

SECTION 3. OPERATION

3-1. INTRODUCTION

This section provides operating procedures for the Henny Penny OG/OE-301/302/303. Sections 1, 2, and 3 should be read and all instructions should be followed before operating the fryer.

3-2. OPERATING CONTROLS

Figures 3-1 through 3-8 identify and describe the function of all operating controls and components.

Page 3-10 describes the function of electromechanical controls, or units without computer controls.

Fig. No.	Item No.	Description	Function
3-1	1	Power Switch	This two position rocker type switch controls the power to the fryer when in the on position.
3-1	2	Digital Display	The digital display is to show the shortening temperature, as well as the timer countdown in the frying cycle. The temperature of the shortening can be determined by depressing the temperature switch. If the temperature is below 250°F (121°C), the digital display will read "LO". If the temperature exceeds 390°F (199°C), the display will read "HI". Any temperature between these two settings will be displayed.
3-1	3	Timer Switch	The right timer can be activated or reset by gently depressing the timer switch. The same holds true for the left timer switch. The left display shows the left timer information and the right display shows the information for the right timer.
3-1	4	Set Switch	The set switch is used to set the cooking cycles and to enter the special program modes.
3-1	5	Exit Melt Switch	The exit melt switch is used to bypass the melt cycle. By pressing and holding the exit melt switch for five seconds, the heat will come on continuously.
3-1	6	Temperature Switch	By pressing the temperature switch (indicated by thermometer), the actual shortening temperature will show on the left display and the setpoint temperature on the right display.

3-2. OPERATING CONTROLS (Continued)

Fig. No.	Item No.	Description	Function
3-1	7	Melt LED	<p>When the melt LED is flashing, the fryer is in the melt cycle. When the temperature of the shortening reaches approximately 250°F (121°C), the melt LED will go off and automatically switch to the heat cycle.</p> <div style="text-align: center; border: 2px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> WARNING </div> <p>When using solid shortening, it is recommended to melt the shortening on an outside heating source before placing shortening in the cookpots. Heating elements, and the slope of the gas cookpot must be completely submerged in shortening. Fire could result, or damage to the cookpot could result.</p>
3-1	8	Ready LED	The ready LED illuminates when the temperature of the shortening is near the setpoint temperature. (It will illuminate if the temperature is 5°F (or °C) more than the setpoint temperature.)
3-1	9	Heat LED	The heat LED illuminates when the heat comes on.
3-1	10	Product LED	The product LED flashes while in the program modes, and a new product can be selected at this time.
3-1	11	Time LED	The time LED flashes while in the program mode and a new fry time can be programmed.
3-1	12	Temperature LED	The temperature LED flashes while in the program mode and the setpoint temperature can be programmed.
3-1	13	Alarm LED	The alarm LED flashes while the program mode. Up to four alarms can be programmed in a cook cycle.

3-2. OPERATING CONTROLS (Continued)

Fig. No.	Item No.	Description	Function
3-1	14	Other LED	The other LED flashes while in the high level program mode and special program modes only. Several parameters can be programmed at this time.
3-1	15	Idle LED	The idle LED illuminates when the right timer up and down switch is pressed for two seconds. The indicator passes through the other product LEDs to the idle LED. The control will then regulate the shortening temperature at a lower programmed temperature.
3-1	16	Up and Down Switches	Two sets of up and down switches (denoted as triangles) are on the control. These switches are used in programming and product selection. A product is selected by pressing and holding either the up or down switch for two seconds. To select both the right and left products at the same time the programmed set point temperature must be the same.
3-2	17	Fuses (electric only)	The fuses, located on the panel behind door, are protective devices that break the circuit when the current exceeds the rated value. The 5 amp fuses provide an overload protection for the control panel.
3-2	18	High Limit Reset	This manual reset, located on panel behind door, must be pushed up in the event the high limit trips. This red button will manually reset the high limit. A high limit protects each cookpot.
3-3	19	Contactors (electric only)	The contactors are the relays that route power to the heating elements. One relay coil is in series with the high limit temperature control, and the other relay coil is in series with the heat control circuit, which is the mercury contactor.
3-3	20	Thermal Sensor	The thermal sensor, located behind the control panel, determines the shortening temperature.

**3-2. OPERATING CONTROLS
(Continued)**

Fig. No.	Item No.	Description	Function
3-4	21	Drain Interlock (Hidden behind bracket)	<p>The drain interlock switch is a microswitch that provides protection for the heating elements in the event an operator drains shortening from the frypot while the power switch is on. The drain switch is designed to automatically shut off the control system when the drain valve is opened. A drain interlock switch protects each cookpot.</p> <p style="text-align: center;">NOTE</p> <p>It is recommended to turn all power off before opening drain valve.</p>
3-5	22	Drain Valve	<p>The drain valve is a two-way ball valve and is normally in the closed position. Turn the handle to the open position to drain the shortening from the frypot.</p> <div style="text-align: center; border: 2px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>WARNING</p> </div> <p>Open the drain valve slowly to eliminate splashing of hot shortening. Severe burns could result.</p>
3-6	24	Filter Union	<p>The filter union connects the filter assembly to the filter pump. It is easily disconnected to allow removal of the filter and filter drain pan.</p>

