



OPERATOR'S M A N U A L

HIGH VOLUME OPEN FRYER

MODEL

OFE/OFG-341

OFE/OFG-342

OEA/OGA-341

OEA/OGA-342



HENRY PENNY
Engineered to Last

REGISTER WARRANTY ONLINE AT WWW.HENNYPENNY.COM

NOTICE

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

A wiring diagram for this appliance is located on the inside of the right side panel.

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

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

The Model OFG/OGA-34X open fryer is equipped with a continuous pilot. But the open fryer can not be operated without electric power. The unit will automatically return to normal operation when power is restored.

CAUTION

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



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



FOR YOUR SAFETY, DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

Technical Data for CE/AGA Marked Products

Nominal Heat Input: (Net)	Natural (I2H) = 31.7 kW (108,165 Btu/h) Natural (I2E) = 31.7 kW (108,165 Btu/h) Natural (I2E+) = 31.7 kW (108,165 Btu/h) Natural (I2L) = 31.7 kW (108,165 Btu/h) Natural (I2HS) = 31.7 kW (108,165 Btu/h) Liquid Propane (I3P) = 31.7 kW (108,165 Btu/h)
Nominal Heat Input: (Gross)	Natural (I2H) = 35.2 kW 120,000 Btu/h Natural (I2E) = 35.2 kW 120,000 Btu/h Natural (I2E+) = 35.2 kW 120,000 Btu/h Natural (I2L) = 35.2 kW 120,000 Btu/h Natural (I2HS) = 35.2 kW 120,000 Btu/h Liquid Propane (I3P) = 35.2 kW 120,000 Btu/h
Supply Pressure:	Natural (I2H) = 20 mbar (2.0kpa) Natural (I2E) = 20 mbar Natural (I2E+) = 20/25 mbar Natural (I2L) = 25 mbar Natural (I2HS) = 25 mbar Liquid Propane (I3P) = 30/37/50 mbar (3.0/3.7/5.0 kpa)
Test Point Pressure:	Natural (I2H) = 8.7 mbar (.087 kpa) Natural (I2E) = 8,7 mbar Natural (I2E+) = N/A Natural (I2L) = 8.7 mbar Natural (I2HS) = 8.7 mbar Liquid Propane (I3P) = 25 mbar (2.5 kpa)
Injector Size:	Natural (I2H) = 3.00 mm Natural (I2E) = 3.00 mm Natural (I2E+) = 2.52 mm Natural (I2L) = 3.17 mm Natural (I2HS) = 3.30 mm Liquid Propane (I3P) = 1.75 mm

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

Noise generated from this equipment is less than 70 dB(A)

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SECTION 1. INTRODUCTION

1-1. INTRODUCTION

The Henny Penny open fryer is a basic unit of food equipment designed to cook foods better and easier. The microcomputer based design helps make this possible. This unit is used only in institutional and commercial food service operations.

NOTICE

As of August 16, 2005, the Waste Electrical and Electronic Equipment directive went into effect for the European Union. Our products have been evaluated to the WEEE directive. We have also reviewed our products to determine if they comply with the Restriction of Hazardous Substances directive (RoHS) and have redesigned our products as needed in order to comply. To continue compliance with these directives, this unit must not be disposed as unsorted municipal waste. For proper disposal, please contact your nearest Henny Penny distributor.



1-2. FEATURES

- Easily cleaned
- OFE has 80 lb. (36 kg.) shortening capacity per well
- OFG has 90 lb. (41 kg.) shortening capacity per well
- 2 half size baskets per well (or full size baskets)
- Microcomputer control
- Stainless steel construction
- Manual reset high limit control
- Self-diagnostic system built into controls
- Built in filter (handles all wells)
- Propane or natural gas; 120,000 BTU/pot (35 kw)
- 18 lbs. (8.2 kgs.) product capacity
- Simplistic electronic Computron 1000 controls available, or more diverse multifunctional controls available

1-3. PROPER CARE

As in any unit of food servicing equipment, the open fryer does require care and maintenance. Requirements for the maintenance and cleaning are contained in this manual and must become a regular part of the operation of the unit at all times.

1-4. ASSISTANCE

Should you require outside assistance, call your local independent Henny Penny distributor in your area, or call Henny Penny Corp. at 1-800-417-8405 or 1-937-456-8405.

1-5. SAFETY

The Henny Penny open fryer has many safety features incorporated. However, the only way to ensure safe operation is to fully understand the proper installation, operation, and maintenance procedures.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Where information is of particular importance or is safety related, the words DANGER, WARNING, CAUTION, or 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 used with the safety alert symbol indicates a potentially hazardous situation which, if not avoided, could 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.

SECTION 2. INSTALLATION

2-1. INTRODUCTION

This section provides the installation instructions for the Henny Penny open fryer.

NOTICE

Installation of the unit should be performed only by a qualified service technician.



Do not puncture the unit with any objects such as drills or screws as component damage or electrical shock could result.

The Henny Penny open fryer has been tested, inspected, and expertly packed to ensure arrival at its destination in the best possible condition. The unit is banded to a wooden skid and then packed inside a heavy cardboard carton with sufficient padding to withstand normal shipping treatment.

NOTICE

Any shipping damage should be noted in the presence of the delivery agent and signed prior to his or her departure.

1. Carefully cut bands from cardboard carton.
2. Lift carton from fryer.
3. Cut and remove the metal bands holding the fryer to the pallet.
4. Remove the fryer from the pallet.



Take care when moving the fryer to prevent personal injury. Single-well fryers weigh 348lbs. (158 kg) and 2-well fryers weigh 700 lbs. (318 kg).

2-3. SELECTING THE LOCATION

Proper location of the open fryer is very important for operation, speed, and convenience. Locate the open fryer to allow clearances for servicing and proper operation. Choose a location which provides easy loading and unloading without interfering with the final assembly of food orders. Operators have found that frying from raw to finish, and holding the product in warmers provides fast continuous service. Keep in mind the best efficiency is obtained by a straight line operation, i.e. raw in one side and finished out the other side. Order assembly can be moved away with only a slight loss of efficiency.

CAUTION

To avoid fire, install the open fryer with minimum clearance from all combustible and noncombustible materials, 0 inches (0.0 cm) from the side and 6 inches (15.24 cm) from the back. If installed properly, the open fryer is designed for operation on combustible floors and adjacent to combustible walls.



To prevent severe burns from splashing hot shortening, position and install fryer to prevent tipping or movement. Restraining ties may be used for stabilization.

2-4. LEVELING THE OPEN FRYER

For proper operation, level the open fryer from side to side and front to back. Using a level placed on the flat areas around the frypot collar, on the middle well, adjust fryer accordingly.

2-5. VENTILATION OF FRYER

Locate the open fryer with provision for venting into an adequate exhaust hood or ventilation system. This is essential to permit efficient removal of the steam exhaust and frying odors. Take special precautions in designing an exhaust canopy to avoid interference with the operation of the open fryer. We recommend you consult a local ventilation or heating company to help in designing an adequate system.

NOTICE

Ventilation must conform to local, state, and national codes. Consult your local fire department or building authorities.

**2-5. VENTILATION OF
FRYER (Continued)**



When installing the gas fry station do not attach an extension to the gas flue exhaust stack. This may impair proper operation of the burner, causing malfunctions and possible negative back draft.

2-6. GAS SUPPLY

The gas open fryer is factory available for either natural or propane gas. Check the data plate inside the front door of the cabinet to determine the proper gas supply requirements. The minimum supply for natural gas is 7 inches water column, and 10 for propane.

For AGA marked fryers, the gas supply pressure must meet the following minimum values:
Natural Gas: 1.13 kpa
Propane (LPG): 2.75 kpa



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

Refer to the illustration on the following page for the recommended hookup of the Open Fryer to the main gas line supply.



To avoid possible serious personal injury:

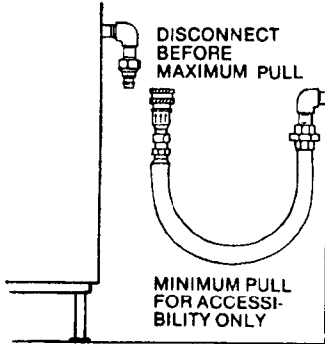
- **Installation must conform with local, state, and national codes.**
- **Installation must conform with American National Standard Z223.1-Latest Edition National Fuel Gas Code and the local municipal building codes. In Canada, installation must be in accordance with Standards CAN/CSA B 149.1 and 149.2, & Installation Codes – Gas Burning Appliances and local codes. In Australia, in accordance with Australian Gas Authority rules AG601-2000, section AS5601.**
- **Isolate the fryer from the gas supply piping system by closing its individual manual shut off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 PSIG (3.45 KPA) (34.47 mbar).**
- **The appliance and its individual shutoff valve must be disconnected from the gas supply system during any pressure testing in excess of 1/2 psi (3.45 KPA).**

For Australia or New Zealand: Where a model is supplied with castors and is to be connected to a fixed gas supply via a flexible hose connection, a restraining chain or wire of adequate strength shall be fixed to the appliance and be suitable to be fixed to the wall within 50 mm of each connection point. The length of the chain or wire shall not exceed 80% of the length of the hose assembly.

GAS PIPING

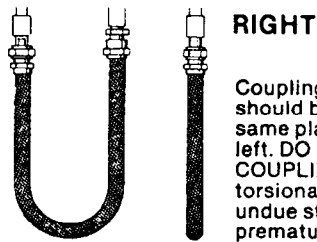
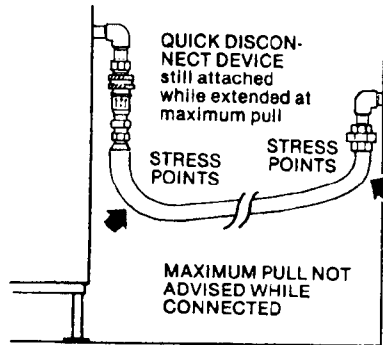
RIGHT

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

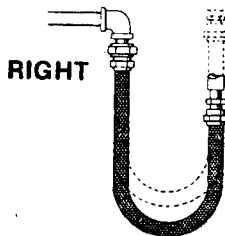
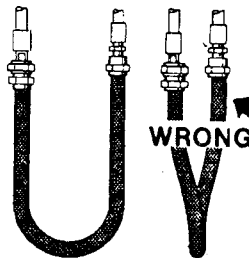


WRONG

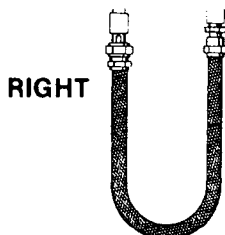
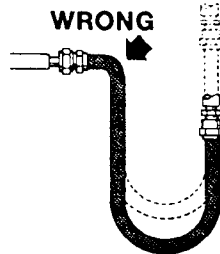
AVOID SHARP BENDS AND KINKS when pulling equipment away from wall. (Maximum pull will kink ends, even if installed properly, and reduce Connector life.)



