HENNY PENNY®
Global Foodservice Solutions

Henny Penny
Pressure Fryers
Model 500
Model 600

Computron 2000 Controls

OPERATOR'S MANUAL

REGISTER WARRANTY ONLINE AT WWW.HENNYPENNY.COM

LIMITED WARRANTY FOR HENNY PENNY EQUIPMENT

Subject to the following conditions, Henny Penny Corporation makes the following limited warranties to the original purchaser only for Henny Penny appliances and replacement parts:

NEW EQUIPMENT: Any part of a new appliance, except baskets, lamps, and fuses, which proves to be defective in material or workmanship within two (2) years from date of original installation, will be repaired or replaced without charge F.O.B. factory, Eaton, Ohio, or F.O.B. authorized distributor. Baskets will be repaired or replaced for ninety (90) days from date of original installation. Lamps and fuses are not covered under this Limited Warranty. To validate this warranty, the registration card for the appliance must be mailed to Henny Penny within ten (10) days after installation.

FILTER SYSTEM: Failure of any parts within a fryer filter system caused by the use of the non-OEM filters or other unapproved filters is not covered under this Limited Warranty.

REPLACEMENT PARTS: Any appliance replacement part, except lamps and fuses, which proves to be defective in material or workmanship within ninety (90) days from date of original installation will be repaired or replaced without charge F.O.B. factory, Eaton, Ohio, or F.O.B. authorized distributor.

The warranty for new equipment covers the repair or replacement of the defective part and includes labor charges and maximum mileage charges of 200 miles round trip for a period of one (1) year from the date of original installation.

The warranty for replacement parts covers only the repair or replacement of the defective part and does not include any labor charges for the removal and installation of any parts, travel, or other expenses incidental to the repair or replacement of a part.

EXTENDED FRYPOT WARRANTY: Henny Penny will replace any frypot that fails due to manufacturing or workmanship issues for a period of up to seven (7) years from date of manufacture. This warranty shall not cover any frypot that fails due to any misuse or abuse, such as heating of the frypot without shortening.

0 TO 3 YEARS: During this time, any frypot that fails due to manufacturing or workmanship issues will be replaced at no charge for parts, labor, or freight. Henny Penny will either install a new frypot at no cost or provide a new or reconditioned replacement fryer at no cost.

3 TO 7 YEARS: During this time, any frypot that fails due to manufacturing or workmanship issues will be replaced at no charge for the frypot only. Any freight charges and labor costs to install the new frypot as well as the cost of any other parts replaced, such as insulation, thermal sensors, high limits, fittings, and hardware, will be the responsibility of the owner.

Any claim must be presented to either Henny Penny or the distributor from whom the appliance was purchased. No allowance will be granted for repairs made by anyone else without Henny Penny's written consent. If damage occurs during shipping, notify the sender at once so that a claim may be filed.

THE ABOVE LIMITED WARRANTY SETS FORTH THE SOLE REMEDY AGAINST HENNY PENNY FOR ANY BREACH OF WARRANTY OR OTHER TERM. BUYER AGREES THAT NO OTHER REMEDY (INCLUDING CLAIMS FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES) SHALL BE AVAILABLE.

The above limited warranty does not apply (a) to damage resulting from accident, alteration, misuse, or abuse; (b) if the equipment's serial number is removed or defaced; or (c) for lamps and fuses. THE ABOVE LIMITED WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS, AND ALL OTHER WARRANTIES ARE EXCLUDED. HENNY PENNY NEITHER ASSUMES NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT ANY OTHER OBLIGATION OR LIABILITY.

Revised 01/01/07

NOTICE

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

A wiring diagram for this appliance is located on the rear shroud cover of the control panel.

Post in a prominent location, instructions to be followed if user smells gas. This information should 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 600 Fryer is equipped with a continuous pilot. But Fryer can not be operated without electric power. Fryer will automatically return to normal operation when power is restored.

CAUTION

Keep appliance area free and clear from combustibles.

WARNING

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.

DANGER

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE. FIRE OR EXPLOSION COULD RESULT.

