SECTION 3. OPERATION

3-1. OPERATING CONTROLS

This section describes the fuctions of all operating controls and their components.

Item	Description	Function
1	Control Decal	The control decal is a self-adhesive decal which displays the desired functions.
2	Menu Board	The menu board displays the products that have been pro- grammed within the control.
3	Menu Indicator	The menu indicators, when illuminated, point to the product cycle the control is in.
4	Done Indicator	This indicator shows the operator the cooking cycle is completed.
5	Digital Display	The digital display is a LED type display which shows the temperature of the shortening and the timer countdown of the frying cycle.
6	Ready Light	The ready light indicates the shortening has reached operating temperature and the operator may drop product.
7	High Limit Light	This light will illuminate in the event the manual reset high limit has tripped. This indicates the shortening temperature has exceeded the safe operating limit.
8	Change Switch Indicators	These indicators, when illuminated, show which part of the display is functional for programming such as increasing or decreasing temperature, time, etc.
9	Pressure Light	When illuminated, shows the solenoid is closed which allows pressure to build.
10	Key Switch	When in the COOK position the unit is in the normal operation mode. In the PROGRAM position the unit is in the program mode.
11	Power Switch	This switch is a sealed illuminated rocker type switch. When in the COOK position, applies power to the control. When in the PUMP position applies power to the pump motor.
12	Timer Switch	The timer switch is used to start, stop, or abort a cooking cycle.

193

Item	Description	Function
13	Reset Usage Switch (Program Mode Only)	This switch resets the total number of cycles that have been cooked either in one product or in all products.
14	Change Switches (Program Mode Only)	These switches change the value of the displayed number. Such as increasing or decreasing the time of a cook cycle, or increas- ing or decreasing the temperature of a cook cycle.
15	Review Usage Switch (Program Mode Only)	By depressing this switch the display will show you the number of cook cycles that have been cooked for a particular product.
16	Select Function Switch (Program Mode Only)	This switch will change the function that is being programmed such as time, temperature, alarm, etc.
17	Select Product Switch	This switch selects the product you wish to cook or program.
18	Select Time Switch	The select time switch selects the interval within a product. There are ten intervals per product.
19	Function Display (Program Mode Only)	The function display will show you the function you are in when programming.



Model 581

င့္ ငံ

3-1. OPERATING CONTROLS (Continued)

1.	Cook/Pump Switch	This is a three-way switch with center "OFF" position. Move the switch to the position marked "POWER" to operate the fryer. Move the switch to the position marked "PUMP" to operate the filter pump. Certain conditions must be met prior to operation of the filter pump. These conditions are covered later in this section.
2.	Cookpot	This reservoir holds the cooking shortening, and is designed to accommodate the Heat Exchanger, 8 head of product and an adequate cold zone for collection of cracklings.
3.	Cooking Rack	This stainless steel rack consists of five baskets that contain the food product during and after frying.
4.	Lid Gasket	The lid gasket provides the pressure seal for the cookpot chamber.
5.	Operating Valve	The dead weight style operating pressure relief valve is used to maintain a constant level of steam pressure within the cookpot. Any excess steam pressure is vented through the exhaust stack.
		NOTE Remove the dead weight cap, and clean the cap, weight, and orifice, once a day to prevent over pressurization of the cookpot
6.	Safety Relief Valve	The safety relief valve is an ASME approved spring loaded valve set at 14.5 psi (999 mbar). In the event the operation valve becomes obstructed, this safety valve will release excess pressure, keeping the cookpot chamber at 14.5 psi (999 mbar). If this occurs, turn the Power/Pump switch to the "OFF" position to release all pressure from the cookpot.
7.	Safety Relief Valve Ring	THE RING IS NOT TO BE PULLED.
8.	Gauge	The pressure gauge indicates the pressure inside the cookpot.