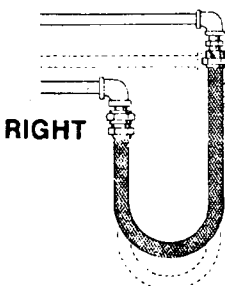
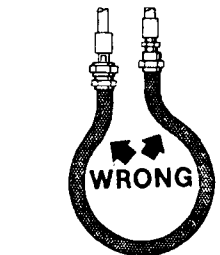
Couplings and hose should be installed in the same plane as shown at left. **DO NOT OFFSET COUPLINGS**—this causes torsional twisting and undue strain causing premature failure.



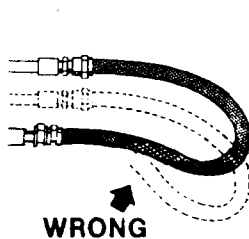
This is the correct way to install metal hose for vertical traverse. Note the single, natural loop. Allowing a sharp bend, as shown at right, strains and twists the metal hose to a point of early failure at the coupling.



Maintain the minimum or larger bending diameter between the couplings for longest life. Closing in the diameter at the couplings, as shown at right, creates double bends causing work fatigue failure of the fittings.

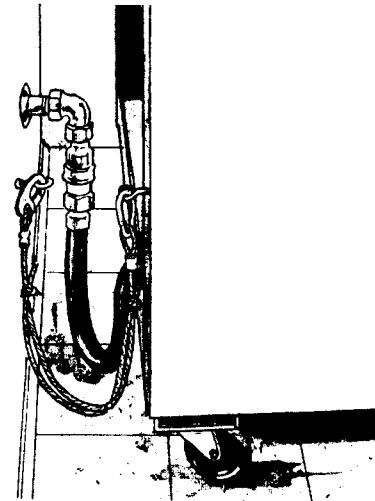


In all installations where "self-draining" is not necessary, connect metal hose in a vertical loop. **DO NOT CONNECT METAL HOSE HORIZONTALLY**... unless "self-draining" is necessary, then use support on lower plane as shown at left.



CABLE RESTRAINT

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



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

CAUTION

DRY WALL CONSTRUCTION

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

CAUTION

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

2-6. GAS SUPPLY
(Continued)

- **A standard one inch, black steel pipe and malleable fittings should be used for gas service connections.**
- **Do not use cast iron fittings.**
- **Although 1 inch (2.54 cm) sized pipe is recommend for 2 wells and 3/4 inch (1.9 cm) sized pipe is recommended for single wells, use adequate sized pipe and install properly, to provide a supply of gas sufficient to meet the maximum demand without undue loss of pressure between the meter and the open fryer. The pressure loss in the piping system should not exceed 0.3-inch water column (.747 mbar).**
- **Do not adjust the vacuum pressure switch. It is factory set for the most efficiency.**

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

1. Installing a manual gas shut off valve and a disconnect union, or
2. Installing a heavy-duty design CSA certified connector. In order to be able to service this appliance, which is provided with casters, a connector complying with ANSI Z21.69 or CAN 1-6.10m88 and a quick-disconnect device, complying with ANSI Z21.41 or CAN 1-6.9m70, must be installed. It must also be installed with restraining means to guard against transmission of strain to the connector as specified in the appliance manufacturer's instruction.
3. Refer to the cable restraint instructions, on preceding page, on how and where to attach the restraining devices to the wall and fryer.

NOTICE

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

2-7. GAS LEAK TEST

NOTICE

Prior to turning the gas supply on, be sure the gas valve knob on the gas control valve is in the OFF position.

Upon initial installation, and after moving the unit, the piping and fittings should be checked for gas leaks. A simple checking method is to turn on the gas and brush all connections with a soap solution. If bubbles occur, it indicates escaping gas.



To avoid fire or explosion, never use a lighted match or open flame to test for gas leaks. Ignited gas could result in severe personal injury and/or property damage

2-8. PRESSURE REGULATOR

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

- Natural: 3.5 inches water column (8.7 mbar).
- Propane 10.0 inches water column (24.9 mbar).

NOTICE

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

2-9. ELECTRICAL REQUIREMENTS OFG/OGA-340 SERIES

- 120 V, 60 Hz., 12 A, 1 PH
- 230 V, 50 Hz., 6.2 A, 1 PH

The 120 V gas fry station requires a 3 wire grounded (Earthed) service and is supplied with a grounded cord and plug. Any 230-volt plug used on the 230-volt unit must conform to all local, state, and national codes.



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

**2-9. ELECTRICAL
REQUIREMENTS
OFG/OGA-340 SERIES
(Continued)**



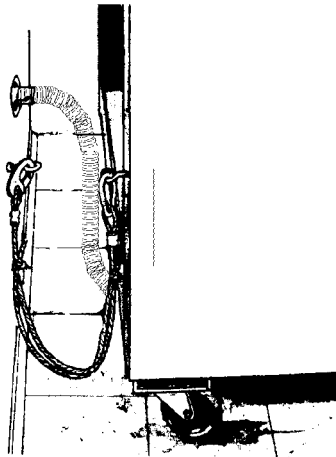
To avoid electrical shock, **do not disconnect the ground (earth) plug**. This fryer **must** be adequately and safely grounded. Refer to local electrical codes for correct grounding (Earthing) procedures or in absence of local codes, with the National Electrical Code, ANSI/NFPA No. 70 Latest Edition. Canadian models are supplied with a terminal box, suitable for conduit connection. In Canada, all electrical connections are to be made in accordance with CSA C221, Canadian Electrical Code Part 1, and/or local codes.

**2-10. ELECTRICAL
REQUIREMENTS
OFE/OEA-340 SERIES**

Refer to the table below for supply wiring and fusing.

CABLE RESTRAINT

	(Per Well)		
Volts	Phase	Kw	Amps
208	3	22.0	61
240	3	22.0	53
380-415	3N+G	22.0	32



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



CAUTION
DRYWALL CONSTRUCTION
Secure I-bolt to a building stud. Do not attach to drywall only. Preferred installation is approximately six inches to either side of service. Cable restraint must be at least six inches shorter than flexible conduit.



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

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



NOTICE
CE units require a minimum wire size of 6mm to be wired to the terminal block. If a flexible power cord is used, it must be HO7RN type.

Permanently connected electric fryers with casters must be installed with flexible conduit and a cable restraint, when installed in the United States. See illustration at left. Holes are available in the rear fryer frame for securing the cable restraint to the fryer. The cable restraint does not prevent the fryer from tipping.

**2-11. ADDITIONAL CE
ELECTRICAL
STATEMENTS**

NOTICE

- The supply power cords shall be oil-resistant, sheathed flexible cable, no lighter than ordinary polychloroprene or other equivalent synthetic elastomer-sheathed cord.
- It is recommended that a 30 mA rated protective device such as a residual current circuit breaker (RCCB), or ground fault circuit interrupter (GFCI), be used on the fryer circuit.
- Equipotential Ground Symbol =



(FOR EQUIPMENT WITH CE MARK ONLY!)






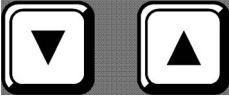
To prevent electric shock hazard this appliance must be bonded to other appliances or touchable metal surfaces in close proximity to this appliance with an equipotential bonding conductor. This appliance is equipped with an equipotential lug for this purpose. The equipotential lug is marked with the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



SECTION 3. OPERATION

3-1. OPERATING COMPONENTS C1000 CONTROLS

Reference Figure 3-1.

Fig. No.	Item No.	Description	Function
3-1	1	Digital Display	Shows the shortening temperature, the timer countdown in the Cook Cycle, and the selections in the Program Mode; the temperature of the shortening can be shown by pressing once, or twice to view set-point temperature; if shortening temperature exceeds 425°F (218°C), the display reads “E-5, FRYER TOO HOT”
3-1	2		This LED lights when the shortening temperature is within 5° of the setpoint temperature, signaling the operator that the shortening temperature is now at the proper temperature for dropping product into the frypot
3-1	3		The timer buttons are used to start and stop Cook Cycles
3-1	4		The idle buttons are used to start an Idle Mode which reduces the temperature of the shortening during non-use periods; press and hold to exit the Idle Mode
3-1	5		The program button is used to access the Program Modes; also, once in the Program Mode, it is used to advance to the next parameter
3-1	6 & 7		Used to adjust the value of the currently displayed setting in the Program Mode and to change set-point temperature for the left frypot, or basket
3-1	8 & 9		Used to adjust the value of the currently displayed setting in the Program Mode and to change set-point temperature for the right frypot, or basket

