE, HANDLE SIDE	2
18	SC01-062	SCREW, #6-32 x 3/8 PH FH	4
20	SC01-041	SCREW, 5/16-18 x 1.00 HEX HD C.....	2
21	36285	WELDMENT, HANDLE TAP PLATE.....	1
√ 23	34526	GASKET, LID - SN: AC0712021 & below	1
√ 23	66620	GASKET, LID - SN: AC0712022 & above.....	1
24	35945	PIN, LID SUPPORT.....	1
25	52497	LATCH ASSEMBLY, COATED	1
26	52498	LATCH SPRING	1
27	59169	LATCH BRACKET, LID (MACHINED).....	1
28	51707	LATCH BRACKET, LID	2
29	LW02-006	LOCKWASHER, LATCH.....	2
30	SC01-248	SCREW, LATCH, 10-32 x 1.25 PH THD SS.....	2
31	35032	PIN, LID SUPPORT.....	1
32	RR01-010	RING, RET. 3/4 SHAFT SS.....	2
33	36312	WASHER, LID HINGE.....	2
34	51697	PIN, LID HINGE.....	1
35	49895	PLATE, CAM GUIDE (R.H.)	1
36	49963	PLATE SHIM ASSEMBLY (R.H.)	1
37	SC01-146	SCREW, 1/4-20 x 3/4 HEX HD SS.....	2
38	52477	LIFT, LID	1
√ 39	35465	CAM SLIDE FILLER.....	2
41	SC01-195	SCREW, 8-32 x 1-7/16 PH FHD S.....	12
42	OR01-005	O-RING, 5/16 x 1/16 DIA.....	12
43	LW01-002	LOCKWASHER, SPLIT RING 1/4 S.....	12
44	NS01-008	NUT, 8-32 HEX.....	12
45	79418	ASSY - REBUILT LID.....	1

√ recommended part

* not shown

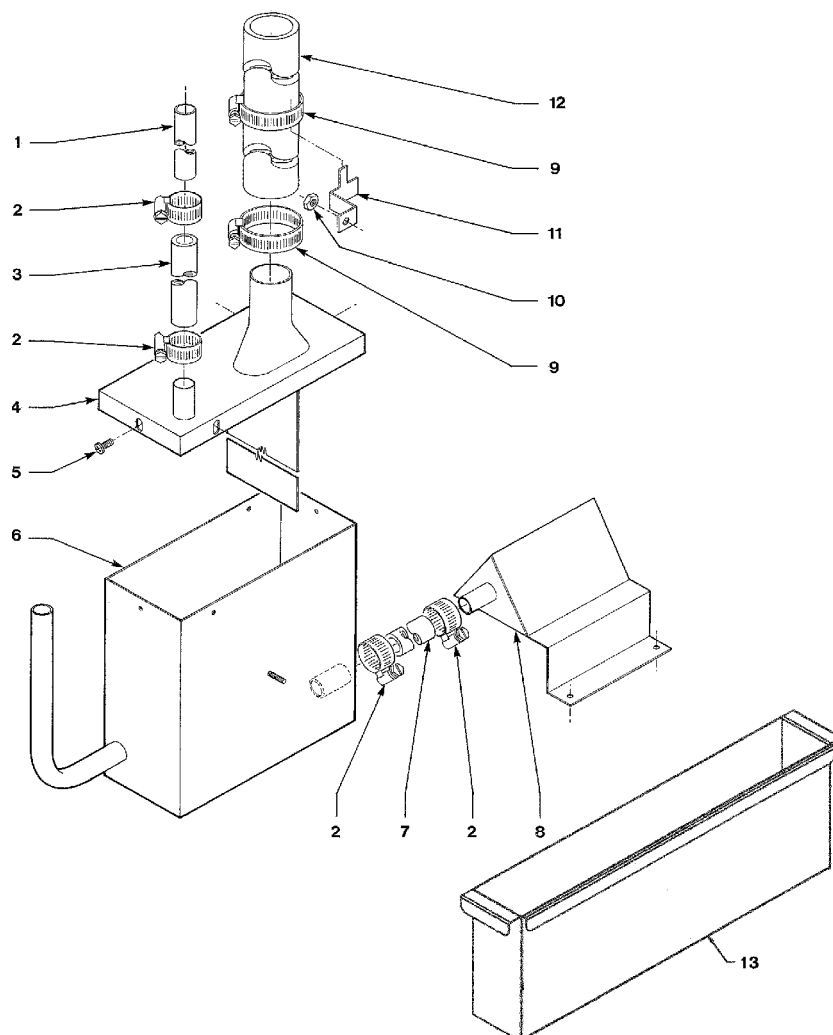
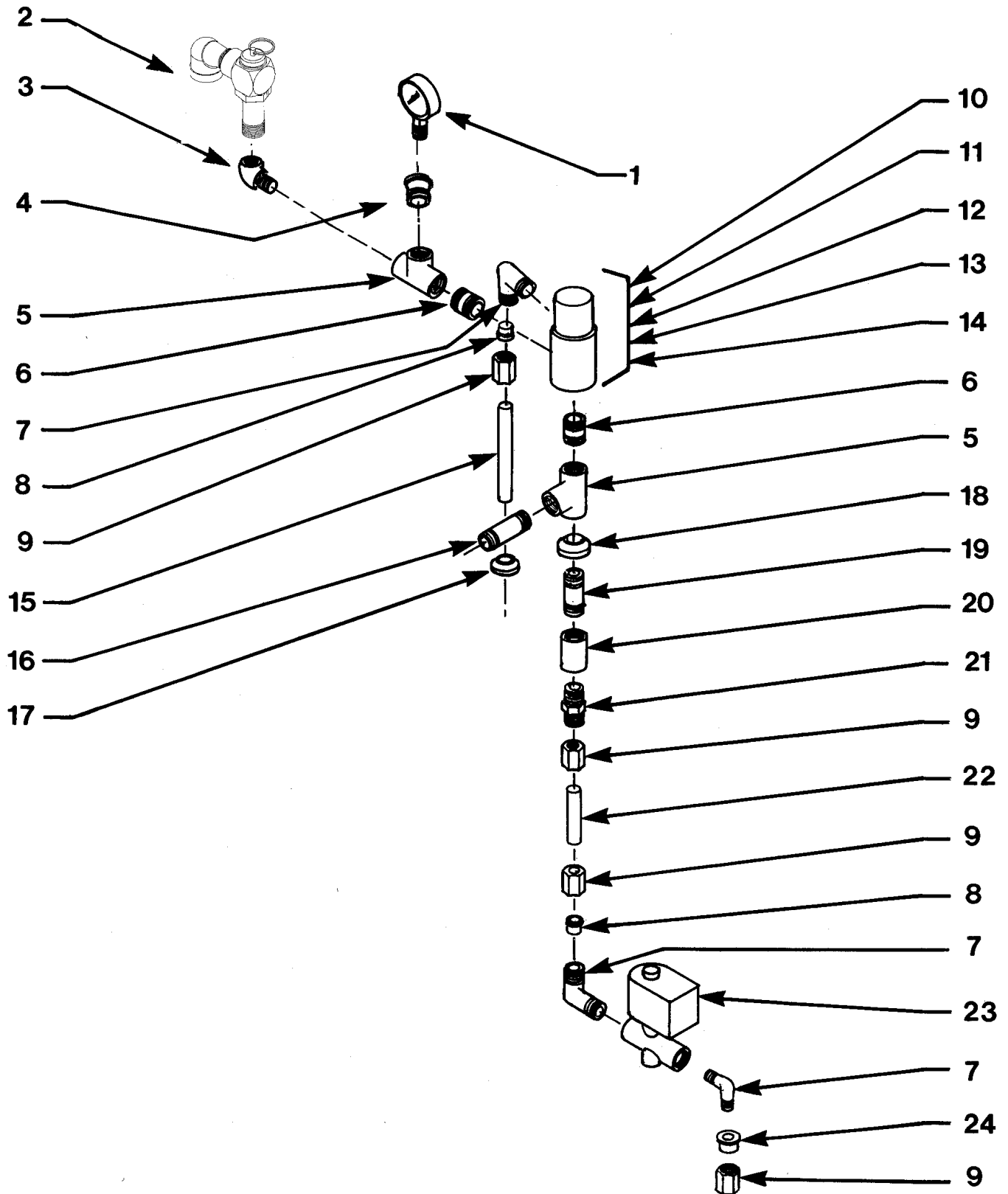