3-2. OPERATING CONTROLS (Continued)

Fig. No.	Item No.	Description	Function
3-6	25	Filter Drain Pan	<p>The removable filter drain pan houses the filter and catches the shortening when it is drained from the frypot. It is not to be used to remove and discard the shortening when the shortening needs replaced.</p> <div style="text-align: center; border: 2px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> WARNING </div> <p>Use extreme care when handling the drain pan or any metal which comes in contact with hot shortening. Do not move drain pan with hot shortening in pan. Severe burns could result. It is recommended to use gloves.</p>
3-6	26	Filter Pump Switch	This two position rocker switch controls the power to the filter pump motor.
3-6	27	Oil Return Line	The detachable oil return line pivots to reach all three cookpots when pumping shortening back into the cookpots. The return line can be removed and a rinse hose connected to unit to discard shortening from unit.
3-8	28	Gas Shut-Off Valve (gas only)	Each cookpot has its own gas shut-off valve on the gas line going to the gas valve.
3-8	29	Gas Control Valve (gas only)	Each cookpot has its own gas control valve which controls the flow of gas to burner assembly. It requires manual pilot lighting.
3-8	30	Gas Solenoid (gas only)	The gas solenoid shuts the flow of gas off to the burner in this unit that the high limit kicks out, and is present for each cookpot.