NOTICE

Proceed onto Section 3-3, Filling or Adding Shortening

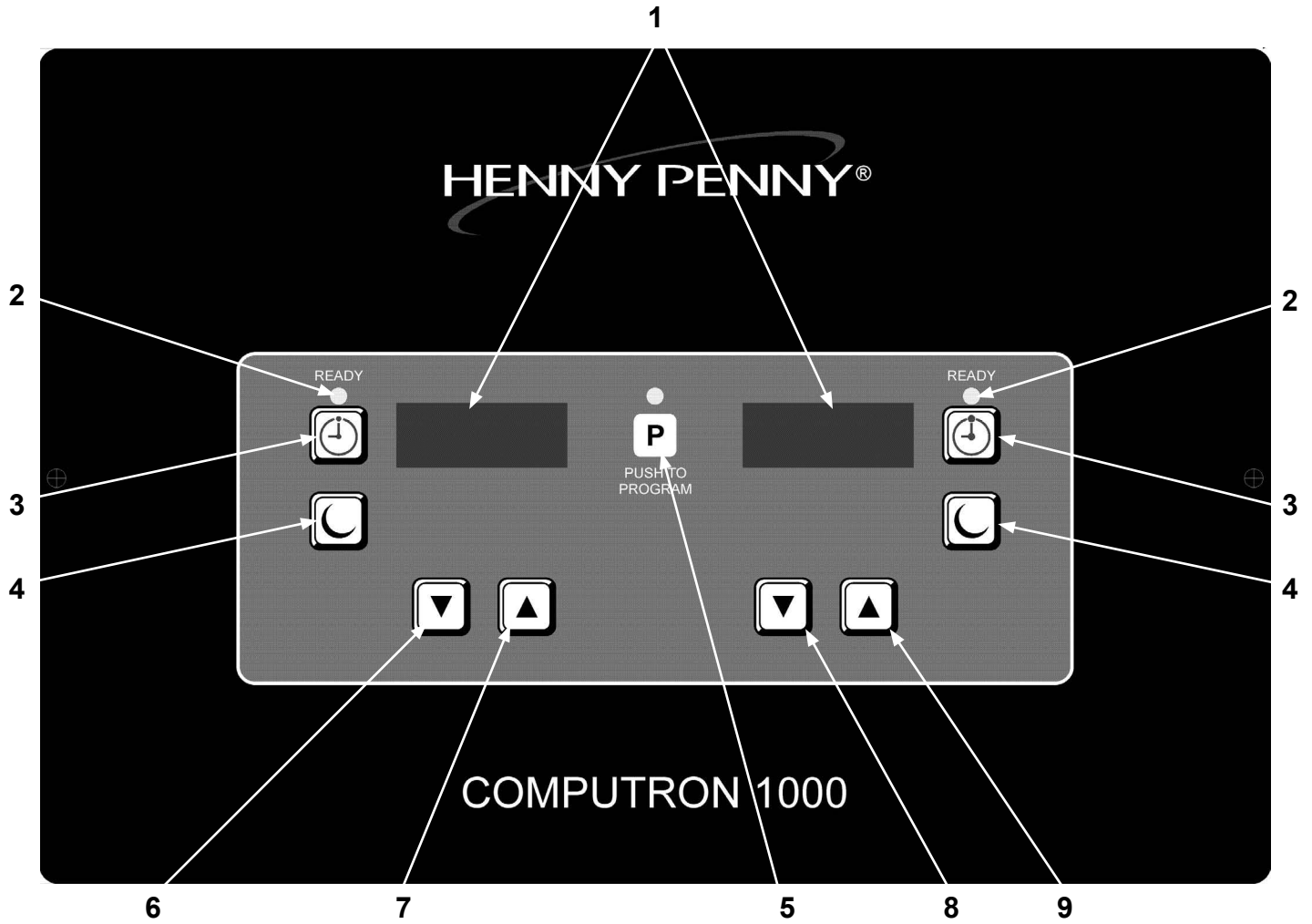








Figure 3-1




3-2. OPERATING CONTROLS 12 BUTTON CONTROLS

This section provides operating procedures for the Henny Penny 340 series open fryer with 12 button timer controls. Read sections 1, 2, and 3, and all instructions before operating the fryer.

Figure 3-2 shows the function of the 12 button timer control.

Fig. No.	Item No.	Description	Function
3-2	1	 HEAT ON	This LED lights when the control calls for heat, and the burners come on and heat the shortening
3-2	2	Digital Display	Digital Display Shows the shortening temperature, the timer countdown in the Cook Cycle, and the selections in the Program Mode; press the INFO button to display the temperature of the shortening; if the temperature exceeds 425°F (218°C), the display reads “E-5”, “FRYER TOO HOT”
3-2	3	WAIT 	Once the fryer is out of the Melt Mode, this LED lights, signaling the operator that the shortening temperature is not at the proper temperature for cooking product
3-2	4	READY 	This LED lights when the shortening temperature is within 5° of the setpoint temperature, signaling the operator that the shortening temperature is at the proper temperature for cooking product
3-2	5	 INFO	Used to display the current shortening temperature, the setpoint temperature, as well as cooking performance, and other information such as, filter use, time of day, etc; in the Program Mode, it steps back to the previous parameter
3-2	6 & 7	 DOWN  UP	Used to adjust the value of the currently displayed setting in the Program Mode

**3-2. OPERATING
CONTROLS 12
BUTTON CONTROLS
(Continued)**

Fig. No.	Item No.	Description	Function
3-2	8		Used to access the Program Modes; once in the Program Mode, it is used to advance to the next parameter
3-2	9		Used to stop Cook Cycles and also to stop the quality timer at the end of a Hold Mode; to use them to start Cook 0 Cycles, see Special Program Mode Section item SP-10
3-2	10	Menu Card Window	Menu Card Displays the food product associated with each product Window selection button; the menu card strip is located behind the decal
3-2	11	Product Select Buttons	Product Select Used to stop Cook Cycles and also to stop the quality Buttons timer at the end of a Mold Mode; to use them to start Cook Cycles, see Special Program Mode Section item SP-10
3-2	12		Are used to manually raise or lower the basket (or baskets), out of the shortening if unit is equipped with auto-lift; if pressed during a Cook Cycle, the cooking time is paused until the basket (or baskets) are lowered back into the shortening; on units not equipped with auto-lift, these buttons manually pause and resume a cook timer

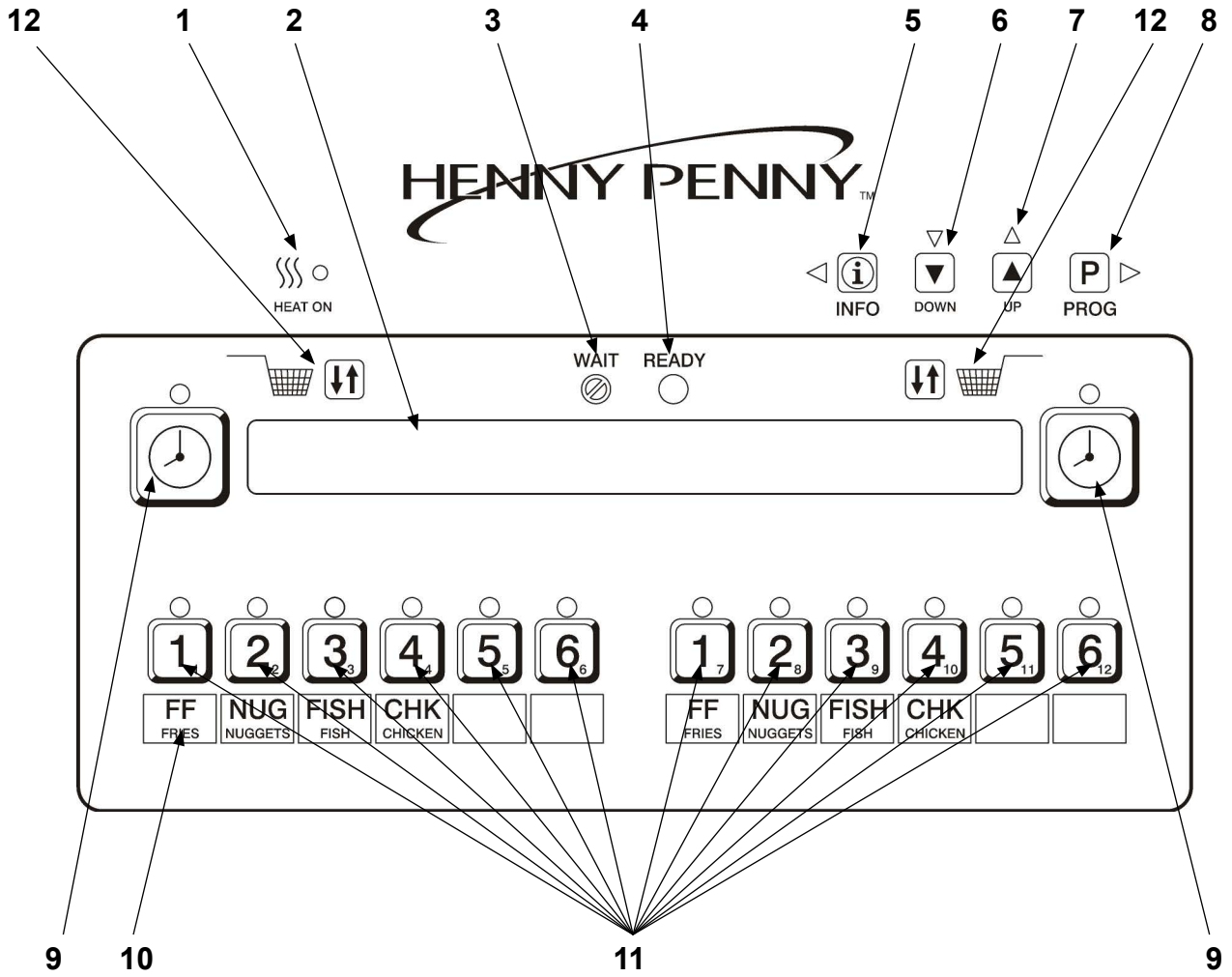


Figure 3-2

3-3. FILLING OR ADDING SHORTENING

CAUTION

The shortening level must always be above the heating elements when the fryer is heating and at the frypot level indicators on the rear of the frypot. Failure to follow these instructions could result in a fire and/or damage to the fryer.

When using solid shortening, it is recommended to melt the shortening on an outside heating source before placing it in the frypots. The heating elements or burner tubes must be completely submerged in shortening. Fire or damage to the frypot could result.

1. It is recommended that a high quality frying shortening be used in the open fryer. Some low grade shortenings have a high moisture content and will cause foaming and boiling over.

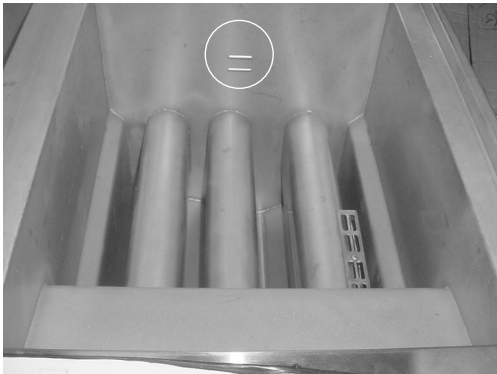


Figure 3-3

WARNING BURN RISK

Wear gloves to avoid severe burns when pouring hot shortening into frypot. Shortening and all metal parts that are in contact with the shortening are extremely hot, and take care to avoid splashing.

2. The gas open fryers require 90 lbs. (41 kg) of shortening per frypot, and the electric 80 lbs. (36 kg) per frypot. All frypots have 2 level indicator lines inscribed on the rear wall of the frypot. The top indicator shows the proper level of heated shortening; the bottom indicator shows the proper level of cold shortening. (See Figure 3-3)

NOTICE

So the faucet doesn't interfere with operating, filtering and cleaning procedures, swivel the faucet to either frypot and push it into the area above the elements, as shown in Figure 3-4 at left.



Figure 3-4


3-4. C1000 OPERATIONS AND PROCEDURES

The Computron 1000 controls are available on both split electronic controls frypot and full frypot fryers. The following is a brief description of the operating procedures for fryers with these controls.

1. Be sure the drain valve is in the closed position.
2. Place basket support inside of frypot.
3. Make sure frypot is filled with shortening to the proper level.
4. Display shows “OFF” until power switch is turned to the ON position. Display now shows the cook time and the unit automatically goes into the Melt Cycle until the shortening temperature reaches 250°F (121°C). The control then automatically exits the Melt Cycle.


NOTICE

The OFG-340 series open fryer has several safety devices which shuts-down the gas supply when they are activated. The above procedures should be followed to restart the open fryer and if the shut down is repeated, a qualified technician should be notified.

The Melt Cycle may be bypassed, if desired, by pressing and holding  for 3 seconds.