Figure & Item No.	Part No.	Description	Qty.
3-5		STEAM BOX & HOSE ASSY	
1	35686	TUBE, DW TO EXHAUST STACK SS.....	1
2	MS01-297	HOSE CLAMP, SS - .500 – 1.062 DID	4
3	35693	TUBE, EXHAUST CONNECT	1
4	35696	WELDMENT, STEAM EXHAUST BOX LID	1
5	SC02-041	SCREW, #8-18 X 7/16 PH IND XTRNL TRX	4
6	66732	WELDMENT, STEAM EXHAUST BOX.....	1
7	82517	HOSE, CONDENSATE (SN: AC0903045 & ABOVE)	1
7	66723	TUBE, CONDENSATE (SN: IG048JC - AC0903044)	1
7	62211	TUBE, CONDENSATE (SN: IG047JC & BELOW).....	1
8	69263	RESTRICTOR	1
9	MS01-315	HOSE CLAMP, ½ X 1-3/4 SS	2
10	NS01-011	NUT, (#10-32 HEX).....	1
11	36851	BRACKET, HOSE	1
12	21877	TUBING, STEAM EXHAUST.....	4
13	71409	CONDENSATE PAN WELDMENT	1
14*	EF02-118	2 HOLE CONDUIT CLAMP 1" EMT (cond. hose).....	1

* not shown



3-6. DEADWEIGHT & SOLENOID ASSEMBLY

Figure & Item No.	Part No.	Description	Qty.
3-6		DEADWEIGHT & SOLENOID ASSY	
√ 1	16910	PRESSURE GAUGE.....	1
√ 2	59742	RELIEF VALVE ASSY	1
3	FP01-127	ELBOW, STREET, ½ X ½, 90 DEGREE	1
4	FP01-063	REDUCER, ½ NPT M TO ¼ NPT F.....	1
5	FP01-011	PIPE TEE, ½ NPT 304 SS.....	2
6	FP01-028	NIPPLE, CLOSE ½ NPT.....	2
7	17407	CONNECTOR, ½ MALE ELBOW	3
8	16817	FITTING, SLEEVE TEFLON.....	As Required
9	16809	NUT FITTING.....	As Required
10	56307	CAP, DEAD WEIGHT	1
11	16902	SEAL "O" RING	1
12	16904	DEAD WEIGHT - 9 PSI	1
12	65449	DEAD WEIGHT - 3 PSI	1
13	16906	ORIFICE, 9 PSI.....	1
14	16852	BODY, VALVE.....	1
15	35686	TUBE, DW TO EXHAUST STACK.....	1
16	35817	PIPE NIPPLE, ½ X 2 ¼ SS	1
17	16804	UMBRELLA GROMMET	1
18	35200	UMBRELLA GRAMMET	1
19	35474	PIPE NIPPLE, ½ X 2.....	1
20	FP01-066	COUPLING, ½ NPT SS	1
21	16807	FITTING CONNECTOR, MALE	1
22	35147	TUBE, STEAM EXHAUST - UP	1
23	29515	VALVE, SOLENOID 24V, 60HZ.....	1
23	29698	VALVE, SOLENOID 24V, 50HZ.....	1
24	16808	FITTING SLEEVE, STEEL.....	1

√ recommended part

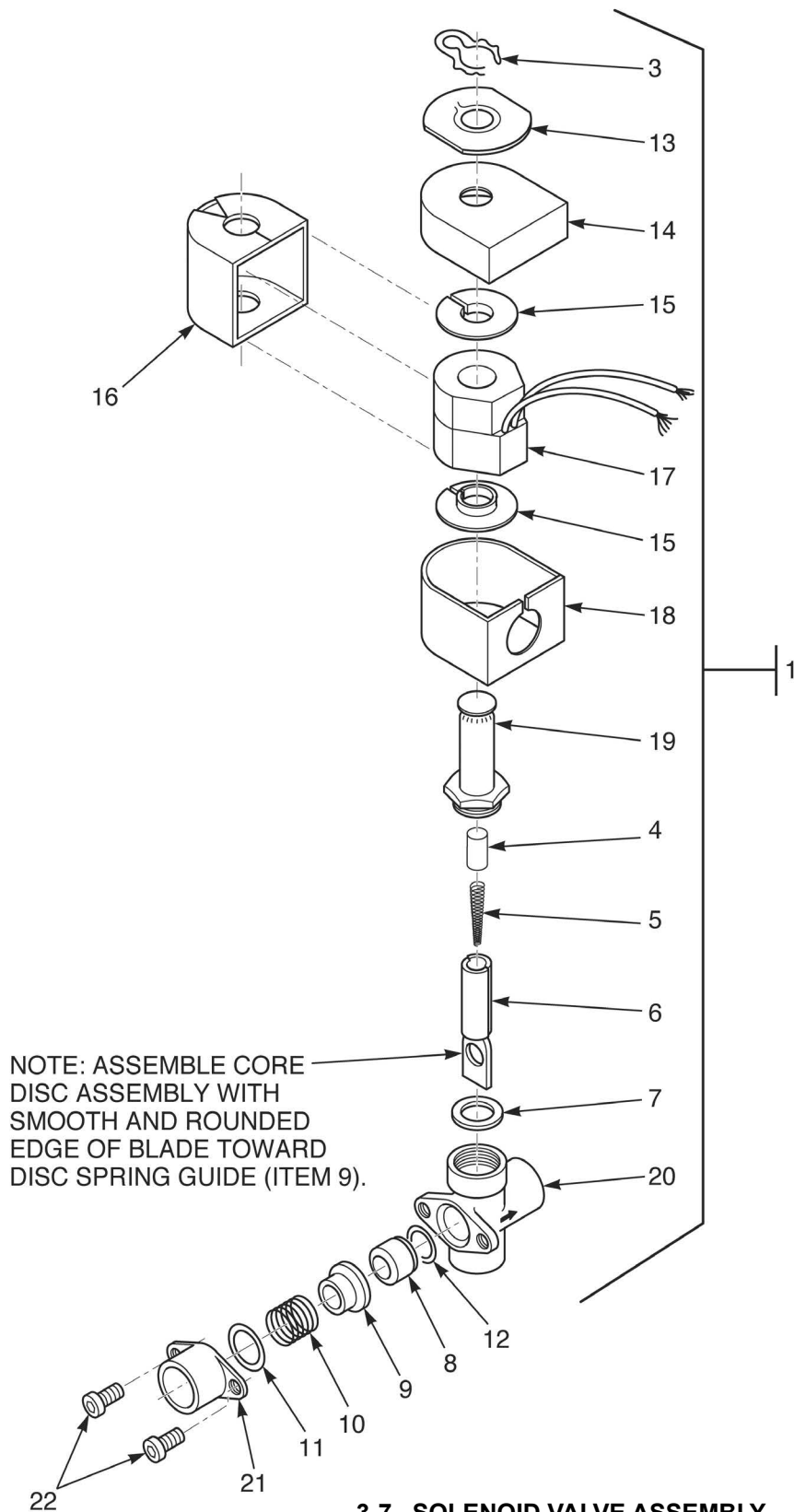


Figure & Item No.	Part No.	Description	Qty.
3-7		SOLENOID VALVE ASSEMBLY	
1	29515	VALVE, SOLENOID 24V, 60 Hz.....	1
1	29698	VALVE, SOLENOID 24V, 50 Hz.....	1
√ 2*	17120	KIT, SOLENOID VALVE REPAIR.....	1
3	17101	CLIP, RETAINER.....	1
4	17109	RETAINER, SPRING.....	1
5	17110	SPRING, CORE.....	1
6	17111	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	29547	COIL, 24V, 60 Hz.....	1
√ 17	29575	COIL, 24V, 50 Hz.....	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 part