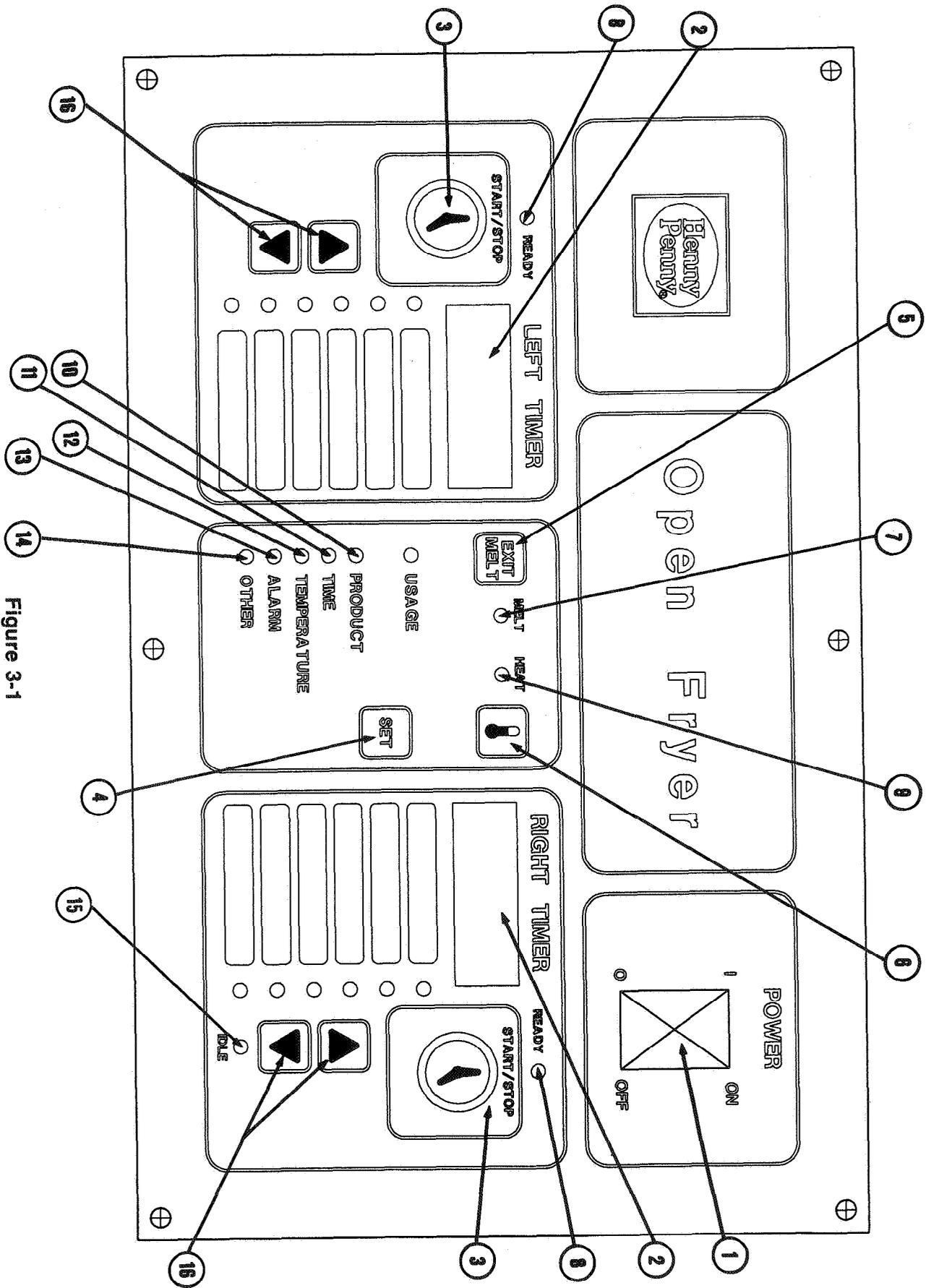


Figure 3-1

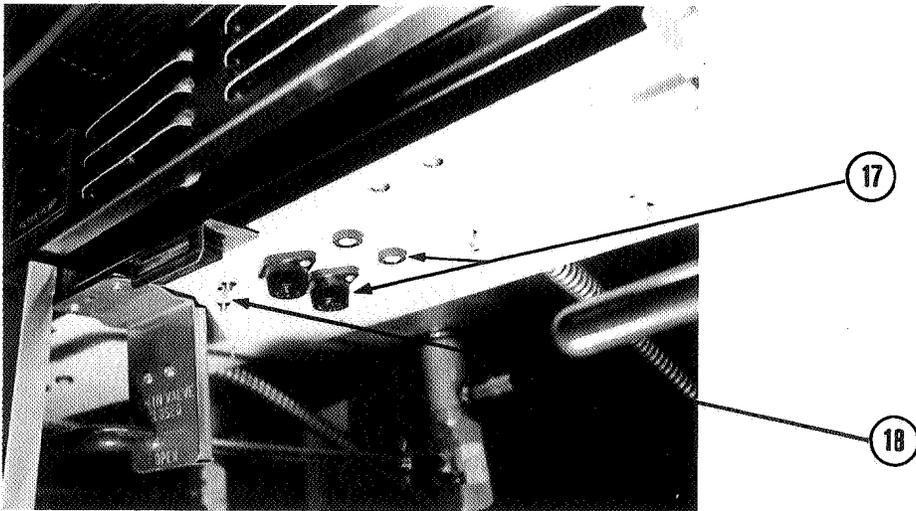


Figure 3-2

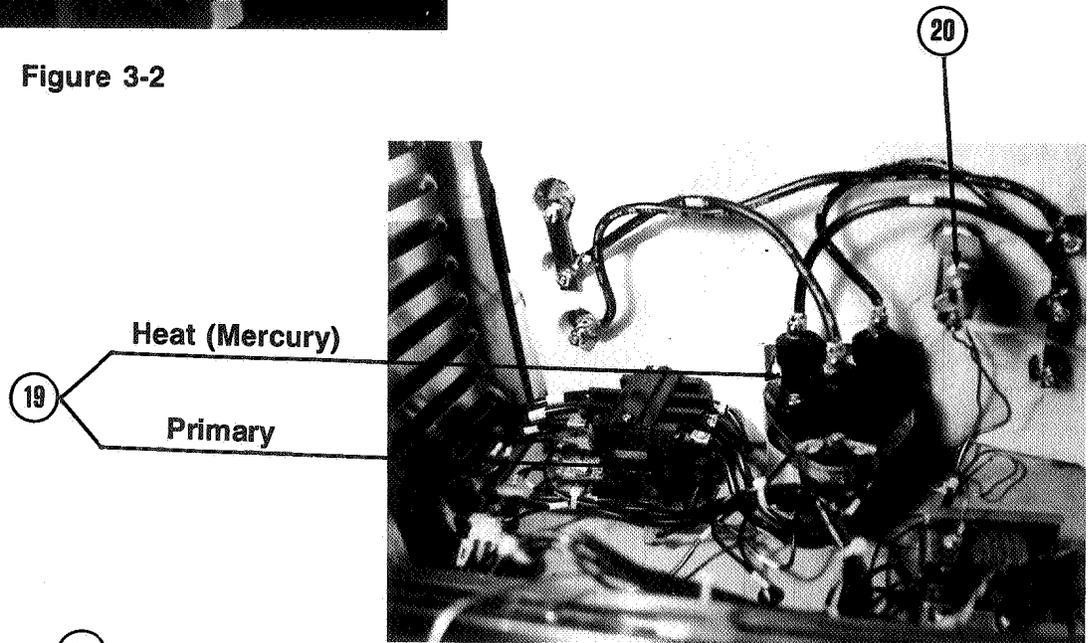


Figure 3-3

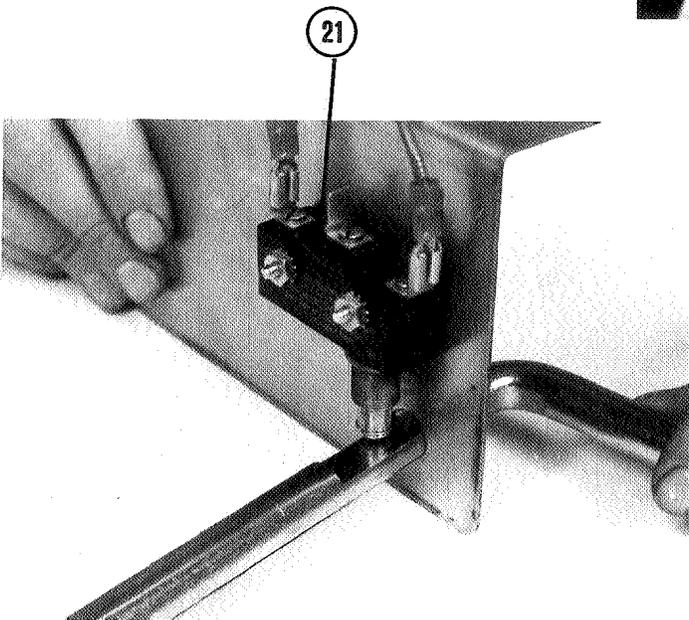


Figure 3-4

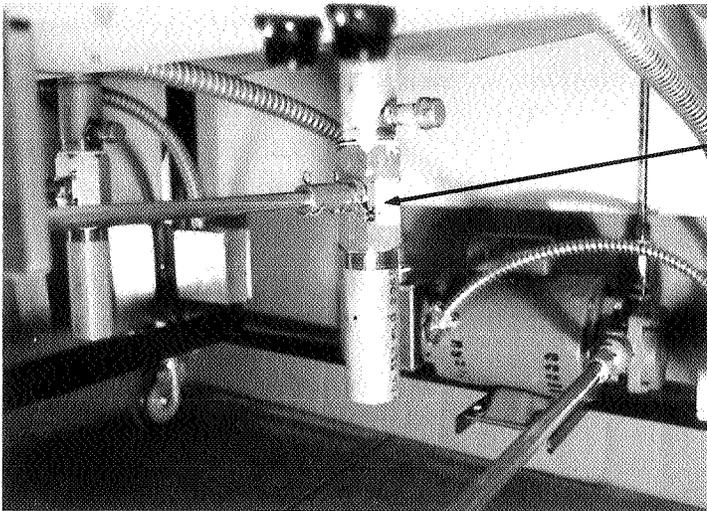


Figure 3-5

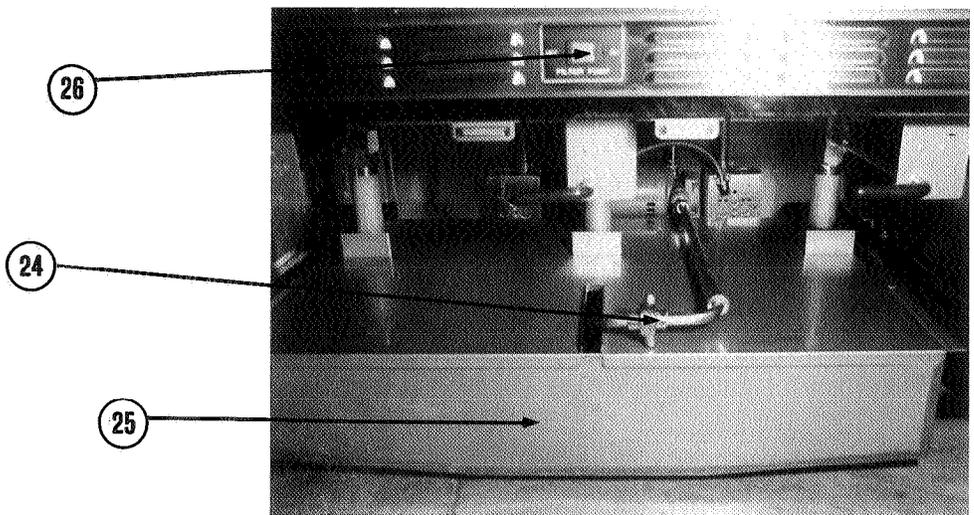


Figure 3-6

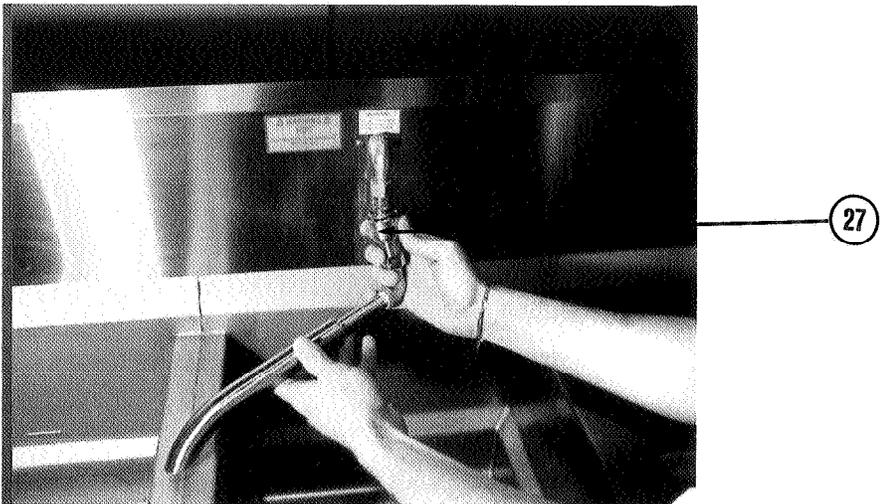


Figure 3-7

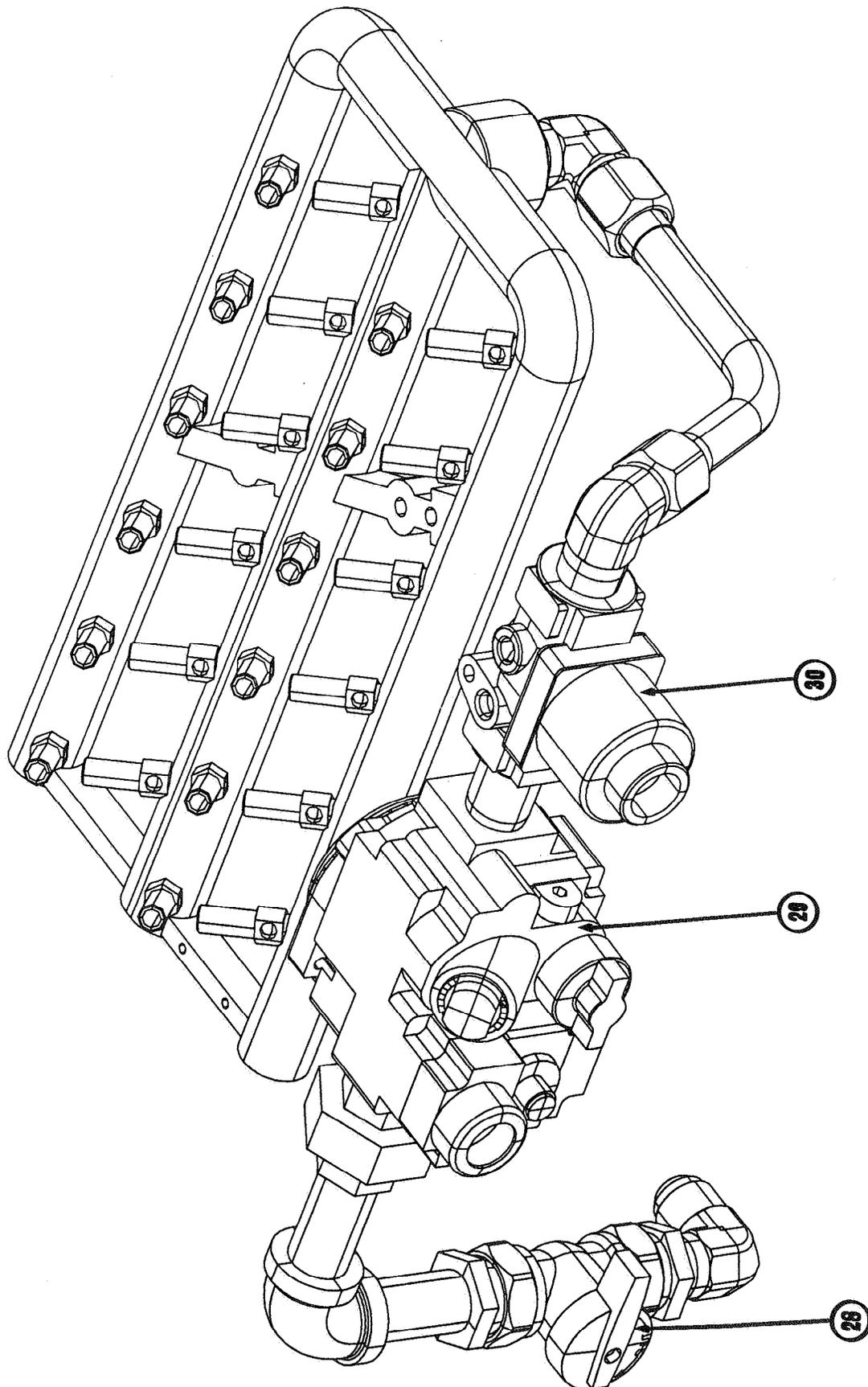
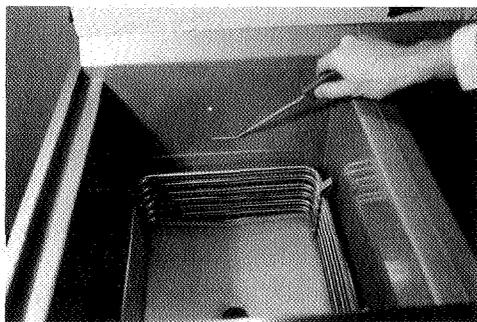


Figure 3-8

ELECTROMECHANICAL CONTROLS

ITEM	DESCRIPTION	FUNCTION
1	Main Power Switch	The main power switch is a two-way switch. Move the switch to the position marked ON to operate the fryer.
2	PUMP Switch	Move the switch to the position marked ON to operate the filter pump.
3	Thermostat Standard (TEMPERATURE)	The thermostat is an electro-mechanical device used to regulate temperature. Turn the knob to set the desired frying temperature.
4	TEMPERATURE Light	The temperature light is illuminated while the shortening is below the temperature set by the thermostat. It goes off when the shortening reaches the set temperature.
5	TIMER	The timer is an electro-mechanical device that controls the length of the frying cycle and activates the buzzer when the frying cycle is complete. Turn the knob to set the black arrow at the desired frying time. The red arrow will reset back to the black arrow when the ON/OFF switch is moved to OFF.
6	TIMER/ON/OFF Switch	Move the switch to the ON position to start the timer. Move to the OFF position to stop the buzzer after the frying cycle. This also will reset the timer to the original setting.
7	TIMER Light	The timer indicating light is a red light which is illuminated when the timer is on.

