



# **Henny Penny**

## **Multipurpose Holding Cabinet**

**Model MPC-554**

# **TECHNICAL MANUAL**



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## 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 cabinet.

### 1-2. SAFETY

Where information is of particular importance or is safety related, the words NOTICE, CAUTION, or WARNING 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.*



The word WARNING is used to alert you to a procedure, that if not performed properly, might cause personal injury.

### **1-3. TEST INSTRUMENTS**

You may use two test instruments to check the electrical components.

1. A voltmeter
2. An ohmmeter.

When the manual refers to the circuit being closed, the ohmmeter should read zero unless otherwise noted. When the manual refers to the circuit being open, the ohmmeter will read infinite resistance.

## **NOTICE**

Do not use an ohmmeter to check solid state relays. Use a voltmeter as described in the Troubleshooting Section.


### **1-4. 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.

<b>PROBLEM</b>	<b>CAUSE</b>	<b>CORRECTION</b>
With power switch in POWER position, unit is completely inoperative (no power)	<ul style="list-style-type: none"> <li>• Open circuit</li> </ul>	<ul style="list-style-type: none"> <li>• Check to see that unit is plugged in</li> <li>• Check breaker or fuse at supply box</li> <li>• Check voltage at wall receptacle</li> <li>• Check POWER switch; replace if defective</li> <li>• Check internal component connectors, and the cord and plug, for loose connections</li> </ul>
	<ul style="list-style-type: none"> <li>• Transformer defective</li> </ul>	<ul style="list-style-type: none"> <li>• Check input and output voltage; replace if defective</li> </ul>
	<ul style="list-style-type: none"> <li>• Control board defective</li> </ul>	<ul style="list-style-type: none"> <li>• Check for 12 volt input from transformer; if control board shows 12 volts, replace control board</li> </ul>

**1-4. TROUBLESHOOTING (Continued)**

PROBLEM	CAUSE	CORRECTION						
Unit will not heat	<ul style="list-style-type: none"><li>Control board not calling for heat</li></ul>	<ul style="list-style-type: none"><li>Verify set-point reading; if zone (see Zone Positions at left) tempeature is below setpoint and not calling for heat (no 5 vdc), control board defective</li></ul>						
Individual zone does not heat  <div>ZONE POSITIONS</div> <table><tr><td>Top</td><td rowspan="2">Side</td></tr><tr><td>Bottom</td></tr></table> V1901-RH  <table><tr><td rowspan="2">Side</td><td>Top</td></tr><tr><td>Bottom</td></tr></table> V1901-LH	Top	Side	Bottom	Side	Top	Bottom	<ul style="list-style-type: none"><li>Faulty heat relay</li></ul> <div></div> <p>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.</p>	<b>Testing for proper relay operation:</b> <ol style="list-style-type: none"><li>With no power (5 vdc) going to the relay, 120 volts should show on the output side of the relay, and 0 volts on the input (5 volts). If no 120 volts, check for open heater, and if heater is OK, replace relay.</li><li>With the component energized, 0 volts should show on the output side of the relay, and 5 vdc on the input side. If not, replace relay. Also, check for reverse polarity of 5 vdc to relay-reference wiring diagram.</li><li>If voltage varies from steps 1 and 2, remove power to unit pull input wires from relay and place leads of meter onto input wires. Reapply power to unit. When unit is running, if the input wires to relay shows 5vdc, the relay is faulty.</li></ol>
Top	Side							
Bottom								
Side	Top							
	Bottom							
	<ul style="list-style-type: none"><li>Faulty heater</li></ul>	<ul style="list-style-type: none"><li>Refer to wiring diagram page 2-9, and with the outputs on, check across terminal #1 of the appropriate relay and the neutral wire, N5 at the transformer. If meter shows full voltage (120V), but heater is not heating, replace heater and liner assy.</li><li>Refer to wiring diagram page 2-9, and disconnect 15-pin connector at control board. With an ohm meter, check between pins 13, 14, &amp; 15. Meter should read 35 to 41 ohms at room temperature. Replace liner and heater assy if necessary</li></ul>						
	<ul style="list-style-type: none"><li>Faulty heater RTD</li></ul>	<ul style="list-style-type: none"><li>Refer to wiring diagram page 2-9, and disconnect 15-pin connector at control board. With an ohm meter, check between the appropriate terminals on connector, based upon which RTD is being checked. Meter should read about 1080 ohms at room temperature. Replace liner and heater assy. if necessary.</li></ul>						