CAUTION


Do not bypass the Melt Cycle unless enough shortening on gas fryers and elements on electric fryers. If Melt Cycle is bypassed before all burner tubes or elements are covered, excessive smoking of the shortening, or a fire will result.

5. Once out of the Melt Cycle, the shortening is heated until  lights and the cook time is displayed. Thoroughly stir shortening to stabilize the temperature throughout the frypots.
6. Before loading product into the baskets, lower baskets into the hot shortening to keep the product from sticking to the baskets.
7. Once the shortening temperature has stabilized at the setpoint temperature, lower the basket with product into the frypot.

**3-4. C1000 OPERATIONS
AND PROCEDURES
(Continued)**



Do not overload, or place product with extreme moisture content into the basket. 12.5 lbs. (5.7 kg) is the maximum amount of product per frypot (6.25 lbs. (2.8 kg) maximum for the split frypot fryers). Failure to follow these directions can result in shortening overflowing the frypot. Serious burns or damage to the unit could result.


9. If the right basket was dropped into the shortening, then press the right .

If the left basket was dropped, then press the left .

10. The timer on the appropriate side (right or left) starts counting down.



NOTICE

The timing operation of the two sides of the control is entirely independent of each other. One may be set, started, or stopped without affecting the other.





11. At the end of the Cook Cycle a tone will sound and the display flashes “DONE”. Press  button and lift the basket from the shortening.

**3-5. C1000 PROGRAMMING
INSTRUCTIONS**



Timer Programming

1. Anytime the cook time is displayed, press   under the appropriate display to change the cook time.

Set-Point Temperature Programming

1. Press  once to view the actual shortening temperature and press  again to view the set-point temperature.
2. While the set-point temperature is in the display, press   to change the set-point temperature.

NOTICE



If “LOCK” shows in display when pressing  , the controls are locked and must be unlocked before changing the time or set-point temperature. See C1000 Special Programming Section.

3-6. C1000 SPECIAL PROGRAMMING


Special Programming is used to set the items below:



- Fahrenheit or Celsius
- Initialize System
- Lock or Unlock Controls
- Heat Source – Electric; Gas w/standing pilot; Gas w/electronic ignition; Gas-Induced Draft
- Vat Type - Split or Full Vat (frypot)
- Oil Type - Solid or Liquid



1. To enter Special Programming, turn off power switch (either side). Press and hold **P** and turn the power switch back on.



2. “SPEC” “PROG” followed by, “DEG” “°F” or “°C”. Use   to change to “°F” or “°C”.



3. Press **P** and “INIT” shows in the display.



Press and hold the right  and display shows “In-3”, “In-2”, “In-1” followed by “Init Sys” “DONE DONE”. The controls now are reset to factory parameters, the time set to 0:00 and temperature 190°F or 88°C.

4. Press **P** and “LOCK” or “UNLOCK” shows in the displays. Use   to change from “LOCK” to “UNLOCK”, or vice versa.

5. Press **P** and “FRYR” & “OPEN” show in displays. Use   to change from “PRES” to “OPEN” if needed.

6. Press **P** and “FRYR” shows in the display. Use   to change the fryer type: “ELEC” for electric models; “GAS” for units with standing pilot; SSI for units with solid state ignition; IDG for units with induced draft gas burners.

7. Press **P** and “VAT” shows in the display. Use   to change the vat (frypot) type from “SPLIT” to “FULL” or vice versa. Should be set on FULL VAT

8. Press **P** and “MELT” and “Solid” or “LIQD” shows in the displays. Use   to choose “Solid”, if using solid shortening, or “LIQD”, if using liquid shortening.

9. Press and hold **P** to exit Special Programming at any time.

**3-7. BASIC OPERATIONS
AND PROCEDURES
- (12 Button Controls/
Autolift)**

The Henny Penny open fryers are available with 12 product button controls. Also, models OEA/OGA are available with 12 button controls with auto-lift features. The auto-lift controls automatically lowers the basket(s) into the shortening, at the beginning of the Cook Cycle, and raises the basket(s) at the end of the cycle.

1. Be sure the drain valve is in the closed position.
2. Place basket support inside frypot.
3. Fill the frypot with shortening.
4. Move power switch to the ON position. Unit automatically goes into the Melt Cycle. When the temperature reaches 230°F (110°C) the control enters the Heat Cycle, and heats the shortening until the temperature setting is reached.

NOTICE

The gas open fryer has several safety devices which shut down the gas supply when they are activated. Follow above procedures to restart the fryer, and if the shutdown is repeated, notify a qualified technician.



Only on gas units can the Melt Cycle be bypassed, if desired, by pressing a product button and holding it for five seconds. The display shows “EXIT MELT?”

1=YES 2=NO”. Press  to exit melt.

CAUTION

Do not bypass the Melt Cycle unless enough shortening has melted to completely cover all of the heat tubes. If the Melt Cycle is bypassed before all heat tubes are covered, excessive smoking of shortening, or a fire will result.

WAIT

5. Once out of the Melt Cycle,  flashes until the setpoint temperature is reached. Then **READY** illuminates. 

**3-7. BASIC OPERATIONS
AND PROCEDURES
- (12 Button Controls/
Autolift) (Continued)**

NOTICE

The two separate timer controls (left and right), can be programmed entirely independent from each other for 2 half baskets, or as one timer for a single, full sized basket. The default setting from the factory is for two half sized baskets. To change to a single full size basket setting, push and hold the #1 product button while turning on the power switch. To change back to the two basket mode, push and hold the #2 product button while turning on the power switch.

CAUTION

When using a single full size basket, be sure the control is set for 1 basket. Upon turning on the fryer, the display shows "1 BASKET", or "2 BASKET". If "2 BASKET" is set, while using a single basket, damage to the basket or lift mechanisms could result.

6. Thoroughly stir shortening to stabilize the temperature throughout the frypots.
7. Once the shortening temperature has stabilized at the setpoint temperature, place the baskets into the shortening, (or for auto-lift fryers, lift basket onto the hangers). Place product into the basket.





Do not overload, or place product with extreme moisture content into the basket. 18 lbs. (8.2 kgs.) is the maximum amount of product per frypot. Failure to follow these directions can result in shortening overflowing the frypot. Serious burns or damage to the frypot could result.

8. If the right basket is to be lowered into the shortening, then one of the right product buttons should be pressed. If the left basket is to be lowered, then one of the left product buttons should be pressed. On auto-lift fryers, the basket(s) automatically lowers into the shortening.
9. The timer on the appropriate side will start counting down.


**3-7. BASIC OPERATIONS
AND PROCEDURES-
(12 Button Controls/
Autolift) (Continued)**

NOTICE

To load product directly into the shortening on Auto-lift fryers, lower empty basket(s) into the shortening by pressing  , load with product, then press


the product button to start the Cook Cycle.

Raise the basket(s) on Auto-lift fryers anytime during a Cook Cycle by pressing  . The Timed Cycle then pauses.

10. At the end of the Cook Cycle, a tone sounds and the display shows “DONE”. Lift the basket from the shortening. (On auto-lift fryers, the basket(s) automatically rises out of the shortening.) To stop the “DONE” beeper, press either , or the product button.


NOTICE

A different product can be selected during the first minute of cooking, in case the wrong product button was pressed.

11. The display shows either dashes, or the product name, depending on the Special Program setting, SP-10. If a Quality Time was programmed, the controller alternately shows the product selected and the Quality Time remaining in minutes. If a different product is selected during the Hold Cycle, the display only shows the product selected.
12. At the end of the Hold Cycle, a tone sounds, the display flashes “QUALITY”, and the product it was timing. Press and release .

NOTICE

In the Cook Mode, when “FILTER SUGGESTED, shows in the display, the operator has the option to filter at this time, or to continue cooking. But, if the operator continues cooking, a filter lockout will occur within the next Cook Cycle, or two.

When “**FILTER LOCKOUT**”, then “**YOU *MUST* FILTER NOW.....**” shows in the display,  is the only button that functions, until the unit is filtered. **PROG**

**3-8. CARE OF
SHORTENING**



FOLLOW THE INSTRUCTIONS BELOW TO AVOID SHORTENING OVERFLOWING THE FRYPOT, WHICH COULD RESULT IN SERIOUS BURNS, PERSONAL INJURY, FIRE, AND/OR PROPERTY DAMAGE.

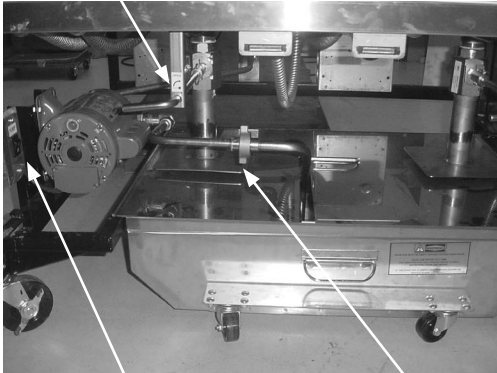
1. Maintain the shortening at the proper cooking level. Add fresh shortening as needed.
2. To protect and get the maximum life out of the shortening, lower the temperature to 275° F (135° C) or lower when the fryer is not in immediate use. Deteriorated shortening smokes badly, even at lower temperatures.
3. Taste the cold shortening daily for signs of bad flavor. Discard any shortening which has a bad flavor or shows signs of excessive foaming or boiling. Keep the frypot clean.



WITH PROLONGED USE, THE FLASHPOINT OF SHORTENING IS REDUCED. DISCARD SHORTENING IF IT SHOWS SIGNS OF EXCESSIVE SMOKING OR FOAMING. SERIOUS BURNS, PERSONAL INJURY, FIRE, AND/OR PROPERTY DAMAGE COULD RESULT.

3-9. FILTERING OF SHORTENING

DRAIN VALVE HANDLE



PUMP SWITCH FILTER UNION
Figure 3-5

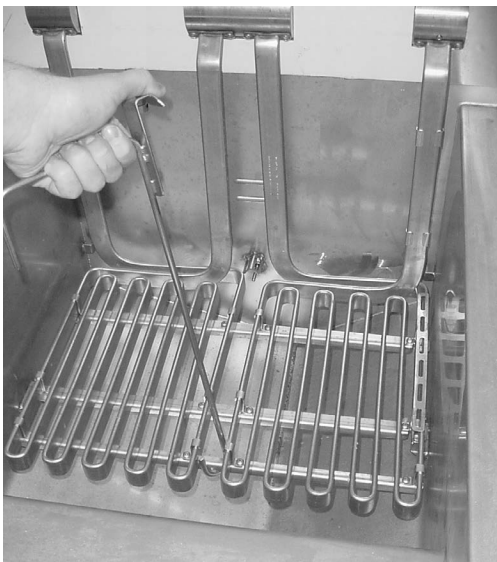


Figure 3-6



Figure 3-7

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

NOTICE

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

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

CAUTION

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

WARNING BURN RISK

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

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

3. Open door(s) under unit, and slowly turn drain valve handle a half turn. Leave for a few minutes, then slowly, fully open drain valve. This prevents much splashing of the hot shortening as it drains. Figure 3-5.
4. As the shortening drains from the frypot, use brushes to clean the sides of the frypot and the burner tubes or heating elements. If the drain fills with breading, use straight white brush to push excess breading into the drain pan.
5. When all shortening has drained, scrape or brush the sides and the bottom of the frypot. Use the lift tool (Figure 3-6) and lift the elements (electric fryers), to clean the bottom of the frypot. Figure 3-7.