* not shown

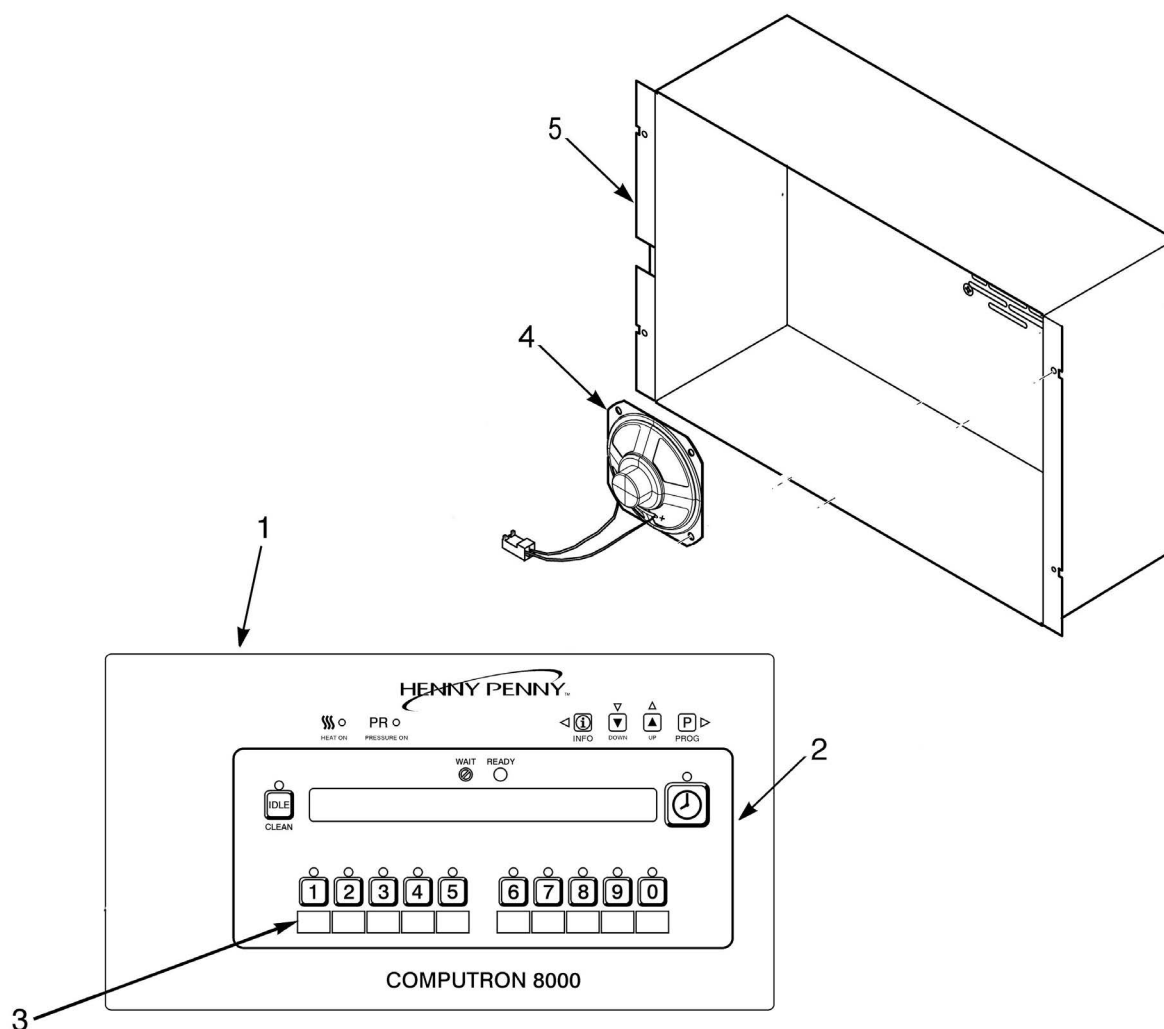


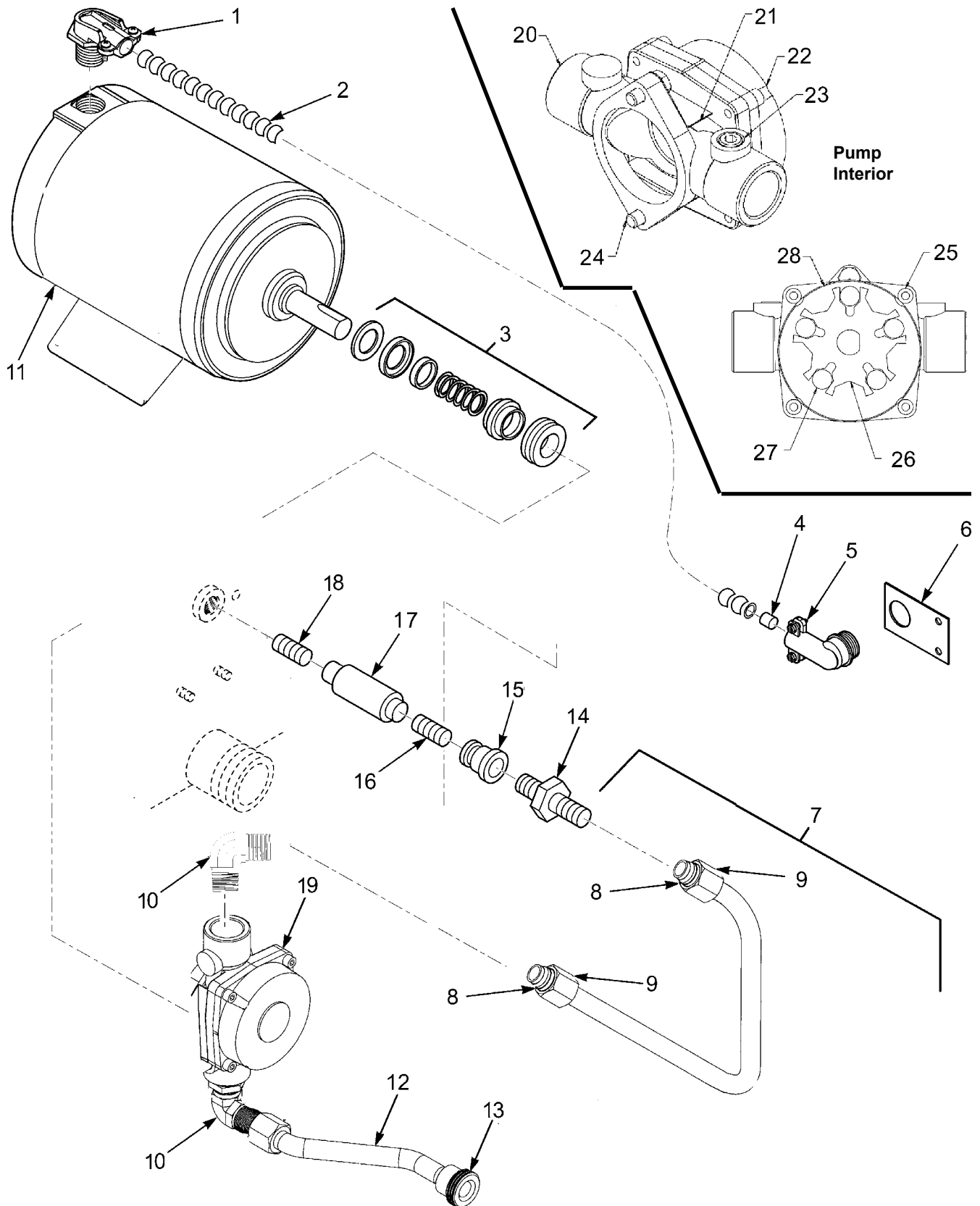
Figure & Item No.	Part No.	Description	Qty.
3-9		CONTROL PANEL ASSEMBLY	
✓ 1	65279RB	ASSY - 8 HEAD C8000 CONTROL.....	1
2	65236	DECAL – 8 HEAD C8000	1
3	32634	MENU CARD C8000 BLANK.....	1
3	65922	MENU CARD C8000 8-HD HP GM	1
✓ 4	26974	WIRE/SPEAKER ASSY	1
5	65661	STUD ASSY-8-HEAD-C8000- COVER.....	1
6*	65893RB	ASSY - I/O BOARD.....	1
7*	14686	KIT, 590 TO 591 CONVERSION - 60HZ.....	1
7*	14687	KIT, 590 TO 591 CONVERSION - 50HZ.....	1
7*	14690	KIT, 592 TO 591 CONVERSION - 60HZ.....	1
7*	14691	KIT, 592 TO 591 CONVERSION - 50HZ.....	1