**1-4. TROUBLESHOOTING (Continued)**

<b>PROBLEM</b>	<b>CAUSE</b>	<b>CORRECTION</b>
Product not holding temperature	<ul style="list-style-type: none"> <li>• Heat settings too low</li> <li>• Low or improper voltage</li> <li>• Product held too long</li> <li>• Product not placed correctly in unit</li> </ul>	<ul style="list-style-type: none"> <li>• Have heat zones set to factory default temperatures</li> <li>• Using meter, compare receptacle voltage to data plate voltage</li> <li>• Hold product for recommended time</li> <li>• Push pans in completely</li> </ul>
Red LED, when should be green, or vice versa	<ul style="list-style-type: none"> <li>• Polarity reversed on LED wires</li> </ul>	<ul style="list-style-type: none"> <li>• Access the LED wires on side of unit and reverse wires at wire nuts</li> </ul>
Front LED does not light	<ul style="list-style-type: none"> <li>• Faulty LED</li> </ul>	<ul style="list-style-type: none"> <li>• Access LED wires on side of unit and check for dc voltage; if no voltage, check for voltage at control board; if voltage present, replace LED</li> </ul>

**1-5. ERROR CODES**

<b>DISPLAY</b>	<b>CAUSE</b>	<b>PANEL BOARD CORRECTION</b>
“E-4”	Control board overheating	Turn switch to OFF position, then turn switch back to ON; if display shows “E-4”, the control board is getting too hot; make sure unit is not overheating; if control board is not overheating and “E-4” persists, replace control board
“E-6”	Faulty temperature probe	Turn switch to OFF position, then turn switch back to ON; if “E-6” still shows, have temperature probe checked
“E-41”	Memory scrambled	Turn switch to OFF position, then turn switch back to ON; if “E-41” still shows, have the controls initialized; if display still shows “E-41”, replace control board
“E-5”	Unit over-heating; faulty relay or control board	If control board doesn’t cut power to relay when the LED is green, then replace control board; but if control board does cut power to relay when the LED is green, but unit continues to heat, check relay

## SECTION 2. MAINTENANCE

### 2-1. INTRODUCTION

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

### 2-2. MAINTENANCE HINTS

1. You may want to use an ohmmeter or voltmeter to check the electric components.
2. When the manual refers to the circuit being closed, the ohmmeter should read zero unless otherwise noted.
3. When the manual refers to the circuit being open, the ohmmeter will read infinity.
4. When tesing the solid state relay, use the voltmeter procedure.

### 2-3. CONTROL BOARD

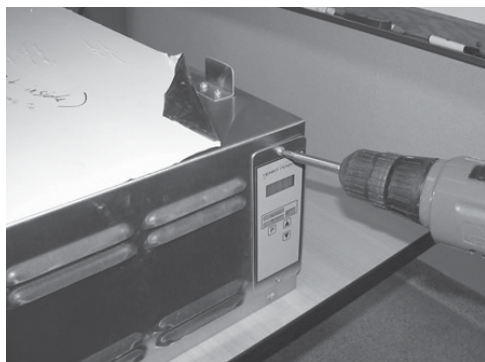


Figure 1



**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. Locate the control access panel on the side of the unit and using a Phillip's-head screwdriver, or a #8 Torx socket, remove the 2 screws securing the panel. Figure 1. Slide panel out.