**3-9. FILTERING OF
SHORTENING
(Continued)**



Figure 3-8

6. Rinse the frypot as follows:
 - a. Close the drain valve.
 - b. Position return line over empty frypot. Figure 3-8.
 - c. Move the pump switch to the pump position.
 - d. Fill the frypot 1/3 full, then turn off pump.
 - e. Wash down and scrub the sides of the frypot with the brushes.
 - f. After the sides and bottom are cleaned, open the drain valve.
7. Close drain valve and pump all of the shortening out of the filter drain pan and back into the frypot.



IF SHORTENING FLOW IS SLOW FROM THE FAUCET, IT'S POSSIBLE THAT THE FILTER CONNECTION AT THE UNION ON THE FILTER TUBE IS NOT TIGHTENED PROPERLY. IF SO, TURN OFF THE PUMP AND WEAR PROTECTIVE GLOVES OR CLOTH WHEN TIGHTENING THE UNION. THIS UNION WILL BE HOT. SEVERE BURNS COULD RESULT.

8. When the pump is pumping air only, move the pump switch from on to off.
9. Check the level of the shortening in the frypot. Add fresh shortening if necessary, until it reaches the top level indicator line on the rear wall of the frypot.

3-9. FILTERING OF SHORTENING (Continued)

NOTICE

About 10 to 12 filterings can be made with one filter paper envelope, depending on:

- the quantity and type of product fried and filtered
- the type of breading used
- the amount of crumbs left inside the filter drain pan; When the filter screen assembly and filter paper become clogged, and the pumping flow slows, clean the screen assembly and change the filter envelope.

10. To continue cooking, turn the main power switch to the on position. (Remove the element lift tool on electric fryers.)

3-10. FILTER PUMP PROBLEM PREVENTION

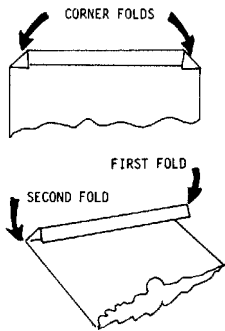


Figure 3-9

To help prevent filter pump problems:

1. Properly install paper envelope over the filter screens. Fold the open end of the envelope, and clamp with retaining clips so that crumbs cannot enter. (See Figure 3-9)
2. Pump shortening, until no shortening is coming from nozzle.

3-11. FILTER PUMP MOTOR PROTECTOR – MANUAL RESET

In the event it overheats, the filter pump motor is equipped with a manual reset button located on the rear of the motor. After waiting 5 minutes to allow the motor to cool, press the reset button. It takes some effort to reset the motor. A screwdriver can be used to help press reset button.

Servicing of the filter pump is done at the side of the unit. If service is required, disconnect the open fryer from the electrical and/or gas power source.



To prevent burns caused by splashing shortening, turn the unit's filter pump switch to the off position before resetting the filter pump motor's manual reset protection device.

**3-12. CHANGING THE
FILTER ENVELOPE**

Change the filter envelope after 10-12 filterings or whenever it becomes clogged with crumbs. Proceed as follows:



The filter union could be hot. Wear protective glove or cloth, or severe burns could result.

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

1. Move the main power switch to the OFF position.
2. Disconnect the filter union and remove the filter drain pan from beneath the frypot.
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.
8. Clean the top and bottom filter screen with soap and water. Rinse thoroughly with hot water.

NOTICE

Be sure that the filter screens, crumb catcher, filter clips and the suction standpipe are thoroughly dry before assembly with the 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.

**3-12. CHANGING THE
FILTER ENVELOPE
(Continued)**

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.
16. The fryer is now ready to operate.

**3-13. CLEANING THE
FRYPOT(S)**

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

1. Turn the main power switch off.



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

Moving the fryer or filter drain pan while containing hot shortening is not recommended. Hot shortening can splash out and severe burns could result.

Always wear chemical splash goggles or face shield and protective rubber gloves when cleaning the frypot 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.



CHEMICAL
SPLASH
GOGGLES



CHEMICAL
RESISTANT
GLOVES

2. If hot shortening is present in the frypot, drain it by slowly opening the drain valve handle, one half turn. Leave for a few minutes, then slowly open the valve to full open position.

3-13. CLEANING
THE FRYPOT(S)
(Continued)

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.



The filter union could be hot. Wear protective glove or cloth, or severe burns could result.

4. Fill the frypot to the level indicator line with hot water. Add 4 ounces (.12 l) of fryer cleaner to the water and mix thoroughly. The fry basket can be placed inside the frypot for cleaning.
5. Use the Clean-Out Mode (see section 3-14), or turn the main power switch to the ON position and set temperature to 195° F (90.5° C).
6. When the solution reaches 195° F (90.5° C), turn the main power switch to the OFF position.



If the cleaning solution in the frypot starts to foam and boil over, immediately turn the power switch to OFF or damage to components could result.

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.

Do not use a water jet (pressure sprayer) to clean the unit, or component damage could result.

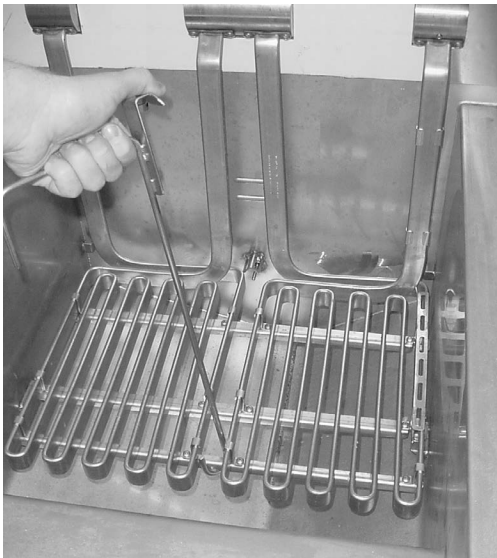


Figure 3-10



Figure 3-11

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 frypot. Lift the elements (electric fryers), to clean the bottom of the frypot (See Figures 3-10 and 3-11).
9. After cleaning, open the drain valve and drain cleaning solution from the frypot into drain pan and discard.
10. Replace the empty drain pan, close the drain valve, and refill frypot with plain hot water to the proper level.

3-13. CLEANING
THE FRYPOT(S)
(Continued)

11. Add approximately 8 ozs. (0.24 liters) of distilled vinegar. Use the Clean-Out Mode (see section 3-14), or bring the solution back up to 195° F (90.5° C).
12. Using a clean brush, scrub the interior of frypot. This neutralizes the alkaline left by the cleaning compound.
13. Drain the vinegar rinse water and discard.
14. Rinse down the frypot using clean, hot water.
15. Thoroughly dry the drain pan and the frypot interior.

NOTICE

Make sure the inside of the frypot, the drain valve opening, and all the parts that 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 frypot with fresh shortening.

Henny Penny has the following cleaners available:


Foaming Degreaser - Part no. 12226

PHT Liquid Cleaner - Part no. 12135



PHT Dry Powder Cleaner - Part no. 12101

See your local distributor for details.

3-14. CLEAN-OUT MODE

When heating the cleaning solution and vinegar solutions, turn the POWER switch to the ON position. When the fryer starts the Melt Cycle, press and hold  then “CLEAN-OUT?”, “1=YES

2=NO” shows in display. Press  to start Clean-Out Mode.

The fryer displays “*CLEAN-OUT MODE*” and heats up to a preprogrammed temperature, up to 195°F (91°C), then automatically begins a preset timed countdown. Use the   if necessary, to adjust the temperature and keep the cleaning solution from boiling over.

Once the timed countdown is complete and display shows “CLEANING DONE”, turn power switch to off position and drain cleaning solution from the frypot.

Refer back to the Cleaning the Frypot procedures for more detailed instructions. See Special Program Modes SP-20 and SP-21 to preset the temperature and time.

3-15. LIGHTING AND SHUTDOWN OF THE BURNERS

1. Turn the power switch to the OFF position.
2. Rotate the gas valve knob clockwise to the OFF position and wait at least five(5) minutes before continuing to the next step.
3. Rotate gas valve counter clockwise to the on position.
4. Place the power switch to the ON position.
Ignition sequence:
 - a. Checks to see vacuum switch is open.
 - b. Fan runs and waits for vacuum switch to close.
 - c. 30 Second purge delay.
 - d. Ignition modules turn on.
 - e. Ignition modules sparking igniters.
 - f. Pilot lit – ready to heat.
5. The burner lights and operates in a Melt Cycle until the shortening reaches a preset temperature.
6. Press the desired product button after the display and LED shows “READY”.

To Shutdown burner:

1. Turn the power switch to the OFF position.
2. Rotate gas valve knob to the OFF position.

3-16. HIGH TEMPERATURE LIMIT CONTROL

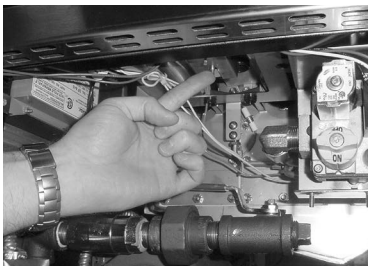


Figure 3-12



Figure 3-13

This high temperature limit 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, the control must be manually reset by pressing the reset button.

A red reset button is located under the control panel, in the front of the gas fryer. (See Figure 3-12)

The reset button on electric fryers is located in a hole in the right element hinge. (See Figure 3-13) Use a small screwdriver to press the reset button.

Once the reset button is pressed, heat is then supplied to the frypot once again.

**3-17. REGULAR
MAINTENANCE**

As in all food service equipment, the Henny Penny open fryer requires care and proper maintenance. The table below provides a summary of scheduled maintenance procedures to be performed by the operator.

Procedure	Frequency
Filtering of shortening	Daily (3-4 loads)
Changing of shortening	When shortening smokes, foams up violently, or tastes bad
Changing the filter envelope	After 10-12 filterings, or when envelope is clogged with crumbs
Cleaning the frypot	Every change of shortening



If moving fryer to perform preventive maintenance:

- **Gas supply should be turned off to avoid fire or explosion.**
- **Electrical supply should be unplugged or wall circuit breaker turned off to avoid electrical shock.**


SECTION 4. PROGRAMMING

4-1. INTRODUCTION


The controls are preset from the factory, but desired Functions can be programmed in the field. This section includes the Product Programming Mode, which are the basic settings, and the Level 2 programming, which are the more detailed settings.