3-3. FILLING OR ADDING SHORTENING



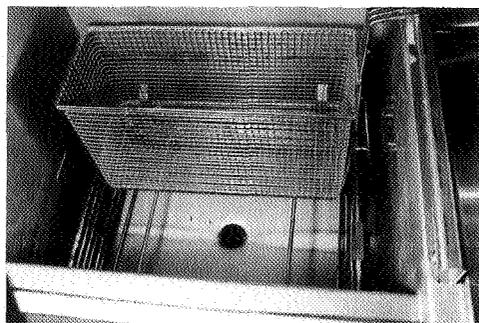
It is recommended that a high quality frying shortening be used in the OE-301/302/303 and OG-301/302/303 fry stations. Some low grade shortenings have a high moisture content causing foaming and boiling over. The Henny Penny OE-301/302/303 requires 48 pounds of shortening per cookpot. The OG-301/302/303 requires 43 pounds per cookpot. All cookpots have two level indicators inscribed on the rear of the cookpot wall. The top indicator shows when the heated shortening is at the proper level. Cold shortening should be at the bottom indicator, since the shortening will expand when heated.

WARNING

Hot shortening must be maintained at the level indicator on each cookpot, or fire could result. It is also recommended to use gloves when in contact with hot shortening. Shortening and all metal parts that are in contact with the shortening are extremely hot and severe burns could result.

Moving the fryer with hot shortening in the cookpots or filter pan is not recommended. Hot shortening can splash out and severe burns could result.

3-4. OPERATING CONTROLS AND PROCEDURES



The Henny Penny Open Fry Station with dual timers contains solid state controls for each cookpot. The following is brief description of the operating procedures.

1. Be sure the drain valve is in the closed position.
2. Place basket support inside of cookpot.
3. Fill the cookpot with shortening.

WARNING

When using solid shortening, it is recommended to melt the shortening on an outside heating source before placing it in the cookpots. Heating elements and the slope of the gas cookpot must be completely submerged in shortening. Fire could result, or damage to the cookpot could result.

3-4. OPERATING CONTROLS AND PROCEDURES (Continued)

4. Move power switch to the "ON" position. Unit will automatically go into the melt cycle. When the temperature reaches 250°F (121°C) the control will go into the heat cycle. The shortening will be heated until the temperature setting is reached.

NOTE

The melt cycle may be bypassed, if desired, by pressing the Exit Melt switch and holding it for five seconds.

WARNING

Do not bypass the melt cycle unless enough shortening has melted to completely cover all of the heating elements. If melt cycle is bypassed before all heating elements are covered, excessive smoking of the shortening or a fire will result.

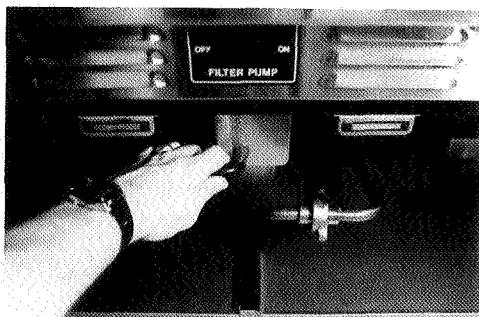
5. Press the up or down switch and hold for two seconds to select a product. The times and temperatures are preprogrammed.

NOTE

The operation of the two timers is entirely independent. They may be set, started, or stopped without affecting each other.

6. Thoroughly stir shortening to stabilize the temperature throughout the cookpots.
7. When the shortening temperature has reached setpoint, ready LED will illuminate, indicating to the operator, they may drop product.
8. Lower basket with product into cookpot and press timer switch. Countdown will begin.
9. When frying cycle is complete, a pulsating beep will sound and the display will read "DONE." Pressing the timer switch stops the beeping and starts the hold mode.
10. The baskets can be lifted out to drain for the duration of the hold mode, the display will flash 00:00 and a pulsating beep will sound. Pressing the timer switch resets it back to the cooking time.

3-5. FILTERING OF SHORTENING



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

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

NOTE

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

2. Use a metal spatula to scrape any build up from the sides of the cookpot. Do not scrape heating elements on electric models, or the slope on the gas models.

WARNING

The filter pan must be in the proper position beneath the drain valve. This will prevent the splashing of shortening on the floor. This splashing could result in severe burns.