Technical Data for CE Marked Products

Nominal Heat Input: (Net)	Natural (I_{2H}) = 21.1 KW (72,000 Btu/h) Natural (I_{2E}) = 21.1 KW (72,000 Btu/h) Natural (I_{2E+}) = 21.1 KW (72,000 Btu/h) Natural (I_{2L}) = 21.1 KW (72,000 Btu/h) Liquid Propane (I_{3P}) = 21.1 KW (72,000 Btu/h)
Nominal Heat Input: (Gross)	Natural (I_{2H}) = 23.4 KW (80,000 Btu/h) Natural (I_{2E}) = 23.4 KW (80,000 Btu/h) Natural (I_{2E+}) = 23.4 KW (80,000 Btu/h) Natural (I_{2L}) = 23.4 KW (80,000 Btu/h) Liquid Propane (I_{3P}) = 22.9 KW (78,000 Btu/h)
Supply Pressure:	Natural (I_{2H}) = 20 mbar Natural (I_{2E}) = 20 mbar Natural (I_{2E+}) = 20/25 mbar Natural (I_{2L}) = 25 mbar Liquid Propane (I_{3P}) = 30 mbar Liquid Propane (I_{3P}) = 37 mbar Liquid Propane (I_{3P}) = 50 mbar
Test Point Pressure:	Natural (I_{2H}) = 8.7 mbar Natural (I_{2E}) = 8.7 mbar Natural (I_{2E+}) = 8.7/10 mbar Natural (I_{2L}) = 10 mbar Liquid Propane (I_{3P}) = 25 mbar
Injector Size:	Natural (I_{2H}) = 1.04 mm Natural (I_{2E}) = 1.04 mm Natural (I_{2E+}) = 1.04 mm Natural (I_{2L}) = 1.04 mm Liquid Propane (I_{3P}) = 0.66 mm
Restrictor Size:	Natural (I_{2E+}) = 4.1 mm

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

TABLE OF CONTENTS

TABLE OF CONTENTS (Continued)

Section **Page**

SECTION 1. INTRODUCTION

1-1. PRESSURE FRYER

The Henny Penny Pressure Fryer is a basic unit of food processing equipment. It has found wide application in institutional and commercial food service operations.

P-H-T

A combination of pressure, heat, and time is automatically controlled to produce the optimum in a tasty, appealing product.

Pressure

Pressure is basic to this method of food preparation. This pressure is developed from the natural moisture of the food. The patented lid traps this moisture and uses it as steam. Because the steam builds rapidly, the greater part of the natural juices are retained within the food. An exclusive deadweight assembly vents excess steam from the pot and maintains constant low, live steam pressure.

Heat

Heat generated is another important factor of the pressure fryer. The normal suggested frying operation is between 315 and 325°F. This results in energy savings and extends the frying life of the shortening. Energy savings is realized due to the unit's short frying time, low temperature, and heat retention of the stainless steel frypot.

Time

Time is important because the shorter the time involved in frying foods results in additional economies for the user. Foods are table ready in less time than it would take to fry them in a conventional open-type fryer.

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. PROPER CARE

As in any unit of food service equipment, the Henny Penny Pressure 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.

1-3. ASSISTANCE

Should you require outside assistance, just call your local Henny Penny distributor in your area, call Henny Penny Corp. 1-800-417-8405 toll free or 1-937-456-8405, or go online to the Henny Penny Web site at www.hennypenny.com.

1-4. MODEL VARIATIONS

This manual covers both gas and electric models, as well as, various options and major accessories. Where information pertains to only one model, it is so noted.

1-5. SAFETY

The Henny Penny Pressure Fryer has may safety features incorporated. However, the only way to ensure a safe operation is to fully understand the proper installation, operation, and maintenance procedures. The instructions in this manual have been prepared to aid you in learning the proper procedures. Where information is of particular importance or safety related, the words DANGER, WARNING, CAUTION, and NOTICE are used. Their usage is described below.

SAFETY ALERT SYMBOL is used with DANGER, WARNING, or CAUTION which indicates a personal injury type hazard.

NOTICE is used to highlight especially important information.

CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

CAUTION used with the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

DANGER INDICATES AN IMMINENTLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.

SECTION 2. INSTALLATION

2-1. INTRODUCTION

This section provides the installation instructions for the electric and gas models of Henny Penny Pressure Fryers.