✓ recommended part/* not shown



Figure & Item No.	Part No.	Description	Qty.
3-10		BEHIND CONTROL PANEL COMPONENTS	
√ 1	29510	CONTACTOR - MERCURY 24V (BEFORE SN: AC0909001)	1
√ 1*	65073	CONTACTOR - 24V (SN: AC0909001 & ABOVE).....	1
√ 2	29901	CAPACITOR-RESISTOR ASSY.....	1
√ 3	29509	CONTACTOR KIT - 24V 4	1
4	17216	BRACKET ASSY- HIGH LIMIT √ 5	1
√ 5	16738	450° F HIGH LIMIT √ 5	1
√ 5	60241	425° F HIGH LIMIT - CE.....	1
√ 6	EF02-125	BREAKER-PUSH BUTTON RESET-15 AMP SN: AC0608031& ABOVE- Non-CE units (10/4/07 and After - CE units)	2
√ 6	18364	FUSE HOLDER ASSY - 15 AMP (SN: AC0608030 & BELOW - Non-CE units)	2
√ 6	EF02-006	FUSE HOLDER.....	2
√ 6	EF02-007	FUSE - 15 AMP.....	2
√ 6	EF02-104	FUSE HOLDER - 20A-250V-CE (Before 10/4/07).....	1
√ 6	EF02-105	FUSE - 15 AMP - CE (Before 10/4/07).....	1
√ 7	140084	KIT, TEMPERATURE PROBE.....	1
√ 8*	72854	ASSY - TRANSFORMER - 24VAC - C8000.....	1

√ recommended part/* not shown



3-11A. FILTER PUMP ASSEMBLY (SN: LG012JC & BELOW)

Figure & Item No.	Part No.	Description	Qty.
3-11A		FILTER PUMP ASSY (SN: LG012JC & BELOW)	
1	18107	CONDUIT CONNECTOR 3/8 X 90	1
2	54484	BLOWER/PUMP – FLEXIBLE CONDUIT	1
√ 3	17476	PUMP SEAL KIT	1
4	18105	ANTI SHORT 3/8 INCH	2
5	18644	CONDUIT CONNECTOR 3/8 X 90	1
6	51831	PUMP CONDUIT BRACKET	1
7	55836	ASSY – OIL RETURN LINE	1
8	16808	SLEEVE, FITTING	2
9	16809	NUT, FITTING	2
10	17407	CONNECTOR, 1/2 MALE ELBOW	2
√ 11	67583	MOTOR – FILTER PUMP - 1/2 HP	1
12	14669	KIT - FILTER PUMP RETURN LINE	1
12	62206	ASSY - TUBE - PUMP TO DISCON - 590	1
√ 13	17430(use69289)	UNION, MALE FITTING	1
14	16807	FITTING, CONNECTOR MALE	1
15	FP01-122	REDUCER, 3/8 TO 1/2	1
16	FP02-024	NIPPLE, CLOSE 3/8	1
√ 17	35472	CHECK VALVE - PRESSURE	1
18	FP02-007	NIPPLE 3/8 X 1-1/2	1
19	17437	PUMP SUBASSY 5 GPM	1
20	17454	BODY - PUMP	1
21	17456	PUMP SHIELD	2
22	17451	COVER - PUMP	1
23	SC01-016	PLUG 1/4 HEX COUNTERSUNK	1
24	SC01-026	SCREW 5/16-18 X 3/4 HEX HD C	2
25	SC01-132	1/4-20 X 5/8 SOC HD CAP SCREW	4
26	17447	ROTOR - PUMP	1
27	17446	ROLLER - TEFLON SET	1
28	17453	PUMP O RING GASKET	1
29*	67589	ASSY - FILTER PMP & 1/2 HP MOTOR	1