**Checkout:**

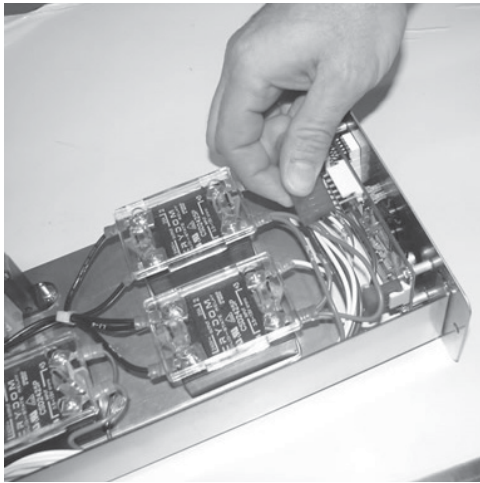


**To avoid electrical shock, make connections before applying power, take reading, and remove power before removing meter leads. The following checks are performed with the wall circuit breaker closed and the main power switch in the ON position.**

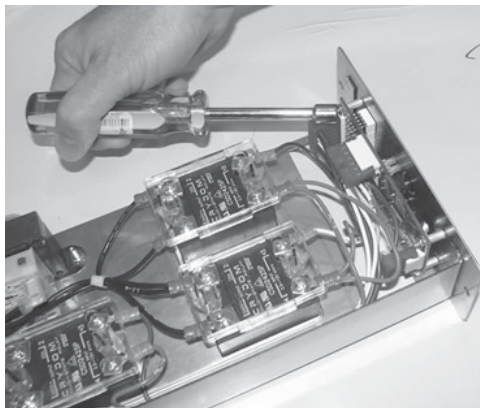
- a. If control has no display, but recieving 12 volts at P3 connector, replace control board.
- b. If zone LED is red, but no 5 vdc shows at associated relay, check all connections, relay polarity, and then replace control board if necessary.
- c. If zone LED is green, and 5 vdc shows at associated relay, then replace control board
- d. If any of the error codes persists, but the components are OK, replace control board.



## **2-3. CONTROL BOARD** **(Continued)**



**Figure 2**



**Figure 3**

## **2-4. TRANSFORMER**

### **Replacement:**

2. Disconnect the two large, white connectors and remove component panel from unit.
3. Remove the connectors to the control board. Figure 2.
4. Using a 1/4" socket or wrench, remove the 4 nuts securing the control board to the panel and remove control board from panel. Figure 3.
5. Install new control board in reverse order.

### **NOTICE**

Do not over-tighten the nuts securing the control board, or the buttons on the controls may not function.



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

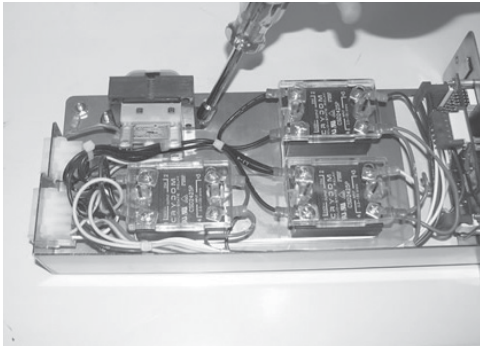
1. Slide the component panel out as described in the first step in Section 2-3.

### **Checkout:**



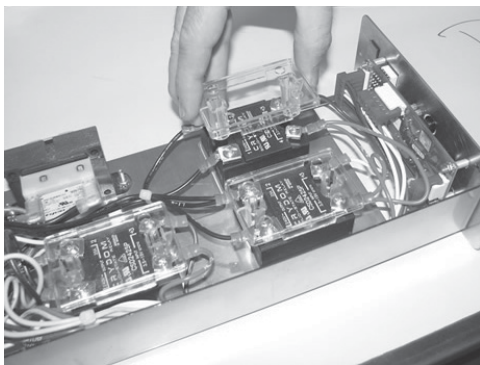
**To avoid electrical shock, make connections before applying power, take reading, and remove power before removing meter leads. The following checks are performed with the wall circuit breaker closed and the main power switch in the ON position.**

## **2-4. TRANSFORMER REPLACEMENT (Continued)**



**Figure 2**

## **2-5. RELAY REPLACEMENT**



**Figure 1**

### **Checkout (Continued)**

If transformer has 120V at the primary terminals, but more than 14 volts, or less than 10 volts at secondary terminals, replace transformer.