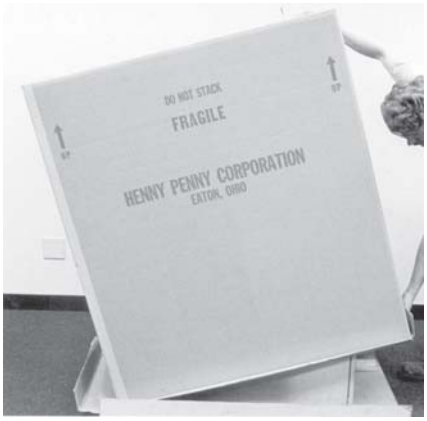
NOTICE

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

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

2-2. UNPACKING INSTRUCTIONS

The fryer is shipped bolted to a wooden base and covered with a cardboard container. Both gas and electric models are shipped completely assembled. If ordered, optional casters are packaged and shipped separately.



Step 2

1. Cut the band from around the bottom of the carton.

NOTICE

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

2. Lift the carton from the fryer.

Step 4

3. Open the lid of the fryer and remove the basket plus all accessories.

4. Lay the fryer on its side, resting it in supports.

Take care when moving the fryer to prevent personal injury. The fryer weighs approximately 300 lbs. (136 kgs).

2-2. UNPACKING INSTRUCTIONS (Continued)

Step 8

5. Remove the four leg bolts from the wooden shipping base. Remove and discard the wooden base.

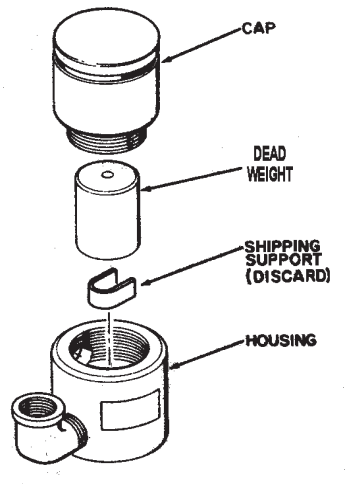
6. Thread the shipping bolts back into the legs to provide leveling adjustment feet. If ordered, install casters into the legs, with the locking casters in front.

7. Place fryer in an upright position.

8. Prepare the deadweight assembly for operation:

NOTICE

The metal shipping support is placed within the deadweight assembly housing to protect the deadweight orifice and deadweight during shipment. This support must be removed prior to installation and start-up.



   a. Unscrew the deadweight cap.

   b. Remove the round deadweight.

   c. Remove and discard the shipping support.

   d. Clean the deadweight orifice with a dry cloth.

   e. Replace the deadweight and secure the deadweight cap.

9. Open lid and remove packing and racks from inside of frypot.

10. Remove the protective paper from the fryer cabinet. It is necessary to clean exterior surface with a damp cloth.

2-3. SELECTING THE FRYER LOCATION

The proper location of the fryer is very important for operation, speed, and convenience. Choose a location which will provide 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 a warmer provides fast continuous service. Landing or dumping tables should be provided next to at least one side of the fryer. Keep in mind the best efficiency will be obtained by a straight line operation, i.e., raw in one side and finish out the other side. Order assembly can be moved away with only a slight loss of efficiency. To properly service the fryer, 24 inches (60.96 cm) of clearance is needed on all sides of the fryer. Access for servicing can be attained by removing a side panel. Also, at least 6 inches (15.24 cm) around the base of the gas units is needed for proper air supply to the combustion chamber.

CAUTION
FIRE HAZARD

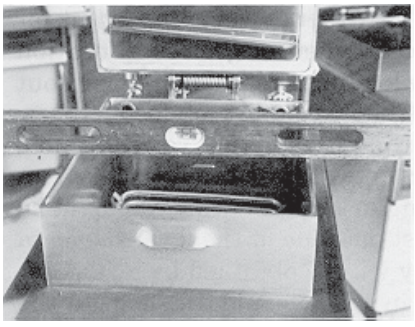
To avoid a fire, install the gas fryer with minimum clearance from all combustible and noncombustible materials, 6 inches (15.24 cm) from side and 6 inches (15.24 cm) from back. If installed properly, the gas fryer is designed for operation on combustible floors and adjacent to combustible walls.

To avoid fire and ruined supplies, the area under the fryer should not be used to store supplies.