√ recommended part

* not shown

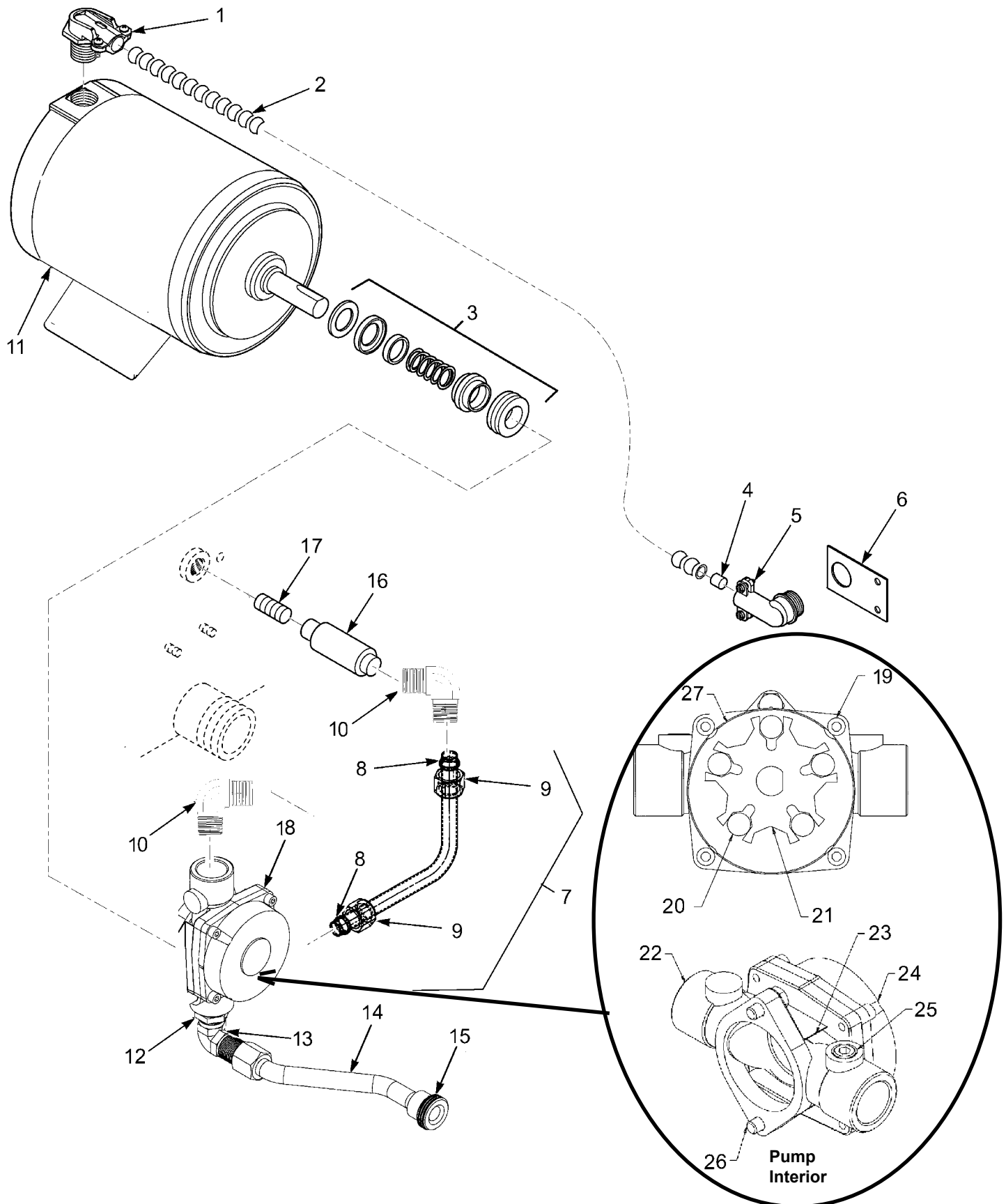
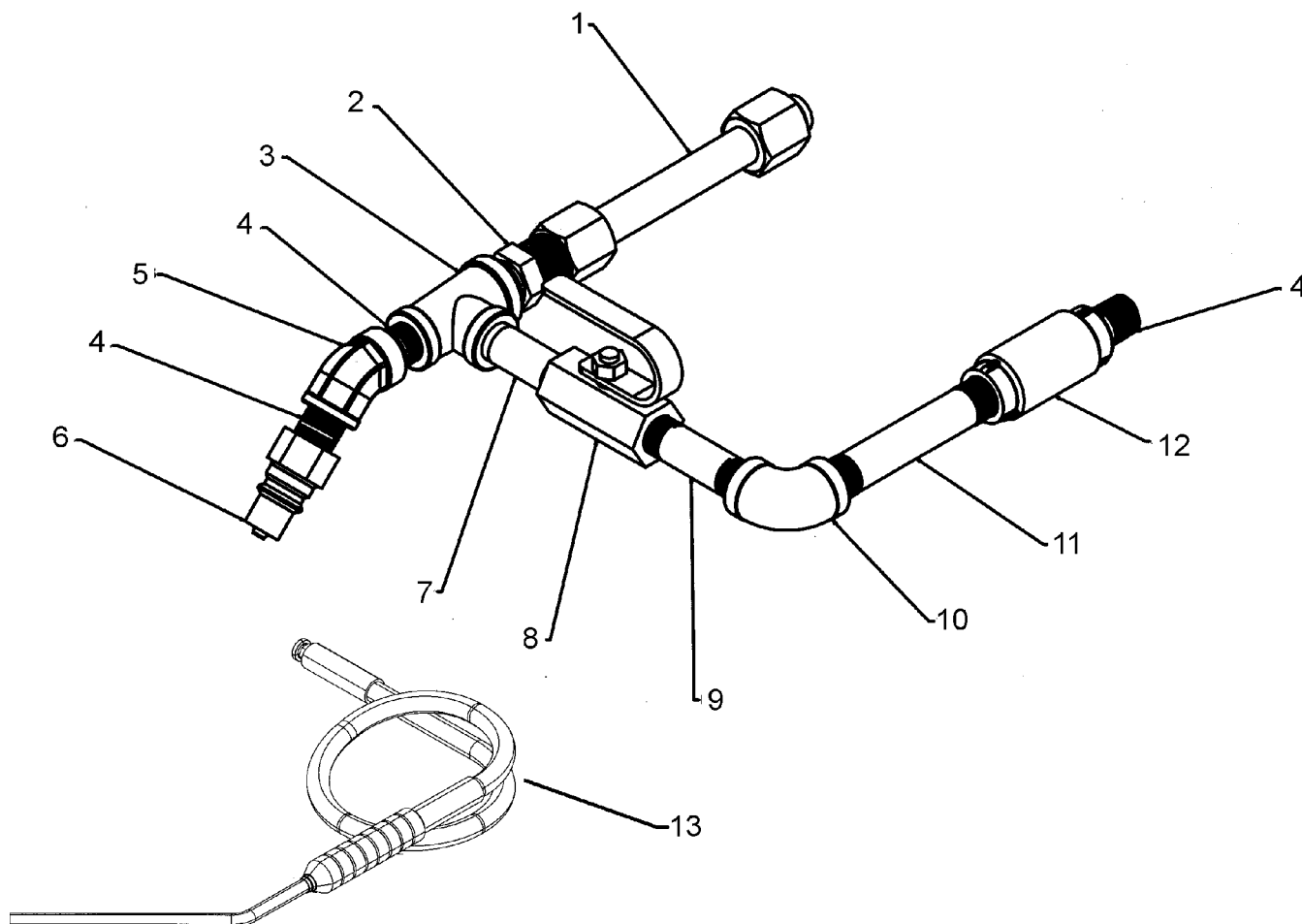


Figure & Item No.	Part No.	Description	Qty.
3-11B		FILTER PUMP ASSY (SN: LG013JC & UP)	
1	18107	CONDUIT CONNECTOR 3/8 X 90	1
2	54484	BLOWER/PUMP – FLEXIBLE CONDUIT	1
√ 3	17476	PUMP SEAL KIT	1
4	18105	ANTI SHORT 3/8 INCH	2
5	18644	CONDUIT CONNECTOR 3/8 X 90	1
6	51831	PUMP CONDUIT BRACKET	1
7	66618	ASSY – OIL RETURN LINE	1
8	N/A	SLEEVE, FITTING	2
9	N/A	NUT, FITTING	2
10	FP01-169	CON-90 MALE 3/4 TUBE 3/4 NPT	2
√ 11	67583	MOTOR – FILTER PUMP	1
12	FP01-089	BUSHING - REDUCING 3/4M TO 1/2F	1
13	17407	CONNECTOR, 1/2 MALE ELBOW	1
14	62206	ASSY - TUBE - PUMP TO DISCON - 590	1
15	17430(use69289)	UNION, MALE FITTING	1
√ 16	21800	VALVE - 3/4 CHECK	1
17	FP02-021	NIPPLE - 3/4 NPT X 3 IN LG BL	1
		SN: AC0805020 AND BELOW	
17	FP02-033	NIPPLE - 3/4 NPT X 4 IN BL	1
		SN: AC0805021 AND ABOVE	
18	64218	PUMP SUBASSY 8 GPM	1
√ 19	SC01-132	1/4-20 X 5/8 SOC HD CAP SCREW	4
√ 20	23469	ROLLER - 8 GPM PUMP	5
√ 21	23468	ROTOR - 8 GPM PUMP	1
√ 22	23647	BODY - 8 GPM PUMP	1
√ 23	17456	PUMP SHIELD	2
√ 24	23470	CAP - 8 GPM PUMP	1
√ 25	FP01-020	PLUG 1/4-18 HEX LEVEL SEAL	1
√ 26	SC01-026	SCREW 5/16-18 X 3/4 HEX HD C	2
√ 27	17453	PUMP O RING GASKET	1
28*	69356	ASSY - 3/4" PUMP & MOTOR	1