3. Open door(s) under unit and open the drain valve very slowly, half a turn at first and then slowly to the full open position. This will prevent excessive splashing of the hot shortening as it drains into the filter drain pan.
4. As the shortening drains from the cookpot, use brushes to scrape and clean the side of the cookpot and the heating elements of the electric model. If the drain fills with breading, use straight white brush to push excess breading into the drain pan.
5. When all of the shortening has drained, scrape or brush the sides and the bottom of the cookpot.
6. Rinse the cookpot as follows:
 - a. Close the drain valve.
 - b. Position return line over empty cookpot.
 - c. Move the pump switch to the pump position.
 - d. Fill the cookpot 1/3 full, then turn off pump.

3-5. FILTERING OF SHORTENING (Continued)

WARNING

If shortening is slow coming from faucet, it is possible that the filter connecting the union on the filter tube line is not tightened properly. If so, turn off the pump and use gloves to tighten the union. This union will be hot. Severe burns could result.

- e. Wash down and scrub the sides of the frypot.
 - f. After the sides and bottom are cleaned, open the drain valve.
7. Pump all of the shortening out of the filter pan and back into the cookpot.
 8. When the pump is pumping air only, move the pump switch from PUMP to OFF.
 9. Check the level of the shortening in the cookpot. Add fresh shortening if necessary, until it reaches the level indicator line on the rear wall of the cookpot.

NOTE

Approximately 10 to 12 filterings can be made with one filter paper envelope, depending on several conditions; the quantity and type of product fried and filtered, the type of breading used, and the amount of crumb accumulation left inside the filter drain pan. When the filter screen assembly and filter paper become clogged and the pumping flow rate slows down, clean the screen assembly and change the filter envelope.

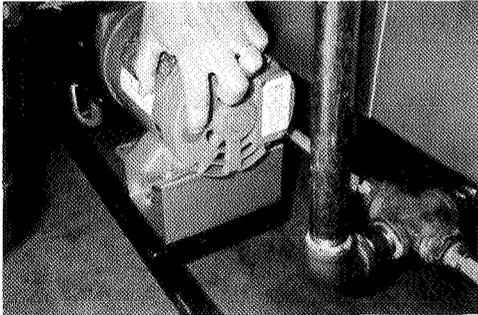
10. If frying is to be continued at this time, move the main power switch back to the "ON" position, and allow time for reheating of the shortening.

3-6. FILTER PUMP PROBLEMS

The following steps will help prevent filter pump problems.

1. Make certain the filter paper envelope is properly installed over the filter screens. Make sure the open end of the envelope is properly folded over and clamped in place with the retaining clips so that the envelope is sealed and crumbs cannot enter.
2. Make sure all the shortening has been pumped from the filter lines and the pump by allowing the filter pump motor to run until no shortening is coming from the nozzle.

3-7. FILTER PUMP MOTOR PROTECTOR



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

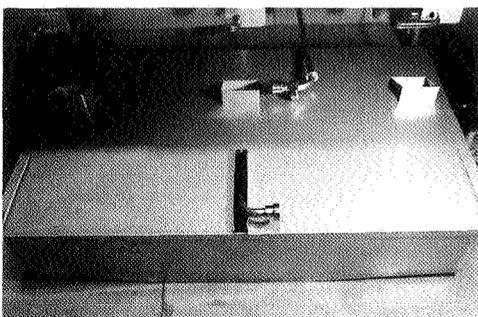
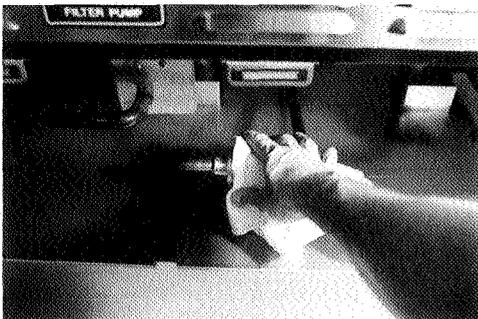
WARNING

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

NOTE

The reset button will take some effort to reset. A screwdriver could be used to press against the reset button to aid in resetting the protector device.

3-8. CHANGING THE FILTER ENVELOPE



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

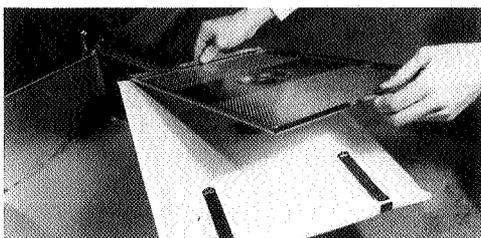
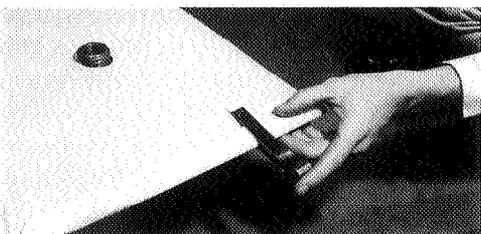
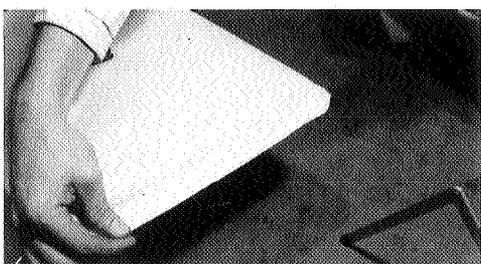
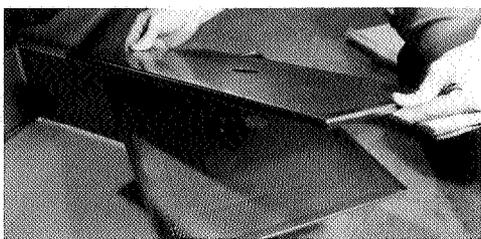
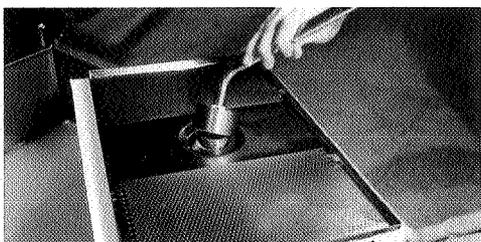
1. Move the main power switch to the OFF position.
2. Disconnect the filter union and remove the filter drain pan from beneath the cookpot.