Henny Penny

	• • • • • • • • • • • • • • • • • • • •	
9	Solenoid Valve	The solenoid valve is an electro-mechanical device that causes pressure to be held in the cookpot. The solenoid valve closes at the beginning of the frying cycle and is opened automatically at the end of the frying cycle. If this valve should become dirty or the teflon seat nicked, pressure will not build up and it must be repaired per the maintenance section.
10	Drain Valve	The drain value is a two-way ball value. It is normally in the closed position. Pull the knob out to drain the shortening from the cookpot into the filter drain pan. DANGER DANGER DO NOT OPEN THE DRAIN VALUE WHILE COOKPOT IS UNDER PRESSURE. Hot shortening will exhaust from this value. Severe burns will result.
11	Drain Interlock Switch	The drain interlock switch is a microswitch that provides protection for the cookpot in the event an operator inadver- tently drains the shortening from the cookpot while the main switch is in the COOK position. The switch is designed to automatically shut off the heat when the drain valve is opened.
12	Condensation Drain Pan	The condensation drain pan is the collection point for the condensation formed on the lid liner and within the steam exhaust system. It must be removed and emptied periodically.
	1	

193

D

3-2. LID OPERATION



To close lid:

1. Lower the lid until lid latches into place.

2. Pull lid handle forward until it stops.

3. Lift up on the lid handle until it stops.

- 4. Bring lid handle out towards you until it stops.
- 5. Push lid handle down, locking lid in place.



DO NOT ATTEMPT TO OPEN LID UNTIL THE PRESSURE DROPS TO ZERO. Lid is locked when fryer is under pressure. Do not attempt to force the lid latch or open the lid while under pressure. Opening the lid when the cookpot is pressurized will allow hot shortening and moisture to escape from the cookpot, resulting in severe burns.

3-2. LID OPERATION (Continued) | To open lid:





DO NOT ATTEMPT TO OPEN LID UNTIL THE PRESSURE DROPS TO ZERO. Lid is locked when fryer is under pressure. Do not attempt to force the lid latch or open the lid while under pressure. Opening the lid when the cookpot is pressurized will allow hot shortening and moisture to escape from the cookpot, resulting in severe burns.

- 1. Gently raise handle until it stops.
- 2. Push handle back until it stops.
- 3. Lower handle.



DO NOT raise the lid with the handle in the up position. Lower the handle before attempting to raise the lid, or damage to the lid could result.

- 4. Push handle back.
- 5. Unlatch the front lid latch and raise lid with handle.

3-2. LID OPERATION (Continued)



Kickstand

Tilt the lid back for ease of filtering or servicing.

- 1. With the lid completely raised, remove the Cooking Rack from lid.
- 2. Using the handle, tilt lid back until the metal "kickstand" fits in the groove in the lid support. (See photo).

WARNING

Make sure the "kickstand" is secure in the groove of the lid support, or severe injuries could result.

3-3. FILLING OR ADDING SHORTENING



- 1. It is recommended that a high quality liquid frying shortening be used in the pressure fryer. Some low grade shortenings have a high moisture content and will cause foaming and boiling over.
- 2. If a solid shortening is used, it can be melted into a liquid first, then poured into the cookpot. Attempting to melt solid shortening in the cookpot may cause burning or scorching of the fresh shortening.



GLOVES SHOULD BE WORN AND CARE MUST BE TAKEN WHEN POURING HOT SHORTENING. Severe burns could result. Also, when adding fresh shortening to existing shortening, care must be taken to avoid splashing or severe burns could result.

- 3. The 581 requires 100 lbs. of shortening. The cookpot has three level indicator lines inscribed on the rear wall of the cookpot which show when the heated shortening is at the proper level.
- 4. Cold shortening should be filled to a point $\frac{1}{2}$ inch below the fill lines on the back of the cookpot.

3-4. CARE OF THE SHORTENING

- 1. To protect the shortening when the fryer is not in immediate use, the fryer should be put into an "IDLE" mode.
- 2. Frying breaded products requires filtering to keep the shortening clean. The shortening should be filtered at noon and at the end of the day.
- 3. Maintain the shortening at the proper cooking level, add fresh shortening as needed.

Model 581

3-5. START-UP (Preheat) PROCEDURE



The following procedures should be followed on the initial startup of the fryer each time the fryer is brought from a cold, or shut down, condition back into operation.