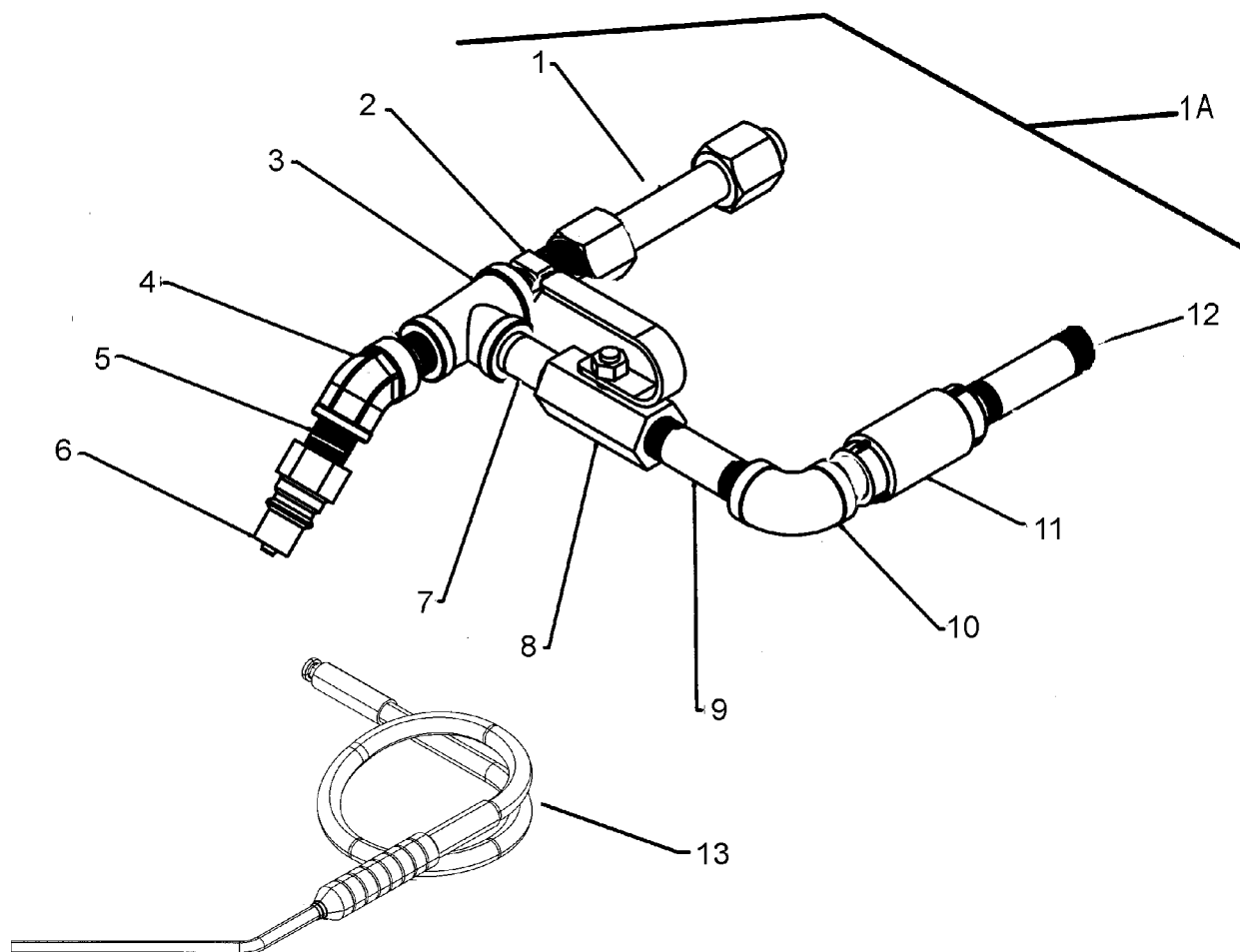
√ recommended part

* not shown



3-12A. OPTIONAL RINSE HOSE ATTACHMENTS (SN: LG012JC & BELOW)

Figure & Item No.	Part No.	Description	Qty.
3-12A		OPTIONAL RINSE HOSE ATTACHMENTS	
1	66677	ASSY - RINSE HOSE - TUBE - 591	1
2	16807	FITTING - MALE CONNECTOR.....	1
3	17306	PIPE TEE FITTING	1
4	FP02-024	NIPPLE - 3/8 NPT - CLOSE B. I.	3
5	FP01-133	ELBOW - 3/8 NPT X 45 - FEMALE	1
6	17334	RINSE HOSE DISCONNECT - MALE.....	1
7	FP02-042	NIPPLE - 3/8 X 2 LG B. I.	1
8	59185	VALVE - FILTER (SMALL C HANDLE)	1
9	FP02-043	NIPPLE - 3/8 NPT X 2.5 B. I.	1
10	17319	PIPE ELBOW - 3/8.....	1
11	FP01-116	NIPPLE - 3/8 NPT X 4" LG B. I.	1
12	35472	CHECK VALVE - PRESSURE	1
13	03003	DETACHABLE HOSE ASSEMBLY	1



3-12B. OPTIONAL RINSE HOSE ATTACHMENTS (SN: LG013JC & ABOVE)

Figure & Item No.	Part No.	Description	Qty.
3-12B		OPTIONAL RINSE HOSE ATTACHMENTS	
1A	14780	KIT - PFE590-RINSE HOSE ATTACH	1
1	66450	ASSY -PUMP TO VALVE TUBE - 591	1
2	FP01-170	CONNECTOR - STRAIGHT MALE 3/4 NPT	1
3	FP01-171	TEE - 3/8 X 3/4 X 3/4 B. I.	1
4	FP01-172	ELBOW - 45 STREET 3/8 NPT B. I.	1
5	FP02-024	NIPPLE - 3/8 NPT - CLOSE B. I.	1
6	17334	RINSE HOSE DISCONNECT - MALE	1
7	FP02-044	NIPPLE - 3/4 X 2 LG B. I.	1
8	23430	VALVE - 3/4 INLET - E34X	1
9	16282	NIPPLE - 3/4 X CLOSE	1
10	FP01-100	ELBOW - STREET 3/4 NPT B. I.	1
11	21800	VALVE - 3/4 CHECK	1
12	FP02-021	NIPPLE - 3/4 NPT X 3 IN LG B. I.	1
13	03003	DETACHABLE HOSE ASSEMBLY	1