### **Replacement:**

2. Disconnect the two large, white connectors and remove component panel from unit.
3. Once component panel is removed, label and disconnect the wires from the transformer.
4. Using a 5/16" socket or wrench, remove the 2 nuts securing the transformer and pull transformer from panel. Figure 2.
5. Install new control board in reverse order.



**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. Slide the component panel out as described in the first step in Section 2-3.

### **Checkout:**



**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.**

2. Remove the relay cover from the relay. Figure 1.

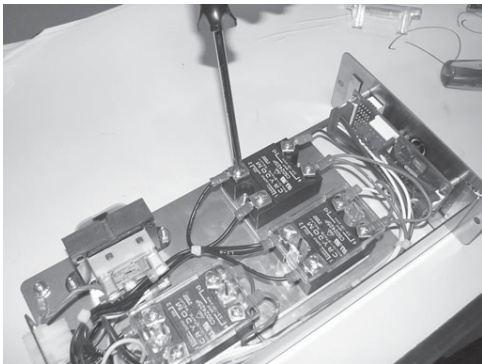


**Do not use an ohmmeter to check solid state relays. Use a voltmeter in the procedures below.**

3. With no power (5 vdc) going to the relay, 120 volts should show on the output side of the relay, and 0 volts on the input (5 volts). If no 120 volts, check heater page 2-6.)

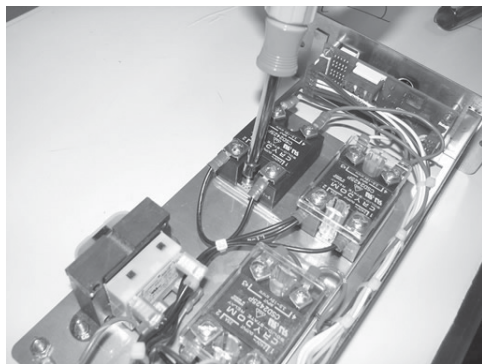
## **2-5. RELAY REPLACEMENT** **(Continued)**

4. With the component energized, 0 volts should show on the output side of the relay, and 5 vdc on the input side. Also, check for correct polarity into the relay-reference wiring diagram.
5. If voltage varies from steps 3 and 4, remove power to unit pull input wires from relay and place leads of meter onto input wires. Reapply power to unit. When unit is running, if the input wires to relay shows 5vdc, the relay is faulty.



**Figure 2**

6. Unplug power cord to unit.
7. Label and remove wires from relay. Figure 2.



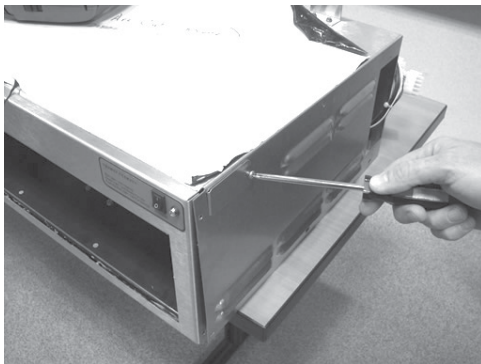
**Figure 3**

8. Using a 5/16" socket or wrench, remove the 2 nuts securing the relay and pull relay from panel. Figure 3.
9. Install new relay in reverse order, making sure not to reverse the polarity on the relays - reference wiring diagram.

## **2-6. POWER SWITCH & LED 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.**



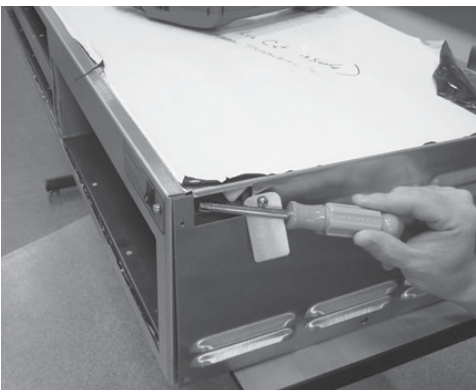
**Figure 1**



**Figure 2**

### **Power Switch Checkout:**

1. Locate the small access panel on the side of the unit and using a Phillip's-head screwdriver, loosen the screw securing the panel and allow panel to hang out of the way. Figure 1.
2. Using a flat-blade screwdriver, insert the screwdriver through the side access and press on the power switch mounting tabs, and then pull the power switch out from the front of the unit. Figure 2.
3. Label and remove the wires from the switch. Check for continuity across the top and bottom terminals. With the switch in the ON position, the circuit should be closed. With the switch in the OFF position, the circuit should be open. If the switch is defective, replace it by installing new switch in reverse order.