WARNING
BURN RISK

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 FRYER



For proper operation, level the fryer from side to side and front to back, using level on the flat areas around the frypot collar.

DANGER

FAILURE TO FOLLOW THESE LEVELING INSTRUCTIONS CAN RESULT IN SHORTENING OVERFLOWING THE FRYPOT WHICH COULD CAUSE SERIOUS BURNS, PERSONAL INJURY, FIRE, AND/OR PROPERTY DAMAGE.

2-5. VENTILATION OF FRYER

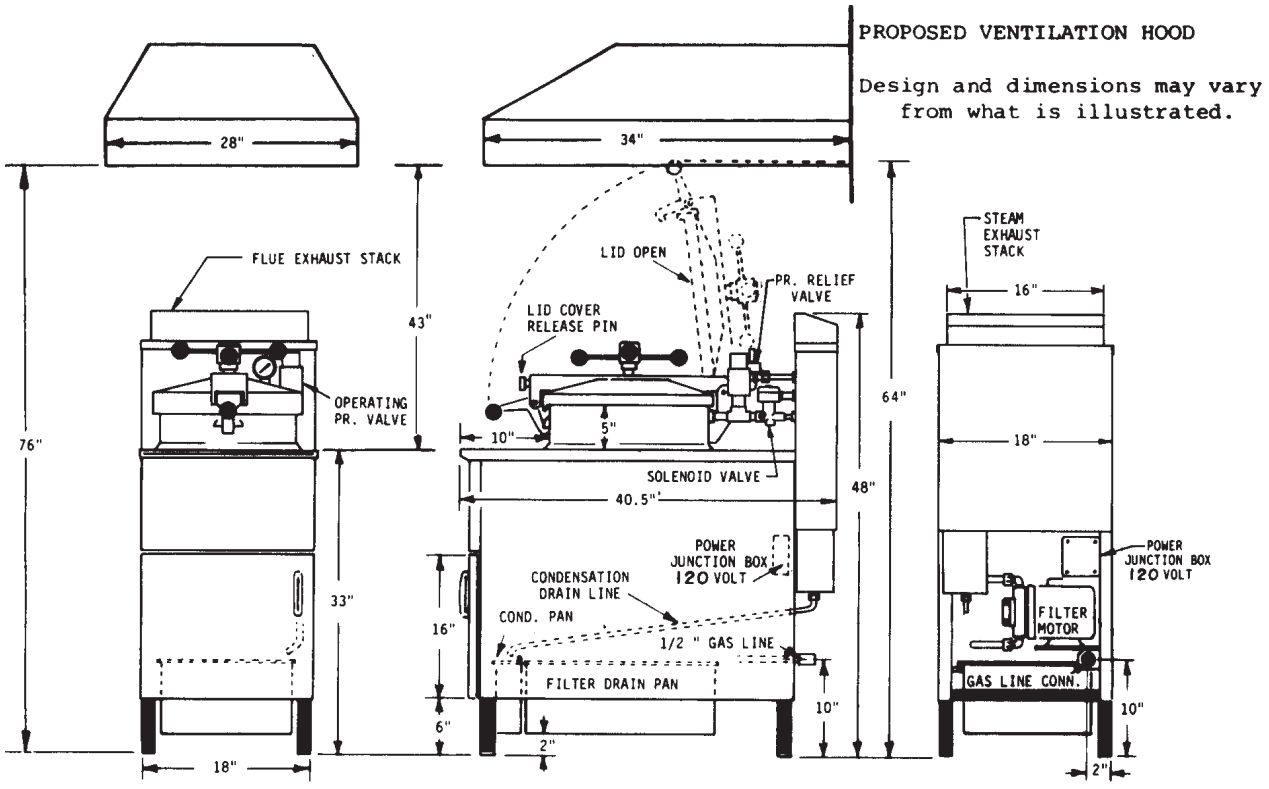
The fryer must be located with provision for venting into adequate exhaust hood or ventilation system. This is essential to permit efficient removal of the flue gases and frying odors. Special precaution must be taken in designing an exhaust canopy to avoid interference with the operation of the fryer. We recommend you consult a local ventilation or heating company to help in designing an adequate system.