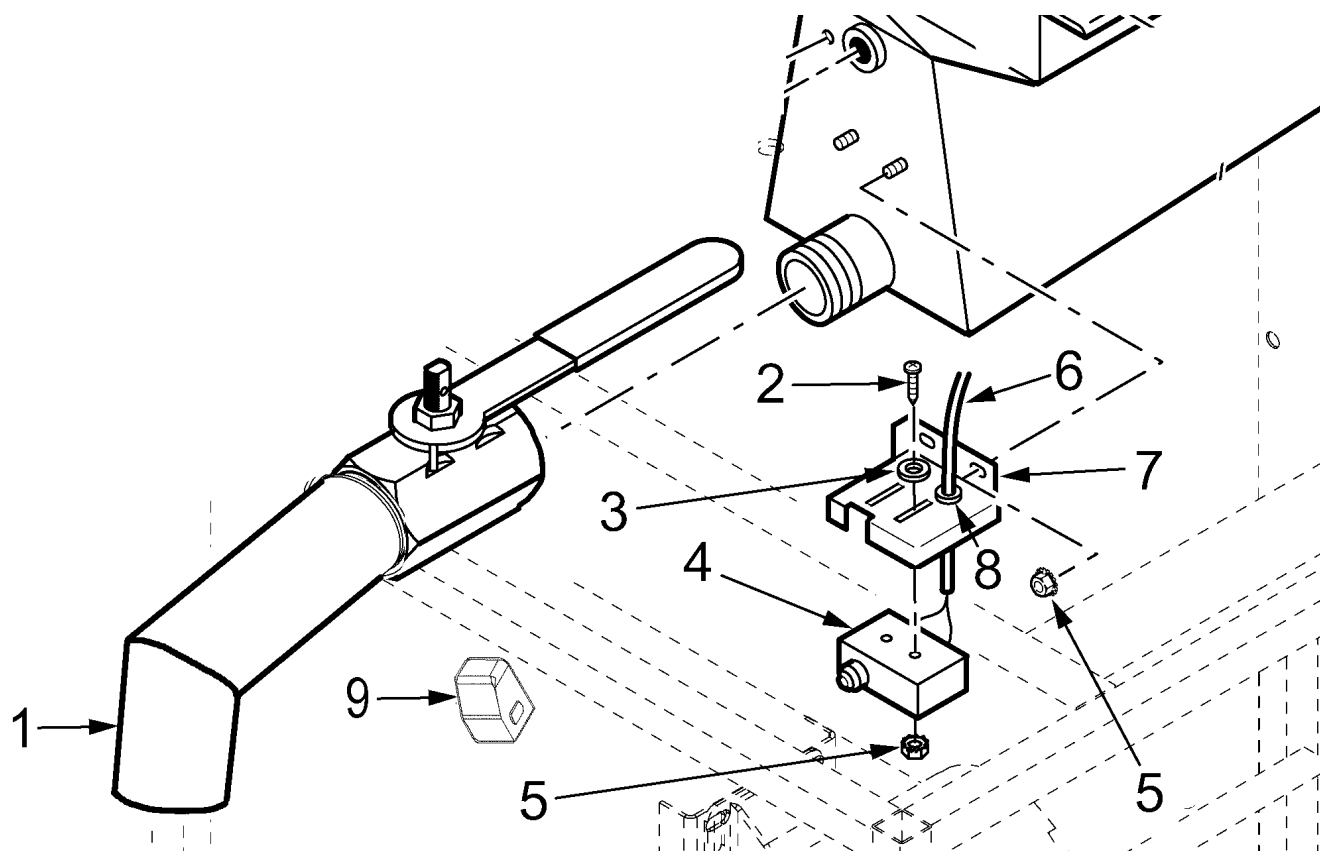
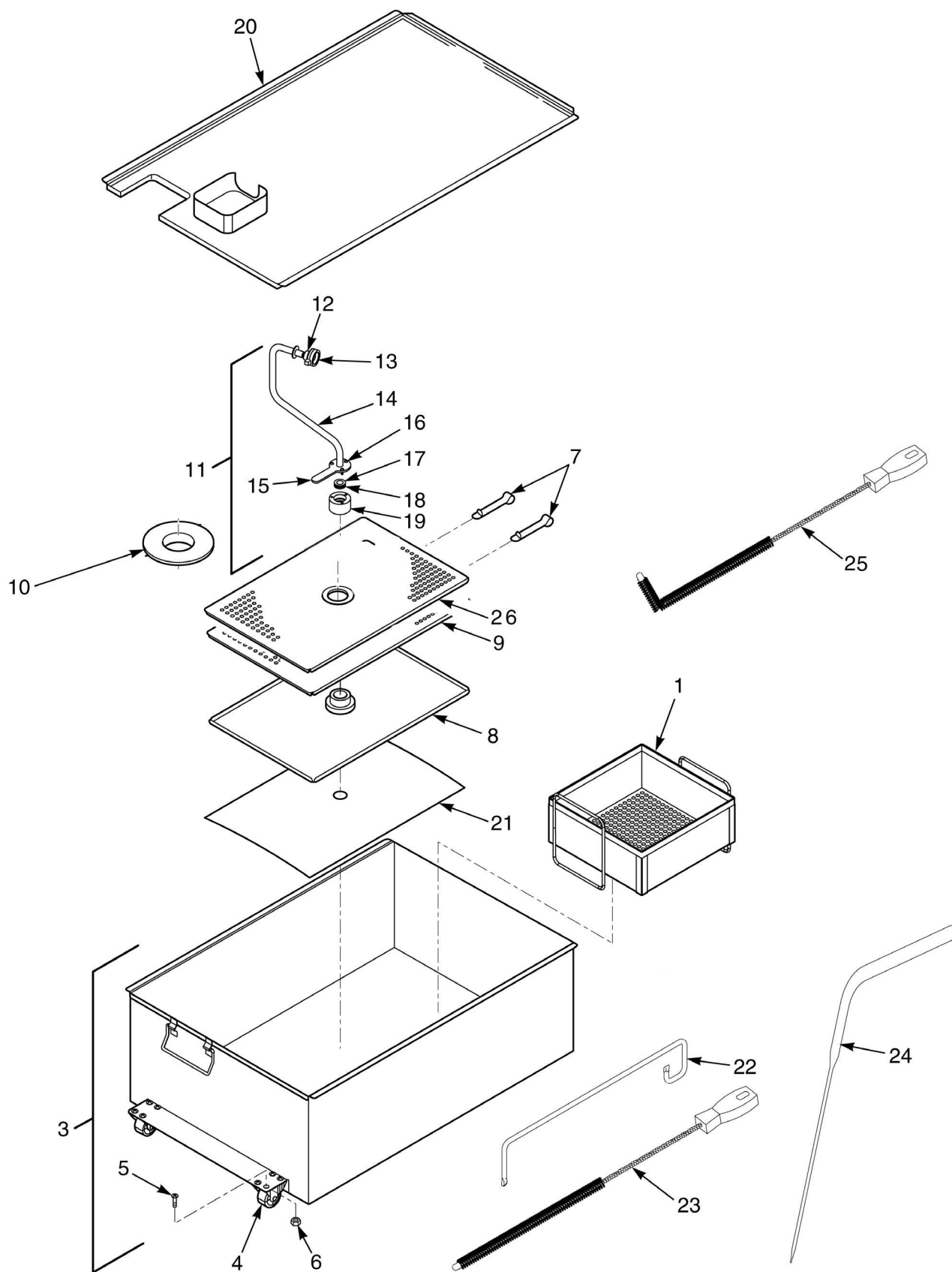


Figure & Item No.	Part No.	Description	Qty.
3-13		DRAIN VALVE & DRAIN SWITCH ASSEMBLIES	
1	66520	DRAIN VALVE ASSY (SN: LG012JC & BELOW)	1
1	66553	DRAIN VALVE ASSY (SN: LG013JC & ABOVE)	1
2	SC01-058	SCREW #6-32 X 1 PH. PAN HD.	2
3	WA01-006	WASHER #6 TYPE A.....	2
√ 4	54228	DRAIN SWITCH W/BOOT.....	1
5	NS02-005	NUT #6-32 HEX.....	2
6	52519	CORD ASSY - DRAIN INTERLOCK.....	1
7	65522	BRACKET, SWITCH (SN: AC0403050 & below).....	1
7	67619	BRACKET, SWITCH (SN: AC0403051 & above).....	1
8	EF02-017	STRAIN RELIEF.....	2
9	67617	BRACKET - MICROSWITCH TRIGGERING.....	1
10*	76579	PLATE - D/I SWITCH COVER.....	1

√ recommended part

* not shown



3-14. DRAIN PAN & FILTER ASSEMBLY

Figure & Item No.	Part No.	Description	Qty.
3-14		DRAIN PAN & FILTER ASSEMBLY	
1	52194	CRUMB CATCHER (OPTIONAL)	1
2*	03203	CRUMB CATCHER BASKET W/HANDLE	1
		(OPTIONAL) (FITS INSIDE FRYPOT)	
2*	21471	CRUMB CATCHER BASKET ASSEMBLY	1
2*	24491	HANDLE - CRUMB BASKET	1
3	52496	FILTER DRAIN PAN ASSEMBLY	1
4	52487	CASTER	2
5	SC01-009	SCREW 1/4-20 X 1/2	8
6	NS02-002	NUT 1/4-20	8
7	17505	FILTER CLIPS	2
8	17503(use 14674)	BOTTOM FILTER SCREEN	1
		(SN:AC0503055 AND BELOW)	
8	65447	BOTTOM FILTER SCREEN-SS	1
		(SN: AC0503056 AND ABOVE)	
9	17502(use 14674)	TOP FILTER SCREEN	1
		(SN:AC0503055 AND BELOW)	
10	36305	WASHER & STANDPIPE	1
11	24212	STANDPIPE ASSEMBLY	1
		(SN:AC0503055AND BELOW)	
11	14658	KIT, 8 HEAD PICK-UP TUBE	1
		(SN AC0503056 & ABOVE)	
√ 12	17431(use 69289)	UNION - MALE FITTING	1
√ 13	17432(use 69289)	UNION - HANDLE FITTING	1
14	24211	WELDMENT, FILTER TUBE AND WASHER.....	1
15	23740	HANDLE, STANDPIPE 8 HEAD.....	1
16	SC01-245	SCREW 10-32 X 1/2	3
17	23804	INSERT, FILTER NUT	1
18	OR01-007	O-RING, FILTER NUT INSERT.....	1
19	23803	FILTER NUT (SN:AC0503055 AND BELOW)	1
19	66535	FILTER NUT (SN AC0503056 & ABOVE)	1
20	62082	FILTER DRAIN PAN COVER ASSEMBLY	1
√ 21	12102	FILTER ENVELOPE PAPER (100 PER CARTON)	1
22	65776	ROD - LONG CLEAN OUT	1
√ 23	35771	BRUSH	1
24	35310	STIRRER	1
√ 25	12126	BLACK L-BRUSH.....	1
26	65211	CRUMB CATCHER - SS	1