- 1. Check to see that all of the control switches are turned off.
- 2. Be sure the drain valve is CLOSED.
- 3. Remove carrier and baskets from lid and tilt lid back (see section 3-2).
- 4. Fill the cookpot to a level at 1/2 inch below the bottom fill line (see section 3-3).
- 5. Connect power to fryer.
- 6. Move the Cook/Pump switch to the "COOK" position.
- 7. Select the desired product using the Select Product switch. The red indicator will be illuminated beside the product.
- 8. When the desired temperature has been reached the Ready Light will illuminate. Stir the shortening at this time to stabilize the temperature. Be sure to agitate the shortening in the "cold zone" in the bottom of the cookpot.



Do not stir the shortening at any other time except at initial "cold" start-up. Failure to follow these instructions can result in shortening overflowing the cookpot which could cause serious burns, personal injury, fire, and/or property damage.

- 9. After the shortening temperature has stabilized for a minimum of 30 minutes, check the shortening temperature using a good deep fat thermometer (Henny Penny part number 12106). If off more than 5°F, refer to the maintenance section.
- 10. If the shortening was not filtered the night before at shutdown, it should be filtered now, after the shortening reaches the frying temperature $(325 \,^\circ F)$ and before the fryer is used.

3-11

3-5. START-UP (Preheat) PROCEDURE (Continued)	DANGER ST
	If the shortening temperature exceeds 420°F imme- diately shut off the power at the main circuit breaker and have the fryer repaired. If shortening (temperature) exceeds its flashpoint, fire will occur, resulting in severe burns and/or property damage.
	11. Raise the lid up and place carrier and baskets onto lid.
	12. Lower lid and emerse baskets into shortening, then raise lid. This will keep the product from sticking to the baskets. You are now ready to start frying.
	NOTE
	Do not permit the fryer to set for an extended period of time at high temperature (325 °F or above), because the shortening will break down much sooner. When the fryer is not being used for frying, put the controls to the "IDLE" position.
3-6. FRYING PROCEDURES	1. Take the chicken parts, 2, 4, 6, or 8 cut-up chickens, from the cooler and place in a scullery sink. Wash the chicken and at this point break the thigh from the joint of the backbone.
	2. Remove any excess fat from the thigh.
	3. Remove the chicken from the water and drain slightly but allow the parts to remain moist.
	4. If a breading machine is used, fill the breading drum with approximately 8 to 10 pounds of PHT Fryer Mix. Feed the moist but drained pieces into the chute at one end of the breader.

3-6. FRYING PROCEDURES (Continued)









- 5. Allow the breaded pieces to fall onto a tray as they come out of the breader drum. (More breading may be needed if a large amount of product is to be breaded.)
- 6. If a breading machine is not used, the food should be placed in the dry mix and hand tumbled so that each piece of food is completely covered.
- 7. Knock off any excess breading and place the breaded product on a tray for cooler storage. Place a damp cloth over the breaded food to retain moisture. The breaded food should be held for a minimum of 30 minutes before frying, so that it can absorb spices from the breading and so that breading can better adhere to the product.
- 8. Prepare fryer as per start-up procedures.
- 9. Be sure the product selector is on chicken.
- 10. Lower the lid and baskets into shortening, then raise them to grease the baskets.
- 11. Remove baskets and place product into baskets the larger pieces to the outside edge of baskets.
- 12. Place the baskets onto carrier, starting with the bottom rack and working up.
- 13. Place cover grid on top rack to prevent pieces from floating.
- 14. Lower lid and baskets and lock lid down.
- 15. Push the timer switch.
- 16. Within a few minutes, the pressure gauge should increase to the operation zone. If it does not, recheck the procedures and then refer to the troubleshooting section.
- 17. When the timer reaches zero the fryer will automatically depressurize and the control will beep. Push the timer switch to reset the controls.



Check the pressure gauge reading. Do not attempt to open the lid until the pressure drops to zero. Opening the lid when the cookpot is pressurized will allow hot shortening and moisture to escape from the cookpot resulting in severe burns to the operator.