NOTICE

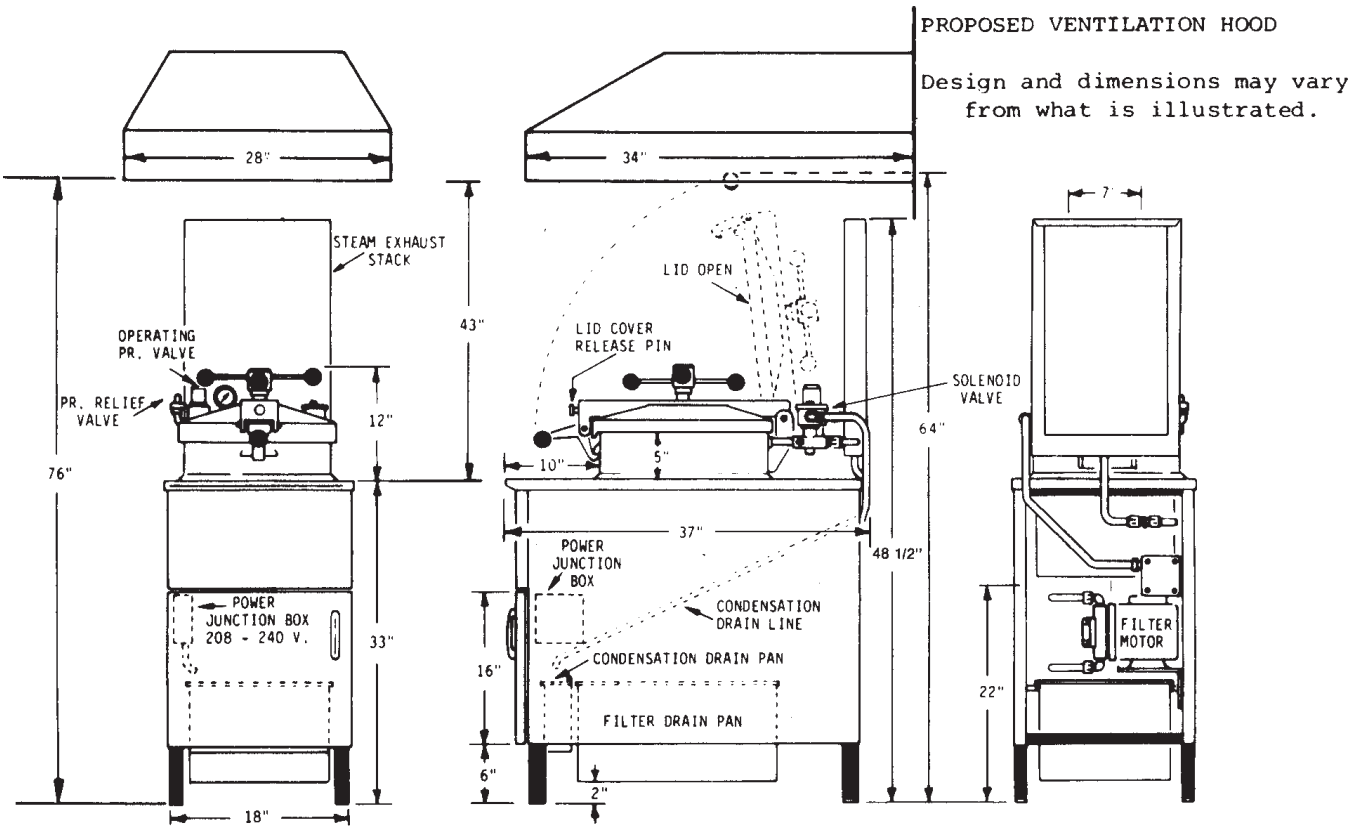
Ventilation must conform to local, state, and national codes. Consult your local fire department or building authorities.