√ recommended part

* not shown

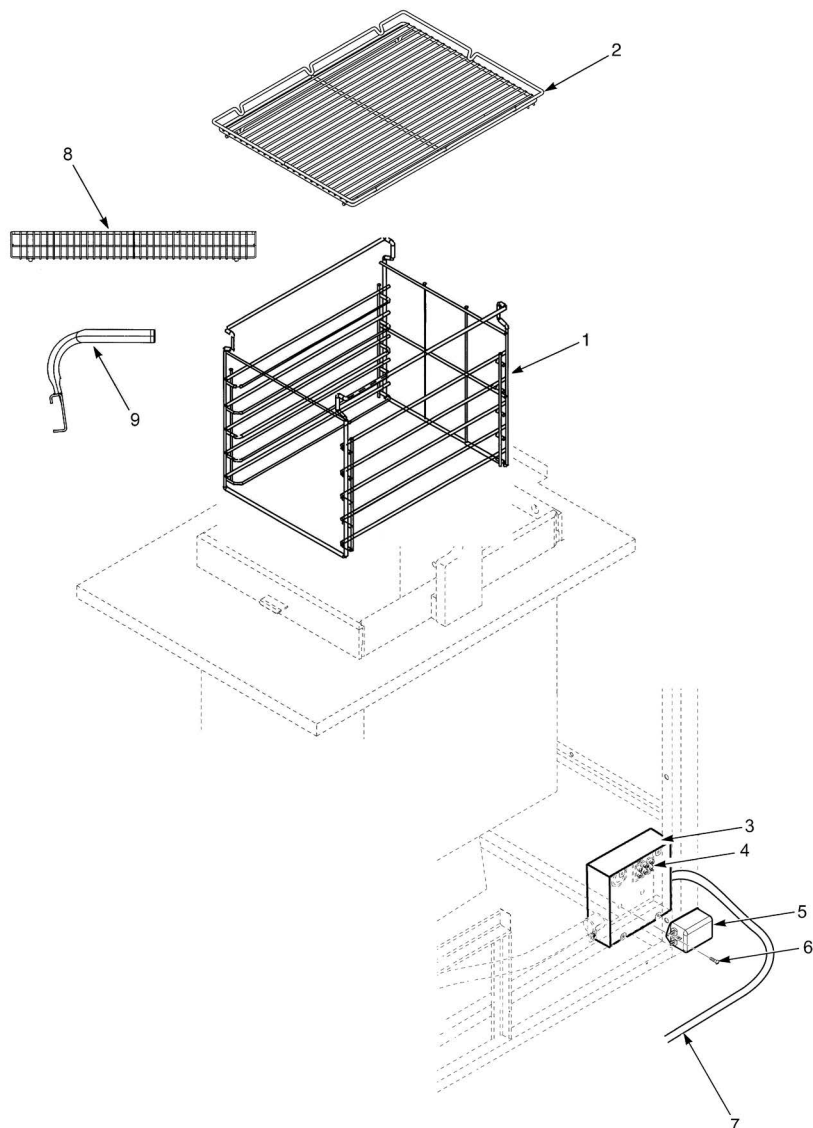


Figure & Item No.	Part No.	Description	Qty.
3-15		CARRIER, RACKS & JUNCTION BOX ASSY	
1	35194	CARRIER ASSY	1
2	44782	RACK HALF SIZE – 8 HEAD FRYER.....	1
3	62126	JUNCTION BOX ASSY.....	1
3	62127	JUNCTION BOX ASSY - CE	1
4	65427	ASSY - 5-POLE TERMINAL BLOCK - CE	1
√ 5	51057	ASSY - EMC FILTER - CE.....	1
6	SC01-023	SCREW #6-32 X 1/4 PH RHD C	8
7	65180	ASSY - MAIN POWER CORD	1
7	65181	CORD - 291/591 POWER	1
*	58146	PLUG-90, 60A, 3PH, 250V, #15-60P	1
8	36404	WIRE BASKET - GM 8 HEAD.....	4
9	36374	ASSY - BASKET HANDLE WELD.....	1
10*	19923	TRANSFORMER - LARGE - 480 VOLT	1
11*	70824	ASSY - CE GROUNDING LUG.....	1

√ recommended part/* not shown

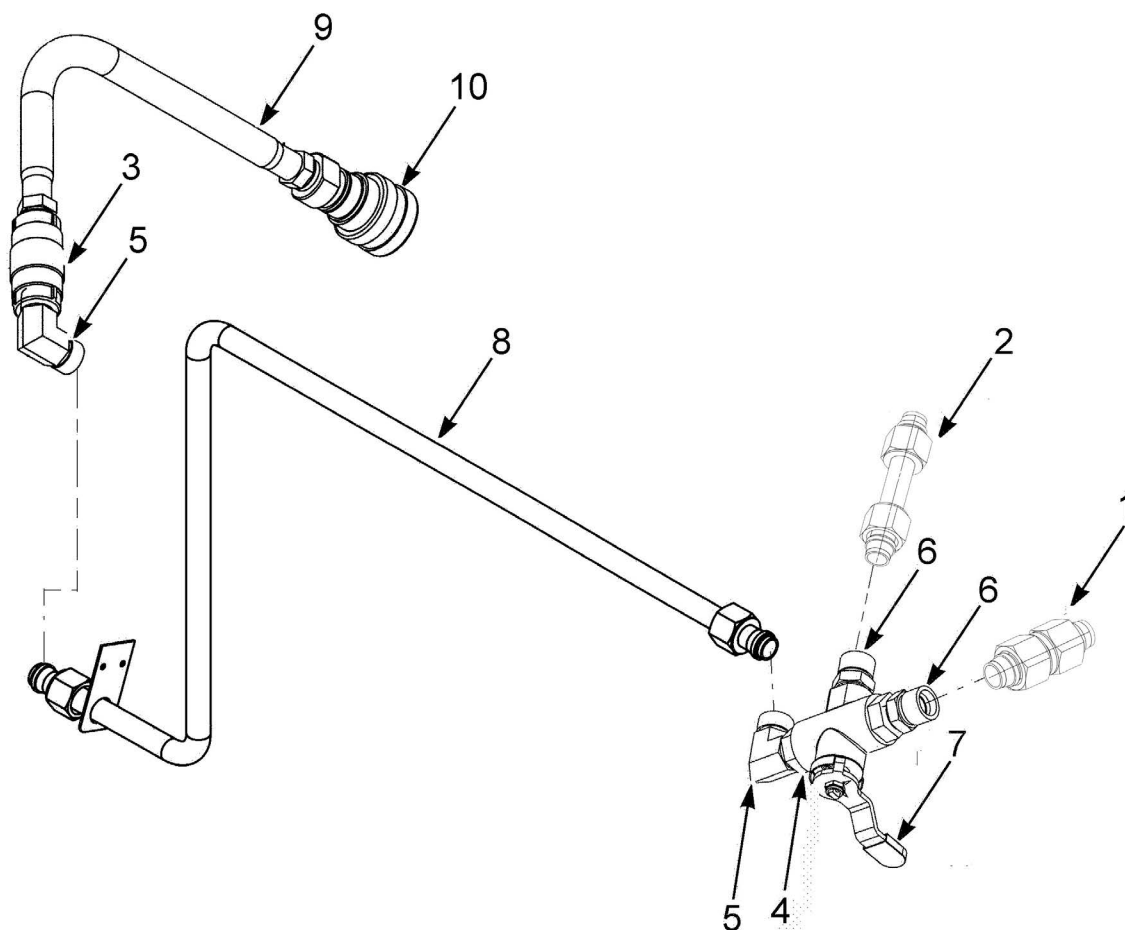


Figure & Item No.	Part No.	Description	Qty.
3-16	14638	OPTIONAL DIRECT-CONNECT KIT	1
		(SN: LG014JC & ABOVE only)	
1	67695	ASSY - TUBE DC POT TO DIVERTER.....	1
2	66450	ASSY - TUBE DC DIVERTER TO POT.....	1
3	21800	VALVE - 3/4 CHECK	1
4	68510	VALVE - 3/4 DIVERTER W/O HANDLE	1
5	FP01-169	CON - 90 MALE 3/4 TUBE 3/4 NPT.....	2
6	FP01-170	CON - STR MALE 3/4 NPT.....	1
7	68126	HANDLE - 8 HEAD DIRECT CONNECT	1
8	67692	ASSY - DIRECT CONN TUBE 8 HEAD	1
9	21753	HOSE - SHORTENING DISCARD	1
10	21612	DISCONNECT - FEMALE	1