**Figure 3**

### **LED Replacement**

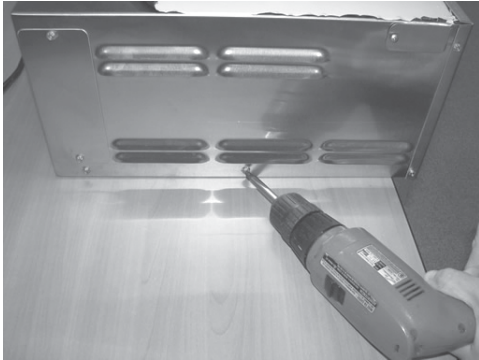
1. Remove access panel per step 1 above.
2. Using a nut-driver, insert the nut-driver through the side access and remove the nut securing the light, and then pull the light out from the front of the unit. Figure 3.
3. Pull the wires out far enough to reach the wire nuts. Label wires and remove the wire nuts and remove light from unit.
4. Install new light in reverse order, making sure not to reverse the LED wires. When unit is operating, the LED is red, below set-point temperature and green above set-point temperature.



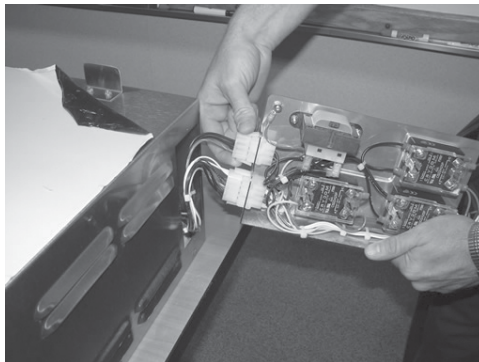
## **2-7. LINER/HEATER ASSY. REPLACEMENT**



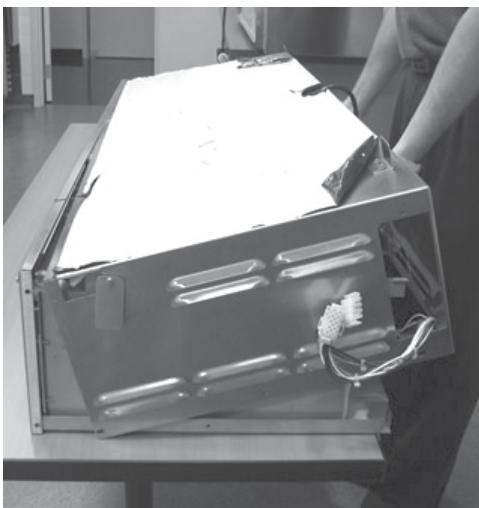
To avoid electrical shock or property damage, move the power switch to OFF and disconnect main circuit breaker, or unplug cord at wall receptacle.



**Figure 1**



**Figure 2**



**Figure 3**

### **Checkout:**

1. Slide the component panel out as described in the first step in Section 2-3.



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.

2. Remove the relay cover from the relay.
3. Refer to wiring diagram page 2-9, and with the outputs on, check across terminal #1 of the appropriate relay and the neutral wire, N5 at the transformer. If meter shows full voltage (120V), but heater is not heating, the heater and liner assembly must be replaced.

### **NOTICE**

The heater is sealed to the liner assembly, so the appropriate liner and heater assembly must be replaced if the heater is faulty.

### **Replacement:**

4. Using a Phillip's-head screwdriver, or a #8 Torx socket (MS01-514), remove the 16 screws around the perimeter of the enclosure & the 2 screws securing the power cord. Figure 1.
5. Pull component panel from unit and disconnect the two, white connectors, and remove component panel from unit. Figure 2.
6. Pull cabinet enclosure from unit. Figure 3.