CAUTION

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



GAS MODEL 600



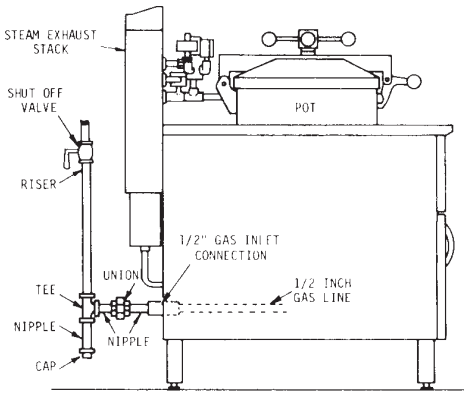
ELECTRIC MODEL 500

2-6. GAS SUPPLY

The gas fryer is factory available for either natural or propane gas. Check the data plate on the right side panel of the cabinet to determine the proper gas supply requirements. The minimum supply for natural gas is 7 inches water column (1.7 kPa), and 10 inches water column (2.49 kPa) for propane. Maximum gas supply is 14 inches water column (3.49 kPa, or .5 psi.

Do not attempt to use any gas other than that specified on the data plate. Conversion kits can be installed by your distributor if required. Incorrect gas supply could cause an explosion or fire resulting in severe injuries and/or property damage.

2-7. GAS PIPING



GAS FRYER, LEFT SIDE VIEW

Please refer below for the recommended hookup of the fryer to main gas line supply.

WARNING

To avoid possible serious personal injury:

- **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 Standard CSA Bl49-1&2, Installation Codes Gas Burning Appliances and local codes. In Australia, installation must conform to Australian requirements.**
- **The fryer and its manual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.45 kPa) (34.47 mbar).**
- **The fryer must be isolated from the gas supply piping system by closing its manual shutoff 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).**
- **A standard 1/2 inch, black steel pipe and malleable fittings should be used for gas service connections.**
- **Do not use cast iron fittings.**
- **Although 1/2 inch size pipe is recommended, piping should be of adequate size and installed to provide a supply of gas sufficient to meet the maximum demand without undue loss of pressure between the meter and the fryer. The pressure loss in the piping system should not exceed 0.3 inch water column (0.747 mbar).**

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

1. Installing a manual gas shutoff valve and a disconnect union, or
2. Installing a heavy duty design A.G.A. certified connector which complies with the Standard for Connectors for Moveable Gas Appliances, ANSI Z21.6, or CAN/CSA 6.16 with a quick disconnect coupling

2-7. GAS PIPING (Continued)

(Henny Penny Part No. 19921), which complies with ANSI standard Z21.41, or CAN 1-6.9. Also adequate means must be provided to limit the movement of the fryer without depending on the connector and quick-disconnect device or its associated piping to limit the fryer movement.

3. See the illustration on following page for the proper connections of the flexible gas line and cable restraint.

NOTICE

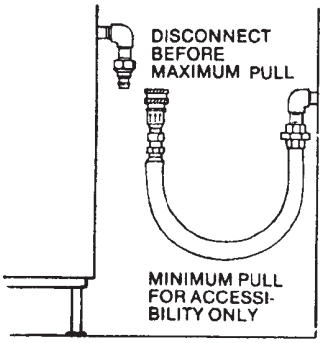
The cable restraint limits the distance the fryer can be pulled from the wall. For cleaning and servicing the fryer, the cable must be unsnapped from the unit and the flexible gas line disconnected. This will allow better access to all sides of the fryer. The gas line and cable restraint must be reconnected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

2-7. GAS PIPING (Continued)

GAS PIPING

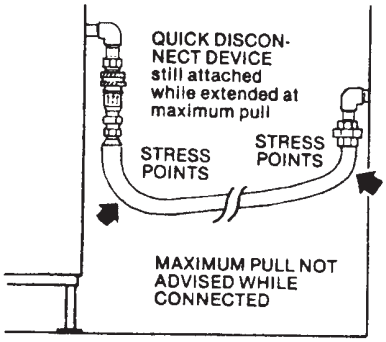
RIGHT

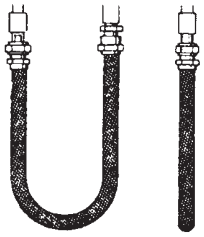
MINIMUM PULL of equipment away from wall permissible for accessibility to Quick Disconnect Device.



WRONG

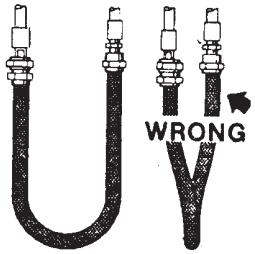
AVOID SHARP BENDS AND KINKS when pulling equipment away from wall. (Maximum pull will kink ends, even if installed properly, and reduce Connector life.)