4-2. PRODUCT PROGRAM MODE

This mode allows the operator to change and set various parameters for each product.








1. Press and hold  for one second until “PROG” shows in the display, followed by “ENTER CODE”.
2. Enter code 1, 2, 3. “SELECT PROG PRODUCT” scrolls across the display.
3. Press and release the desired product button (1 to 12).

NOTICE













To copy product settings from one button to another, press and hold the product button to be copied until the display flashes. Then press the product button you are copying the settings to. The display shows “COPY -X- TO -Y-?” then, “1=YES 2=NO”. Press  to complete the copying.

5. Press and release . The name of that product shows in the display. Ex. “NAME“FRIES”.

Change Product Names

- a. Press and release  and  and the first letter, or digit, starts flashing.
- b. Press and release  and  to change the flashing letter.
- c. To continue to the next letter, press . Then press   to change this letter.
- d. Repeat step c until up to 7 letters are entered.







**4-2. PRODUCT PROGRAM
MODE (Continued)**

- e. Press and hold  to exit Program Mode, or press and release  until “COOK” shows in display, to continue with Program Mode.
6. Press and release  and “COOK TIME” shows in the display along with the preset time. Press   to change the time. The time shows in minutes and seconds. Press and hold the buttons, and the time will jump by 5 second increments to a maximum of 59:59.
7. Press and release  a second time and “TEMP” shows in the display, along with the preset temperature on the right side of the display. Press   to change the temperature. Press and hold the buttons and the temperature will jump by 5 degree increments to a max. of 380°F (193°C), and a min. of 190°F (88°C).
8. Press and release  a third time and product “COOK ID” shows in the display along with the ID. For example, “FF” would be the ID for french fries And “NU” would be the ID for nuggets. Press   to change the ID letters.
9. Press and release  a fourth time and “LOAD COMP” shows in the display along with the load compensation value. Press and release to change this value to a max. of 20 and a min. of 0.

NOTICE

The ID letters appear alongside the cook timer, while cooking, to help identify the product being cooked.


**4-2. PRODUCT PROGRAM
MODE (Continued)**



10. Press and release  a fifth time and “LCOMP AVG” shows in the display along with the load compensation average temperature. Press and release   to change this value to a maximum of 50°F (10°C) below setpoint temperature.
11. Press and release  a sixth time and “ALARM – 1 AT 0:00” shows in the display. Press and release   to set an alarm.


Ex: If a Cook Cycle was set at 3 minutes, and an alarm was to go off after 30 seconds into the Cook Cycle, “2:30” would be set in the display at this time. When the timer counts down to 2:30 the alarm sounds.




NOTICE

Up to 4 alarms can be programmed. After the first one is set, the other alarms can be accessed by pressing


the  button again. Additional prompts shows in the display. These are “NONE”, “SHAKE”, “STIR”,

“ADD”, or “PAUSE”. Press   buttons to

select the word to show in the display if an alarm is programmed. If “PAUSE” is selected on Auto-lift fryers the basket automatically rises out of the shortening and timer stops the countdown. Press  to lower the basket and resume the timer.

12. Press and release  until “QUALITY TMR” shows in the display along with the preset holding. Press and release   to adjust the holding time, up to 59:59.

NOTICE

To exit the Product Program Mode at any time, press and hold  for 2 seconds.



**4-2. PRODUCT PROGRAM
MODE (Continued)**

Filter Cycle Mode (Optional)



For “2,MIXED”, or “3,GLOBAL” to appear in the Product Program Mode, the Filter Tracking must be enabled in the Special Program Mode.(See Special Program Mode Section)

13. Press  .

“2,MIXED”

- a. “FILTER AFTER” shows in the display, along with the preset number of Cook Cycles.
- b. Press and release   until the desired number of Cook Cycles between filters shows in the display. For example, if 4 is set for a product, each time that product is selected, it counts 1/4, or 25%. Then each time a product is cooked, the percentages add up until 100%, or more is reached. Then the display shows “FILTER SUGGESTED”.

“3,GLOBAL”


- a. “FILTER INCL” shows in the display, along with “NO” or “YES”
- b. Press and release   to “YES” if that product is to be included in the filter count, or “NO” if it is not.

**4-3. SPECIAL PROGRAM
MODE**

The Special Program Mode is used to set more detailed parameters listed below.




- SP-1** • Degrees Fahrenheit or Celsius
- SP-2** • Language: Eng, French, German, Spanish, Portuguese
- SP-3** • System initialization (factory presets)
- SP-4** • Audio volume
- SP-5** • Audio tone
- SP-6** • Audio effect
- SP-7** • Type of shortening to be melted - liquid, solid
- SP-8** • Idle Mode
- SP-9** • Filter tracking
- SP-10** • Product buttons
- SP-11** • Cooking display
- SP-12** • Quality timer display
- SP-13** • Baskets - 1 or 2
- SP-14** • Auto-lift detection
- SP-15** • Multi-stage cooking
- SP-16** • Program code change
- SP-17** • Energy Save Enabled? (Gas Fryers)
- SP-18** • Clean-out minutes
- SP-19** • Clean-out temperature

**4-3. SPECIAL PROGRAM
MODE (Continued)**



1. Press and hold  for 5 seconds until “L-2” and “LEVEL 2”, followed by, “SP PROG” and “ENTER CODE shows in the display.
2. Enter code 1, 2, 3, and “SP- 1 “, “TEMP, UNITS” shows in the display.

NOTICE




If a bad code is entered, a tone sounds and “BAD CODE” shows on the display. Wait a few seconds, the control reverts back to the Cook Mode, and repeat the above steps.

To exit from the Special Program Mode at any time, press and hold  button for 2 seconds, or to roll back to previous setting, press  .

Degrees Fahrenheit or Celsius (SP-1)

- a. Follow steps 1 and 2 above.
- b. The display flashes “SP- 1” and “TEMP, UNITS”, along with “°F” or “°C”. Press   buttons to toggle between “°F” and “°C”.




Language (SP-2)

- a. Follow steps 1 and 2 above.
- b. Press and release  button. “SP-2” and “LANGUAGE” flashes on the display, along with the language (Ex:” 1.ENGL”)
- c. To toggle to the desired language, press and release  .

**4-3. SPECIAL PROGRAM
MODE (Continued)**

System Initialization (SP-3)

This step resets the cook programs to factory settings.




- a. Follow steps 1 and 2 above.
- b. Press and release  twice. “SP-3” and “DO SYSTEM INIT” flashes on the display, along with “INIT”.
- c. Press and hold . “INIT” shows on the display, a tone sounds, and “IN 3”, “IN 2”, “IN 1” flashes on the right side of the display. When “INIT” starts flashing on the left side of the display, release . When “DONE” shows on the display, the initialization is complete, and the controls now have factory preset parameters.

NOTICE

All cook settings programmed by the operator are lost when System Initialization is completed




Audio Volume (SP-4)

The volume of the speaker can be adjusted.

- a. Follow steps 1 and 2 above.
- b. Press the  3 times. “SP-4” and “AUDIO VOLUME” flashes on the display, along with the volume value.
- c. Press   to adjust the speaker volume; 10 the maximum value and 1 the minimum.

Audio Tone (SP-5)




The tone of the speaker can be adjusted.

- a. Follow steps 1 and 2 above.
- b. Press  4 times. “SP-5” and “AUDIO TONE (HZ)” flashes on the display, along with the tone value.
- c. Press   to adjust the tone of the speaker; 2000 the maximum, 50 the minimum.

**4-3. SPECIAL PROGRAM
MODE (Continued)**

Audio Effect (SP-6)

This setting lets you add an “audio effect”- i.e. a pulsed or “warble,” sound effect – to the beeps generated in a Cook Cycle.




- a. Follow steps 1 and 2 above.
- b. Press  5 times. “SP-6” and “AUDIO EFFECT” shows in the display, along with the effect value.
- c. Press   to change the sound effect of the tone.

The numbers correspond as follows:

- 0 = normal tone
- 1 = fast-pulsed tone
- 2 = slow pulsed tone
- 3 = warble tone

Type of shortening to be melted - Liquid or Solid (SP-7)

The Melt Cycle can be set to the type of shortening being used.

- a. Follow steps 1 and 2 above.
- b. Press and release  6 times. “SP-7” and “MELT CYCLE SELECT” flashes on the display, along with “1=LIQ” or “2=SOLID”.
- c. Press   to toggle from one type to another.

CAUTION

The type of shortening being used in the open fryer determines the amount of heat applied during the Melt Cycle. If the controls are set to the solid setting, less heat is applied to the shortening, than if the controls were set to the liquid option. Too much heat applied to solid shortening will cause excessive smoking, and could cause a fire. This setting should match the type of shortening being used at the time.


When using solid shortening, it is recommended to melt the shortening on an outside heating source before placing it in the frypots. The heating elements or burner tubes must be completely submerged in shortening. Fire or damage to the frypot could result.



**4-3. SPECIAL PROGRAM
MODE (Continued)**

Idle Mode (SP-8)


A programmed Idle Mode allows the shortening temperature to drop to a lower temperature when not in use. This saves on the shortening and utilities.



a. Follow steps 1 and 2 above.


b. Press and release  7 times. “SP-8” and “IDLE MODE ENABLED?” flashes in the display, along with “NO” or “YES”.



c. Press and release   to toggle between NO and YES.

d. With “YES” in the display, the Idle Mode is enabled.


Press and release . “SP-8A” and “IDLE SETPT TEMP” shows in the display, along with the preset temperature.



e. The idle setpoint temperature, can be changed by pressing  .

f. Press and release . “SP-8B” and “AUTO-IDLE MINUTES” shows in the display, along with the preset time.

g. Press   to set the minutes the cooker stays idle before the auto-idle is enabled; 60 the maximum, OFF the minimum. Ex: “30” in the display means, if product in not cooked in that frypot for 30 minutes, the control automatically activates the idle setpoint temperature, programmed above.




4-3. SPECIAL PROGRAM MODE (Continued)

- h. To use the right product button 6 as the manual idle button, press . “SP-8C” and “USE-6R-FOR IDLE” shows in the display, along with “NO” or “YES”.

- i. Press   to toggle between NO and YES. If “YES” is displayed, then during a time of low volume, the operator presses the right product button 6 to manually enter the Idle Mode.







Filter Tracking Enabled (Sp-9)

The controls can be set to signal the operator when the shortening needs filtering. The filter tracking must be enabled to program the number of Cook Cycles between filtering procedures. (See Filter Cycles paragraph in Product Program Mode Section.)






- a. Follow steps 1 and 2 above.
- b. Press and release  until “SP-9” and “FILTER TRACKING ENABLED” flashes on the display, along with “1,OFF”.
- c. To enable the filter tracking, press   to toggle the display from “1,OFF”, to “2,MIXED”, or, “3,GLOBAL”.