WARNING

This union may be hot. Use protective gloves or clothes to prevent burns. Also use care to prevent burns caused by splashing of hot shortening.

3. Remove drain pan cover from drain pan and lift the screen assembly from the drain pan.
4. Wipe the shortening and crumbs from the drain pan. Clean the drain pan with soap and water. Thoroughly rinse with hot water.
5. Unthread the suction standpipe from the screen assembly.
6. Remove the crumb catcher and clean thoroughly with soap and water. Rinse thoroughly with hot water.
7. Remove the filter clips and discard the filter envelope.

3-8. CHANGING THE FILTER ENVELOPE (Continued)



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

CAUTION

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

9. Assemble the top filter screen to the bottom filter screen.
10. Slide the screen into a clean filter envelope.
11. Fold the corners in and then double fold the open end.
12. Clamp the envelope in place with the two filter retaining clips.
13. Replace the crumb catcher screen on top of the filter paper. Screw on the suction standpipe assembly.
14. Place complete filter screen assembly back into filter drain pan, replace cover, and slide pan back into place beneath the fryer.
15. Connect the filter union by hand. Do not use a wrench to tighten.
16. The fryer is now ready to operate.

3-9. CLEANING THE COOKPOTS

After the initial installation of the fryer, as well as before every change of shortening, the cookpot should be thoroughly cleaned as follows:

NOTE

Melt bypass should be in operation. Refer to section 3-2 "Operating Controls" on Exit Melt Switch.

1. Turn the main power switch OFF.

WARNING

The filter drain pan must be in position under the drain valves to prevent splashing or spilling of hot liquids which can cause serious burns.

2. If hot shortening is present in the cookpot, it must be drained by slowly opening the drain valve handle one half turn. Leave for a few minutes, then slowly open the valve to full open position.
3. Close the drain valve. Discard the shortening in the filter pan using the shortening shuttle. Then install the filter drain under the fryer, leaving out the filter screen assembly.

WARNING

Moving the fry station, or drain pan, with hot shortening in them is not recommended. Hot shortening can splash out, and severe burns could result.

4. Fill the cookpot to the level indicator with hot water. Add 4 ounces of fryer cleaner to the water and mix thoroughly. The fry basket can be placed inside the cookpot for cleaning.

WARNING

Always wear chemical splash goggles or face shield and protective rubber gloves when cleaning the cookpot as the cleaning solution is high in alkaline. Avoid splashing or other contact of the solution with your eyes or skins. Severe burns may result. Carefully read the instructions on the cleaner. If the solution comes in contact with your eyes rinse thoroughly with cool water and see a physician immediately.

5. Turn the main power switch to the POWER position and set temperature to 200°F. The Exit Melt Switch must be used.

3-9. CLEANING THE COOKPOTS (Continued)

6. When the solution reaches 200°F, turn the main power switch to the OFF position.

CAUTION

Watch cleaning solution constantly to make sure it does NOT boil over, causing damage to controls.

7. Let the cleaning solutions stand for 15 to 20 minutes with the power off.
8. Using the fryer brush (never use steel wool), scrub the inside of the cookpot.
9. After cleaning, open the drain valve and drain cleaning solution from the cookpot into the drain pan and discard.
10. Replace the empty drain pan, close the drain valve, and refill the cookpot with plain hot water to the proper level.
11. Add approximately 8 ounces of distilled vinegar and bring the solution back up to 200°F (93°C).
12. Using a clean brush, scrub the interior of the cookpot. This will neutralize the alkaline left by the cleaning compound.
13. Drain the vinegar rinse water and discard.
14. Rinse down the cookpot using clean, hot water.
15. Thoroughly dry the drain pan and the cookpot interior.

NOTE

Make sure the inside of the cookpot, the drain valve opening, and all the parts that will come in contact with new shortening are as dry as possible.

16. Replace the clean filter screen assembly in the drain pan, replace cover, and install drain pan under fryer.
17. Refill the cookpot with fresh shortening.