)

3-6. FRYING PROCEDURES	18. After the pressure drops to zero, open the lid.
(Continueu)	19. Let baskets hang for approximately 15 seconds before removing the baskets.
	20. Place the product into a warming cabinet immediately.
	21. Before frying the next load, allow time for the shorten- ing to reheat. (Wait until the ready light comes on.)
3-7. FILTERING	 Frying breaded food requires frequent filtering. Taste the cold shortening every day for flavor. Watch the shortening for foaming during frying cycles. Discard the shortening as soon as it shows signs of foaming. Clean the frypot as follows each time the shortening is changed or filtered. 1. Turn the power switch to the "OFF" position.
	The best results are obtained when the shortening is filtered at the normal frying temperature.
	2. Remove carrier from lid of the fryer.
5 ° No. 1 (2010)	WARNING
	Rack may be hot. Burns could result.
	3. Lower the lid to the lid stop bracket and tilt the lid back and into an upright position (see section 3-2).
	4. Use a metal spatula to scrape any build-up from the sides of the frypot. Do not scrape heating element.
	5. Roll the filter unit under the fryer, until the latch located on the front, right leg of the fryer, secures the filter unit in place.
	DANGER A
	The filter unit 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.
397	3-13

3-7. FILTERING (Continued)









- 6. Open the drain valve fully by pulling the drain valve knob all the way out.
- 7. As the shortening drains from the cookpot, use brushes (Henny Penny part number 12105 includes both brushes) to scrape and clean the side of the cookpot and the heating elements. If the drain fills with breading, use the white brush to push the breading into the filter pan.
- 8. When all of the shortening has drained, scrape or brush the sides and the bottom of the cookpot.
- 9. Rinse the frypot as follows:
 - A. Close the drain valve.
 - B. Connect hose of filter unit to the fryer.
 - C. Plug filter unit into the fryer.



Lower the lid so that the very first surge of shortening will not splash up or over the top of the cookpot, causing severe burns.

D. Turn the cook/pump switch to the "PUMP" position. Carefully open lid to see if shortening is returning properly. Fill cookpot 1/3 full, then turn pump off.



If there are air bubbles coming up in the shortening, it is possible that the filter connection union on the filter tube line is not tightened properly. If so, turn off the pump. Use gloves to tighten the union. Severe burns could result.

- E. Wash down and scrub the sides of cookpot. Use "L" brush to clean the heating elements.
- F. After the sides and bottom are cleaned, open the drain valve and let shortening drain out, then close drain valve.

3-7. FILTERING (Continued)





3-8.CHANGING THE FILTER ENVELOPE





- 10. Lower the lid down to the lid stop bracket during the first surge of pumping and pump all the shortening out of the filter pan and back into the frypot.
- 11. When the pump is pumping air only, the shortening in the cookpot will appear to be boiling. Move the main power switch to the "OFF" position.

NOTE

When the appearance of boiling occurs, immediately turn the pump off. This will prevent aeration of the shortening, therefore increasing shortening life.

- 12. Check the level of the shortening in the cookpot. Add fresh shortening if necessary, until it reaches the point between the level indicators.
- 13. After completing the filtering operation, empty and replace the condensation drain pan.
- 14. If frying is to be continued at this time, move the main power switch back to the "COOK" position, and allow time for reheating of the shortening.

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

- 1. Unplug portable filter (PF-180) from cooker and roll filter unit out from under the cooker.
- 2. Remove back cover from filter unit and remove crumb basket. Discard crumbs and clean thoroughly with soap and water. Rinse thoroughly with hot water.
- 3. Unscrew dairy union from standpipe and remove filter head assembly from filter pan.



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



- 4. Lift the screen assembly from the drain pan.
 - 5. Wipe the shortening and crumbs from the drain pan. Clean the drain pan with soap and water. Thoroughly rinse with hot water.
 - 6. Unthread the suction standpipe from the screen assembly.
 - 7. Remove filter clips and discard the filter envelope.
 - 8. Clean the top and bottom filter screen with soap and water. Rinse thoroughly with hot water.