NOTICE

The Mixed setting allows the operator to set different amounts of Cook Cycles, between filters, for each product. If the operator wants to have one setting for all products go to step h.

- d. If “2,MIXED” is selected, press  and “SP-9A” shows in the display followed by “SUGGEST FILTER AT ...” and a value between 75% and 100%. Press and release   to change this value.
- e. Press  and “SP-9B” shows in the display followed by “LOCKOUT ENABLED?” and “YES” or “NO”. Press and release   to choose yes or no.





**4-3. SPECIAL PROGRAM
MODE (Continued)**

- f. Press  and “SP-9C” shows in the display, if YES was chosen in step e. FILTER LOCKOUT AT...” and a value between 100% and 200% shows in display. Press   to change this value.
- g. Now, go back to the Product Program Mode, to the Filter Cycle, and program in the number of Cook Cycles between filtering.
- h. If “3,GLOBAL” is selected, “SP-9A” shows in the display, and followed by “GLOBAL FILTER CYCLES”. The right side of the display shows a digit, 1 to 99. Press   to set the desired amount of Cook Cycles between filters.

NOTICE


In Cook Mode, the number of global Cook Cycles remaining shows in the center of the display.

Ex: “----- 5x -----”.




- i. Press  and “SP-9B” shows in the display followed by “LOCKOUT ENABLED?” and “YES” or “NO”. Press and release   to choose yes or no.
- j. Now, go back to section 4-2 and enter the Program Mode. Press  until “FILTER INCL” shows in the display (step 13). Each product must be set to “YES” to be included in the filter tracking.

Product Buttons (Sp-10)

This mode allows you set up the way products are selected, and Cook Cycles started, in the Cook Mode.






- a. Follow steps 1 and 2 above.
- b. Press and release  until “SP-10” and “PRODUCT BUTTONS” flashes in the display.

**4-3. SPECIAL PROGRAM
MODE (Continued)**

- c. When using the first option, “1,COOK”, pressing a product button displays that and starts the Cook Cycle. When nothing is cooking, no product displays. Products 1 to 6 shows on the left display only, and products 7 to 12 shows on the right display only.
- d. Press   to show the second option. If using “2,SELECT”, pressing a product button displays the product only. Press  to start the Cook Cycle.


Cooking Display (Sp-11)

Choose between 3 cooking display options in this mode.



- a. Follow steps 1 and 2 above.
- b. Press  until “SP-11” and “COOKING DISPLAY” shows in the display.
- c. The first option, “1,TIME”, sets the display to read only the time remaining in the Cook Cycle.
- d. Press   to show the second option. “2,TM+ID”, sets the display to read both the time remaining in the Cook Cycle and also the product ID. (ex: FF=french fries)
- e. Press   to show the third option. “3,NM+TM”, sets the display to alternate between showing the name of the product being timed, and the time remaining in the Cook Cycle.

Quality Timer Display (SP-12)

Choose between 3 timer display options in this mode.




- a. Follow steps 1 and 2 above.
- b. Press  until “SP-12” and “QUALITY TMR DISPLAY” shows in the display.
- c. The first option, “1,NONE”, means the display will not show the quality time remaining after a Cook Cycle. The quality time appears only after the timer expires.

**4-3. SPECIAL PROGRAM
MODE (Continued)**

- d. Press   to show the second option. “2,QT+ID”, sets the display to constantly show the Quality Time remaining, and the product ID that the Quality Time is holding after a Cook Cycle.
- e. The third option, “3,NM+QT”, sets the display to alternate between the name of the product just cooked and the Quality Time remaining.



Number of Baskets (SP-13)

This allows the operator to set the controls for use of 1 basket or 2.






- a. Follows steps 1 and 2 above.
- b. Press  until “SP-13” and “NUMBER OF BASKETS” shows in the display.
- c. Press   to toggle between “1,BSKT”, or “2,BSKT”.

NOTICE

The number of baskets can also be changed without

entering the Program Mode. Press and hold  while turning on the power switch for a single basket. To change back to two baskets, press and hold  while turning on the power switch.
















Auto-lift Detection (SP-14)

- a. Follows steps 1 and 2 above.
- b. Press  until “SP-14” and “AUTOLIFT” shows in the display.
- c. Keep the controls set at “1,DETECT” for the controls to automatically detect the autolift or not.
- d. Press   to select “2,*OFF*”, to disable the auto-lift. This can be used to bypass the auto-lift mechanism, if the auto-lift becomes disabled.
- e. Press   to select “3,*ON*”, to force the auto-lift feature, if the controls are not detecting the auto-lift.




**4.3 SPECIAL PROGRAM
MODE (Continued)**



Multi-Stage Cooking (SP-15)

This allows the operator to cook up to 10 stages (time/temperature setpoints) per product.

- a. Follows steps 1 and 2 above.
- b. Press  until “SP-15” and “MULTI-STAGE ENABLED?” shows in display, along with “NO” or “YES”.
- c. Press and release   to toggle between NO and YES.
- d. “YES” in the display, enables the multi-stage mode.
- e. Press and hold  to exit the Special Program Mode.
- f. Press and hold  for one second until “PROG” shows in the display, followed by “ENTER CODE”.
- g. Enter code 1, 2, 3. “SELECT PROG PRODUCT” scrolls across the display.
- h. Press and release the desired product button (1 to 12).
- i. Press and release  two times, “1. TOTAL, 1.COOK TIME 0:00” shows in display.
- j. Press and release   to set the total cook time
- k. Press , “1. TEMP XXX°F” (or °C) shows in display.
- m. Press and release   to set the starting temperature.
- n. Press , “2. STEP 2 AT 0:00” shows in display.
- o. Press and release   to set the time, at which the timer counts down to and begins step 2.
- p. Press , “2. TEMP XXX°F” (or °C) shows in display.


**4-3. SPECIAL PROGRAM
MODE (Continued)**

- q. Press and release   to set temperature for step 2.
- r. Press  to continue onto step 3 and follow instructions in steps n, o, p, and q.

When all stages are set, you can continue to the next program mode when you press , or press and hold  to exit Special Program Mode.

Program Code Change (SP-16)

This allows the operator to change the program code (factory set at 1, 2, 3) used to access Product Programming, Special Programming, Clock Set, Data Comm, and Heat Control Modes.

- a. Follow steps 1 and 2 above.
- b. Press PROG until “SP-15” and “CHANGE, MGR CODE? 1=YES” shows in display, along with “CODE”.
- c. Press . “ENTER NEW CODE, P=DONE, I=QUIT” shows in display. Press product buttons with new code.
- d. If satisfied with code, press PROG. “REPEAT NEW CODE, P=DONE, I=QUIT, shows in display. Press same code buttons in step c.
- e. If satisfied with code, press PROG. “*CODE CHANGE*” shows in display.
- f. If not satisfied with code, press INFO and “*CANCELLED*” shows in display, then reverts back to “SP-15” and “CHANGE, MGR CODE? 1=YES”. Then the above steps can be repeated

**4-3. SPECIAL PROGRAM
MODE (Continued)**

Energy Save Enabled? (Gas fryers only) (SP-17)




The Energy Save mode reduces energy used during idle (non-cooking) periods by turning off the blower (draft fan) and pilot flame when possible.

- a. Follow steps 1 and 2 above.
- b. Press PROG until “SP-19” and “ENERGY SAVE ENABLED ? <GAS FRYERS>” shows in display, along with “YES/NO” option.
- c. Press and release UP and DOWN buttons to change from “NO” (default) to “YES”, or vice-versa.

Press and hold PROG at any time to exit Special Program Mode.




Clean-Out Minutes (SP-18)

This allows you to set the number of minutes of the Clean- Out Mode.

- a. Follow steps 1 and 2 above.
- b. Press  until “SP-10” and “CLEAN-OUT MINUTES” shows in display, along with the preset minutes.
- c. Press   to change the number of minutes, up to 99.




Clean-Out Temperature (SP-19)

This allows you to set the temperature of the Clean-Out Mode.

- a. Follow steps 1 and 2 above.
- b. Press  until “SP-11” and “CLEAN-OUT TMP” shows in display, along with the set temperature.
- c. Press   to change the temperature, up to 212°F (100°C).


4-4. CLOCK SET MODE

This mode allows the operator to set the time and date into the controls.



1. Press and hold  for 5 seconds until “L-2” and “LEVEL 2”, followed by, “SP PROG” shows in the display. Release the , then immediately press and release  again. “CLOCK SET” shows in the display, followed by “ENTER CODE”.
2. Enter code 1, 2, 3, and “CS-1, SET MONTH” shows in the display.

NOTICE




If a bad code is entered, a tone sounds and “BAD CODE” shows on the display. Wait a few seconds, the control reverts back to the Cook Mode, and repeat the above steps.

To exit from the Clock Set Mode at any time, press and hold  button for 2 seconds.




Set Month

3. The month value (1-12) flashes. Press   to change the month value.




Set Date

4. Press  and “CS-2, SET DATE” shows in display.
5. The day of the month (1-31) flashes. Press   to change the day of the month.



Set Year

6. Press  and “CS-3, SET YEAR” shows in display.
7. The year setting flashes. Press   to change year.




Set Hour (12 or 24 Hour)

8. Press  and “CS-4, SET HOUR” shows in display.
9. If in 12 hour mode, the hour (1-12) flashes along with AM or PM. Press   to change the hours and AM/PM settings.




4-4. CLOCK SET MODE
(Continued)

9. If in 24-hour mode, “24-HR” shows in display, and the hour (1-24) flashes. Press   to change hours.




Set Minutes

10. Press  and “CS-5, SET MINUTE” shows in display.
11. The minutes flash, and press   to change.

Clock Mode (12 Hour or 24 Hour)

12. Press  and “1. AM/PM”, or “2. 24-HR” shows in display,
13. Press   to toggle from “1. AM/PM”, which is 12-hour mode, or “2. 24-HR”, which is 24-hour mode.

Daylight Savings Setting

14. Press  and “1.OFF”, or “2.US”, or “3.CE” shows in display.
15. Press   to toggle between settings.
- a. “1.OFF” won’t have automatic Daylight Savings adjustment in the controls.
 - b. “2.US” automatically adjusts for United States’ Daylight Savings, starting the first Sunday in April, and ending the last Sunday in October.
 - c. “3.CE” automatically adjusts for CE Daylight Savings, starting on the last Sunday in March, and ending the last Sunday in October.

4-5. DATA LOGGING,
HEAT CONTROL,
TECH MODE, AND
STAT MODE

The Data Logging, Heat Control, Tech and Stat Modes are advanced diagnostic and program modes, mainly for Henny Penny use only. For more information on these Modes, contact the Service Department at 1-800-417- 8405, or 937-456-8405.