**2-7. LINER/HEATER ASSY.**  
**REPLACEMENT**  
**(Continued)**



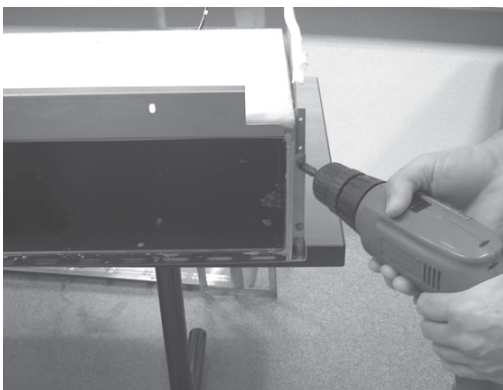
**Figure 4**

7. Using a 5/16" socket or wrench, remove the 5 nuts on the rear of the front panel. Figure 4.



**Figure 5**

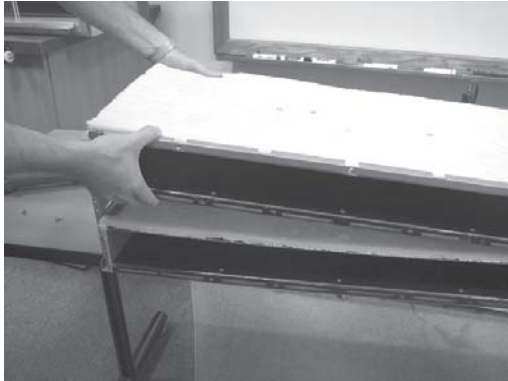
8. Using a 1/8" drill bit, drill-out the pop-rivets securing the bottom of the front panel and then remove front panel from unit. Figure 5.



**Figure 6**

9. Remove the screws securing the liner(s) to the liner supports. (The lower screws too, if the lower liner assembly is to be replaced.) Figure 6.