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

- 9. Assemble the top filter screen to the bottom filter screen.
- 10. Slide the screens into a clean filter envelope.
- 11. Fold the corners in, then double fold the open end.
- 12. Clamp the envelope in place with the two filter retaining clips.
- 13. Place large washer on top of filter paper and screw on the suction standpipe assembly.
- 14. Place complete filter screen assembly back into filter drain pan.
- 15. Place filter assembly over suction standpipe assembly, and connect filter union by hand. Do not use a wrench to tighten.
- 16. Place crumb basket into position in the back of the filter pan and place cover over it.
- 17. Portable filter is now ready to be slid under the cooker for filtering.

3-9.FILTER PUMP PROBLEM PREVENTION Model 581

- 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 the filter valve is kept closed at all times during frying.
- 3. Make sure all the shortening has been pumped from the filter lines and the pump by allowing the filter pump motor to run until the shortening in the cookpot appears to be bubbling or boiling.

The filter motor is equipped with a manual reset button in the event the motor's thermal protector actuates. This reset button is located on the front of the filter head assembly, behind a hinged circular door. Wait approximately 5 minutes before attempting to reset this protector device.

NOTE

Use steady, hard pressure on the reset button until a definite "click" is heard. The button takes some force to reset.

WARNING

To prevent burns caused by splashing shortening, the unit's power cord must be unplugged before resetting the filter pump motor's manual reset protection device.



3-10. CLEANING THE FRYPOT

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

1. Turn the main power switch OFF.



The filter drain pan must be in position under the drain valve to prevent splashing or spilling of hot liquids. Failure to do so will result in splashing and severe burns.

- 2. If hot shortening is present in the cookpot, it must be drained by slowly pulling the drain valve knob.
- 3. Close the drain valve. Discard the shortening in the filter pan. Roll the empty filter pan under the fryer.
- 4. Lower the lid to the lid stop bracket and tilt lid back, so that the lid won't interfere with cleaning.
- 5. Fill the cookpot to the level indicators with hot water. Add 8 to 10 ounces of fryer cleaner (Henny Penny part number 12101) to the water and mix thoroughly.



Always wear safety goggles or face shield and protective rubber gloves when cleaning the cookpot, as the cleaning solution is highly alkaline. Avoid splashing or other contact of the solution with eyes or skin. Severe burns or blindness could result. Carefully read the instructions on the cleaner. If solution comes in contact with eyes, rinse thoroughly with cool water and see a physician immediately.

6. Enter Boil Out mode. (See page 6-8.)



NEVER PRESSURIZE FRYER TO CLEAN. Leave lid open. Water under pressure is super heated and will cause severe burns if it comes in contact with skin. 3-10. CLEANING THE FRYPOT (Continued)

WARNING

If the cleaning solution in the cookpot starts to foam and boil over, DO NOT TRY TO CONTAIN IT BY CLOSING THE FRYER LID, or severe burns could result.

7. Using the fryer brush (Henny Penny part number 12105) scrub the inside of the cookpot, the lid liner, and around the counter-top of the fryer.



Do not use steel wool, other abrasive cleaners or cleaners/sanitizers containing chlorine, bromine, iodine, or ammonia chemicals, as these will deteriorate the stainless steel material and shorten the life of the unit.

- 8. After cleaning, turn off the main power switch. Open the drain valve and drain the cleaning solution from the cookpot into the drain pan and discard.
- 9. Close the drain valve and refill the cookpot with plain hot water to proper level.
- 10. Add approximately 16 ounces of distilled vinegar and enter the Boil Out mode again.
- 11. Using a clean brush, scrub the interior of the cookpot and lid liner. This will neutralize the alkaline left by the cleaning compound.

12. Drain the vinegar rinse water and discard.

13. Rinse down the frypot, using clean hot water.

14. Thoroughly dry the drain pan, and the cookpot interior.

NOTE

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

15. Refill the fryer with fresh shortening.



3-13. NIGHT CLOSING PROCEDURES

At the end of each day or shift, perform the following procedures:

1. Move the COOK/PUMP switch to the OFF position.

2. Filter the shortening.

3. Place racks and carrier in sink for cleaning.

4. Clean operating valve per previous paragraph.