SECTION 5. TROUBLESHOOTING

5-1. TROUBLE SHOOTING GUIDE

Problem	Cause	Correction
POWER switch ON but fryer completely inoperative	<ul style="list-style-type: none"> • Open circuit 	<ul style="list-style-type: none"> • Plug fryer in • Check breaker or fuse at supply box
Shortening will not heat but lights are on	<ul style="list-style-type: none"> • Open high limit circuit Error message “E10” • Drain valve open Error message “E15” 	<ul style="list-style-type: none"> • Reset high limit per High Limit Temperature Control Section • Turn drain valve handle to closed position
Foaming or boiling over of shortening	<ul style="list-style-type: none"> • Water in shortening • Improper or bad shortening • Improper filtering • Improper rinsing after cleaning fryer 	<ul style="list-style-type: none"> • At end of Cook Cycle, drain shortening and clean • Use recommended shortening • Refer to the procedure covering filtering the shortening • Clean and rinse the frypot, then dry thoroughly
Shortening will not drain from frypot	<ul style="list-style-type: none"> • Drain valve clogged with crumbs 	<ul style="list-style-type: none"> • Open valve, force cleaning brush through drain
Filter switch on, motor does not run	<ul style="list-style-type: none"> • Motor thermal protector tripped 	<ul style="list-style-type: none"> • Reset thermal switch per section on Filter Pump Motor Protector – Manual Reset

NOTICE

More detailed troubleshooting information is available in the Technical Manual, available at www.hennypenny.com, or 1-800-417-8405 or 1-937-456-8405.

5-2. ERROR CODES

In the event of a control system failure, the digital display will show an “Error Message.” These messages are coded: “E4”, “E5”, “E6”, “E10”, “E15”, “E20”, “E-31”, “E41”, “E46”, “E54”, E-70-A & B and “E92”. A constant tone is heard when an error code is displayed, and to silence this tone, press any button.

DISPLAY	CAUSE	PANEL BOARD CORRECTION
“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; check the louvers on each side of the unit for obstructions
“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”, check the temperature probe; to replace, refer to Technical Manual
“E-6 B”	Temperature probe shorted	Turn switch to OFF position, then turn switch back to ON; if display shows “E-6” check the temperature probe; to replace, refer to Technical Manual
“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; refer to Technical Manual
“E-15”	Drain switch failure	Close drain, using the drain valve handle; if display still shows “E-15”, check the drain microswitch; refer to Technical Manual
“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 (Special Program Section) if error code persists, replace the control board; refer to Technical Manual

5-2. ERROR CODES
(Continued)

DISPLAY	CAUSE	PANEL BOARD CORRECTION
“E-20 A”	Vacuum switch failure (stuck closed)	Press the timer button to try the ignition process again; if “E-20 A” persists check vacuum switch; refer to Technical Manual
“E-20 B”	Draft fan or vacuum switch failure (stuck open)	Press the timer button to try the ignition process again; if “E-20 B” persists, check vacuum switch or the blower motor; refer to Technical Manual
“E-20 C”	Ignition modules	Press the timer button to try the ignition process again; if not responding “E-20 C” persists, check the ignition module, the spark ignitor, or the I/O board; refer to Technical Manual
“E-20 D”	Pilots not lit or no flame sense	Press the timer button to try the ignition process again; if “E-20 D” persists, check the ignition module, the I/O board, or the flame sensor; refer to Technical Manual
“E-31”	Elements up- Electric units only	Lower elements into frypot
	Fan switch jumper wire missing	Check for jumper wire on 12-pin connector & add if missing
“E-54”	PCB component failure	Turn switch to OFF position, then turn switch back to ON; if “E-54” persists, have PCB replaced
“E-70A”	Fan switch jumper missing	Have jumper wire checked on 12 pin connect to panel
“E-70B”	MV jumper missing	Have jumper wire checked on connectors to panel
“E-92”	24 VAC fuse on I/O open	24 VAC fuse on I/O board open; check for shorted component in 24-volt circuit (i.e., hi limit, drain switch, air switch)

GLOSSARY

HENNY PENNY HOLDING CABINETS

air valve	a valve on the eight head fryer that allows air into the filter lines when the pump is on in the mixing mode on eight head fryers
airflow switch (gas fryers only)	a switch that senses the amount of airflow coming from the blower; if the airflow falls below a certain level, the switch cuts power to the gas control valve that shuts down the burners
blower (gas fryers only)	located on the rear of a gas fryer, the blower pulls flue gases out of the flue and provides the proper amount of air to the burner tubes for efficient combustion
breadding	a flour and seasoning mixture used to coat the product prior to frying
burner assembly (gas fryers only)	an assembly on gas fryers that houses the pilot light which ignites the gas that heats the fryer
burner tubes (gas fryers only)	the tubes through which heated air is forced to heat the shortening
carrier	a wire frame inside the eight head frypot that holds five racks of product during the Cook Cycle
casters	the wheels on bottom of the fryer that allow the unit to roll; casters should be locked when unit is in use and not being moved; casters may be adjusted to help level the fryer
cleaning solution	an agent used to clean the frypot; see recommended cleaning procedures
cold zone	an area in the bottom of the frypot where shortening is cooler than the area above; the zone allows the crumbs to settle without burning
cook cycle	a programmed cycle that cooks a particular product at a preselected temperature and for a preselected time
cooking load	the amount of product cooked during a Cook Cycle
counterweight	the weights shipped with the fryer that, when installed in the counterweight assembly, enable the eight head fryer lid to lift easily
counterweight assembly	an assembly of weights and cables that enable the eight head fryer lid to lift easily
cover	a protective lid for the frypot when fryer is not in use
cracklings	the crumbs of breadding that come off the product during a Cook Cycle
crumb catcher	the part of the filter assembly on four head fryers that filters crumbs out of the shortening before the shortening is pumped back into the frypot

data plate	a label or plate located on the right side panel of the fryer that indicates the fryer type, serial number, warranty date, and other information
drain handle	the handle used to open and close the drain valve
drain interlock switch	a microswitch that automatically shuts off the fryer heat in the event the drain valve is inadvertently opened while the fryer power switch is in the ON position
drain valve	a valve that allows the shortening to drain from the frypot into the filter drain pan; the fryer power switch should be in the OFF position before the drain valve is opened; the drain valve should remain closed at all other times
dumping table	a table onto which the cooked product is dumped after removal from the frypot
fill lines	the four lines marked on the interior rear wall of the frypot that show the proper shortening level (also referred to as level indicator lines)
filter clips closed	the clips are the part of the filter screen assembly that holds the filter envelope
filter drain pan	a pan that slides under the fryer into which shortening is drained
filter envelope	a fiber envelope into which the filter screen is placed; the end of the envelope is folded and held closed with filter clips; a part of the filter screen assembly
filter heater switch	control panel switch that activates the strip heater (Model OE-100 only)
filter pan dolly	an optional transport cart for the filter drain pan
filter pump motor	the motor that powers the filtering system
filter screen assembly	an assembly that filters the shortening as it is pumped from the frypot; the assembly is made up of two filter screens, a filter envelope, two filter clips, and a crumb catcher (Note: eight head fryers have two filter screens with no crumb catcher)
filter union	the threaded connection between the fryer and the filter system that can be connected or released without tools
filter valve	the valve that must be opened to pump shortening back into the frypot during the filter cycle (Models OE-100, 320, and 340)
flame sensors (gas fryers only)	the sensors that shut off the gas supply to gas fryers if the pilot lights go out or do not light
fryer brush	a brush included with the fryer used to scrub the inside of the frypot
frypot cooking	the interior portion of the fryer that holds the shortening and the product while cooking
frypot collar	the top flat surface area around the fryer lid

gas control valve (gas fryers only)	an automatic dual controller that controls gas to both pilot lights and gas pressure to burners on fryers; if either pilot light goes out, the controller shuts off the gas to the other pilot light
gas valve knob (gas fryers only)	the knob that opens and closes the gas control valve
gas pressure regulator (gas fryers only)	a device located on the gas control valve that regulates the gas pressure; the pressure specifications are preset at the factory
heat indicator	the light that illuminates when the shortening is being heated; the light goes off when the preset shortening temperature has been achieved
heating elements	the coils located inside the frypot on electric fryers that heat the shortening
high limit	a temperature control that opens and shuts off the heat to the frypot if it senses shortening temperature in excess of 420°F (216°C)
ignition modules	two modules that send electrical energy to the spark igniters that ignite the pilot lights on gas fryers
L-shaped brush	a brush included with the fryer that is used to clean around the burner tubes and heating elements
landing table	another name for a dumping table (see dumping table)
level indicator lines	the lines marked on the interior rear wall of the frypot that show the proper shortening level (also referred to as fill lines)
lid assembly	an assembly comprised of lid, lid handle, and lid latch which raises and lowers product into shortening on eight head fryers
lid handle	a handle that is attached to the lid and is used to lower the lid into contact with the frypot; the handle is then pulled forward and pushed down to lock the lid in place (see lid latch)
lid latch	a mechanical catch on the front of the fryer lid that engages a bracket located on the front of the frypot; the latch holds the lid down
manual reset lever	resets high limit (OE-100 only)
manual shutoff valve (gas fryers only)	a valve located between the fryer and the wall that shuts off the flow of gas from the supply line; this is not the main shutoff valve for the store
melt cycle	a heat mode that cycles on and off to slowly melt the shortening when the power switch is on and the shortening temperature is below a certain temperature; the melt cycle prevents scorching of the shortening
pilot orifice (gas fryers only)	a controlled opening for the pilot light located on the burner assembly
pilot light (gas fryers only)	a small flame that remains burning even when the fryer is not in use; the flame ignites the gas when the fryer is turned on

power/pump switch	a three-way switch located on the front control panel of the fryer that serves as an off/on switch and a filter switch
product	a food item cooked in the fryer
rack	the wire grid that slides into the carrier to hold product during the Cook Cycle
setpoint	a preset cooking temperature; the setpoint is a programmable feature
shortening mixing system	an automatic system on eight head fryers that periodically uses the filter pump to mix the shortening in the frypot to prevent an accumulation of moisture to minimize the boiling action in the frypot
shortening shuttle	optional equipment used for shortening disposal
sift breading	the process of removing clumps from breading
spark igniters (gas fryers only)	the igniters that create a spark to ignite the pilot lights on gas fryers (see ignition modules)
standpipe	the pipe through which shortening is pumped back into the frypot after the filtering process is complete
standpipe assembly	the pipe and fittings that are part of the shortening filtering process
straight brush	a brush that is included with the fryer that is used to clear the drain in the bottom of the frypot
strip heater	keeps the filter lines free of solidified shortening when the filter heater switch is turned on (Model OE-100 only)
temperature probe	a round probe that is located in the inside of the frypot that measures the temperature of the shortening in the frypot; the probe communicates with the control panel
thermal protector	overheat protection switch for the filter motor that must be manually reset if tripped



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