**2-7. LINER/HEATER ASSY.**  
**REPLACEMENT**  
**(Continued)**



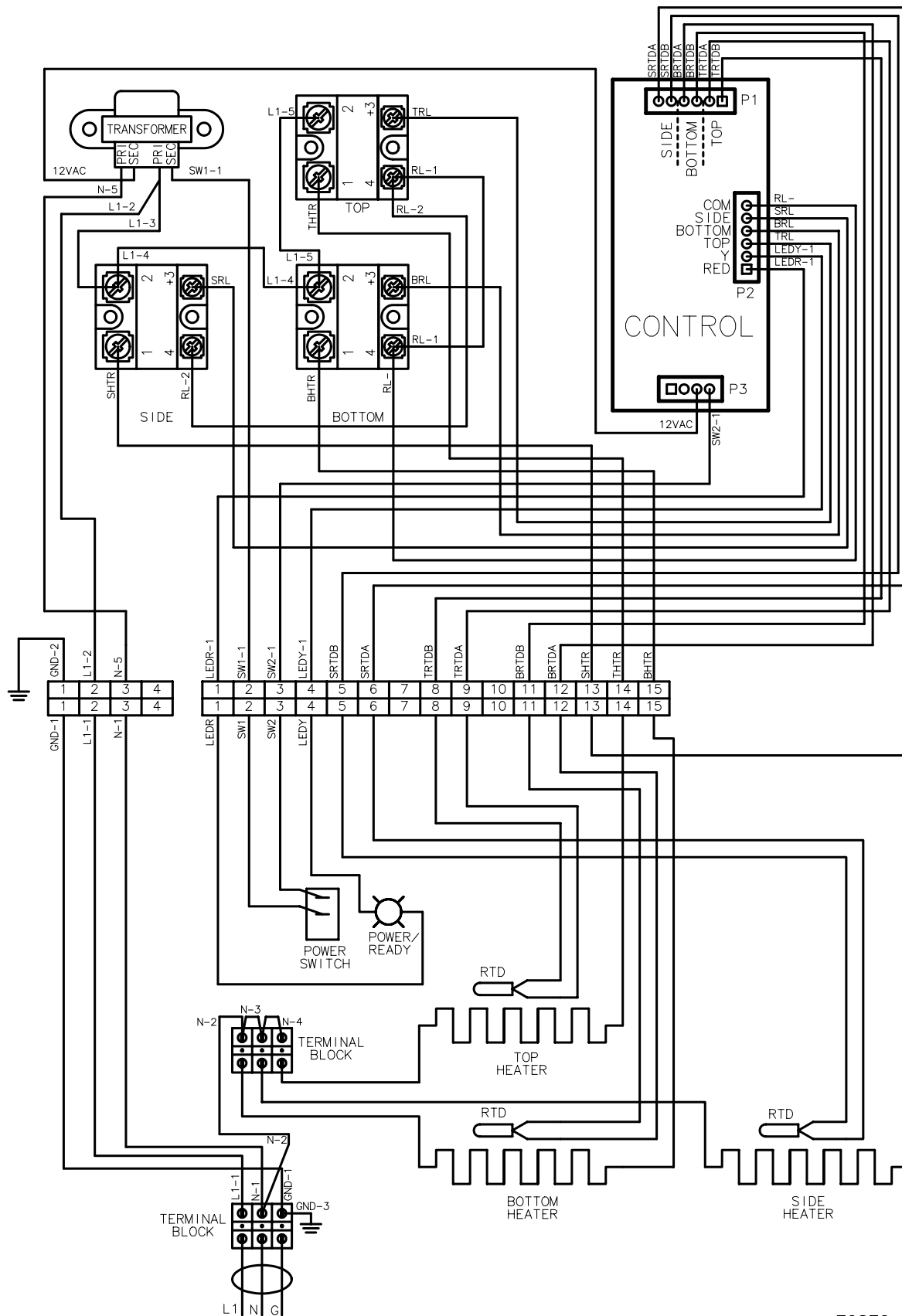
**Figure 7**

10. Pull the liner assembly from unit (Figure 7). If the lower liner assembly needs replaced, remove the top liner, drill-out the 3 pop rivets (see step 5) holding the side support to the base, and then pull the lower assembly from unit and replace in reverse order.

If the single liner needs replaced, drill-out the 3 pop rivets holding the side support to the base and pull the single assembly out and replace in reverse order.

11. Using 1/8" pop-rivets, pop-rivet the liners to the side, bottom liner supports, if needed. (3 on each side.)
12. Using the screws removed in step 6, secure the liner to the liner supports, and then pop-rivet the front panel to the unit.
13. Replace nuts on front panel, from step 4.
14. Reconnect component panel and place into unit.
15. Reinstall cabinet enclosure and secure with screws removed in step 1, and unit is now ready for use.

## 2-8. WIRING DIAGRAMS



72872



## **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 MPC-554 units.

### **3-2. GENUINE PARTS**

Use only genuine Henny Penny parts in your cabinet. 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:

Example:	Item Number	<u>8</u>
	Part Number	<u>63464</u>
	Description	<u>Switch - Power</u>

From data plate, list the following information:

Example:	Product Number	<u>MPC554</u>
	Serial Number	<u>AW001IE</u>
	Voltage	<u>120 Volt</u>

### **3-4. PRICES**

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

### **3-5. DELIVERY**

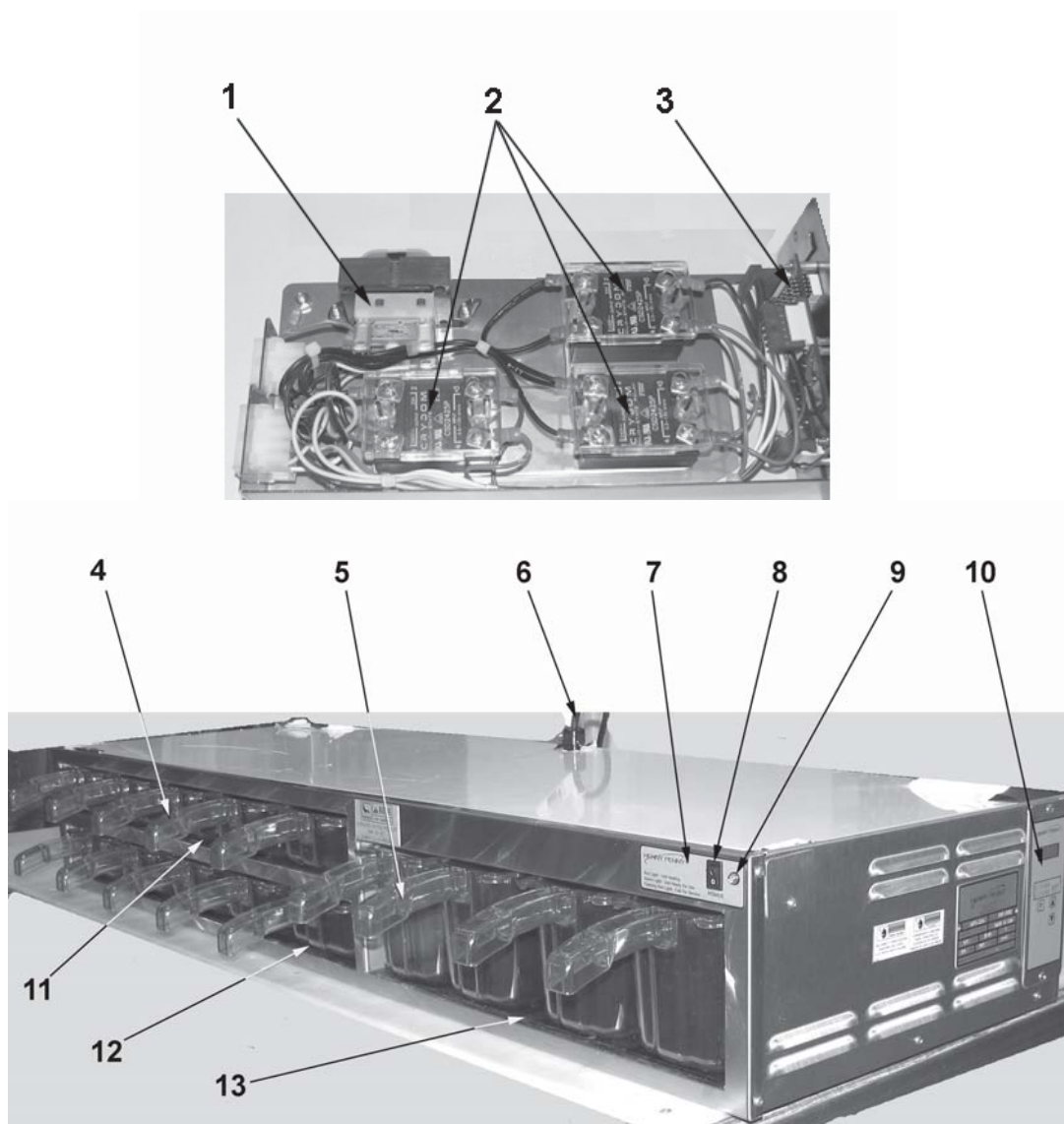
Commonly replaced items are stocked by your local distributor and will be sent out when your order is received. Other parts will be ordered, by your distributor, from Henny Penny Corporation.

### **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 the 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.



Item No.	Part No.	Description	Quantity
✓ 1	30978	Transformer Assembly - 120VP-12VS-20VP	1
✓ 2	40645	Relay - 25A - Solid State	3
✓ 3	73602	Control - MPC554	1
✓ 4	71851	Pan - Small MPC	10
✓ 5	71850	Pan - Large MPC	4
6	53656	Cord - Power	1
7	74129	Decal - Power Switch - Left	1
7	72774	Decal - Power Switch - Right	1
✓ 8	63464	Switch - Power	1
✓ 9	LS72-000	Indicator - Bi-Color Panel Mount	1
10	69608	Decal - MPC554 Control	1
11	14910	Kit - MPC554 Liner/Heater - Long - Top	1
12	14911	Kit - MPC554 Liner/Heater - Long - Bottom	1
13	14912	Kit - MPC554 Liner/Heater - Short	1
14	ME50-021	Terminal Block (not shown)	2