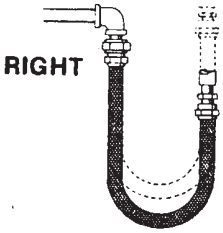




RIGHT

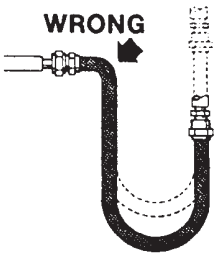
Couplings and hose should be installed in the same plane as shown at left. DO NOT OFFSET COUPLINGS—this causes torsional twisting and undue strain causing premature failure.

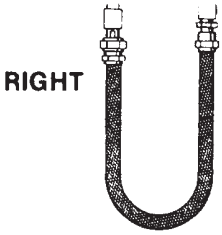




This is the correct way to install metal hose for vertical traverse. Note the single, natural loop.

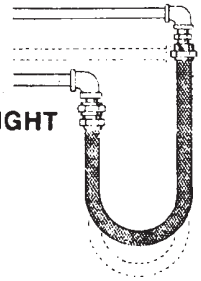
Allowing a sharp bend, as shown at right, strains and twists the metal hose to a point of early failure at the coupling.





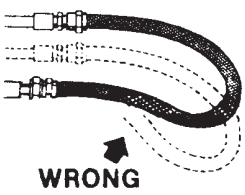
Maintain the minimum or larger bending diameter between the couplings for longest life.

Closing in the diameter at the couplings, as shown at right, creates double bends causing work fatigue failure of the fittings.



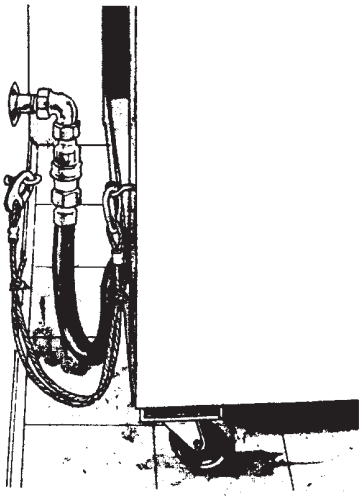
In all installations where "self-draining" is not necessary, connect metal hose in a vertical loop.

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).

2.8 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.

After the piping and fittings have been installed, check 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. In this event, the piping connection must be redone.

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.

2-9. GAS PRESSURE REGULATOR SETTING

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

Natural: 3.5 inches water column (0.87 kPa)
Propane: 10.0 inches water column (2.49 kPa)

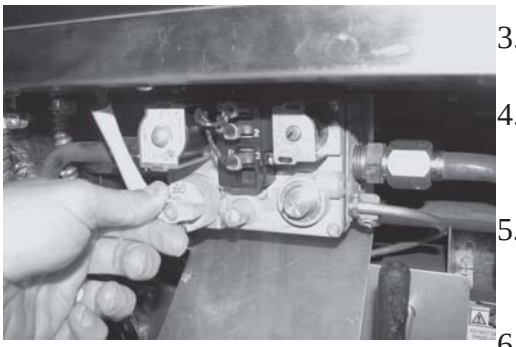
NOTICE

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

2-10. GAS PILOT & BURNER LIGHTING AND SHUTDOWN PROCEDURE

Lighting Procedure - Solid State Ignition

1. The frypot should be cleaned per the instructions in Section 3.
2. The frypot must be filled to the proper level with shortening. Refer to Filling or Adding Shortening Section.



Step 4

3. Turn main power switch to OFF position.
4. Turn the gas valve knob counterclockwise to the OFF position. (OFF pointed down)
5. Wait a sufficient length of time (at least 5 minutes) to allow any gas which may have accumulated in the burner compartment to escape
6. Turn the gas valve knob clockwise to the ON position. (ON pointed down)

2-10. GAS PILOT & BURNER LIGHTING AND SHUTDOWN PROCEDURE (Continued)

7. Turn main power switch to ON position.

8. Wait about 45 seconds for the burner to light.

9. Listen for the gas burner ignition.
   - It will be an audible sound due to the gas igniting at the gas jets within the burner.

10. The burner lights and operates until the shortening temperature reaches a preset temperature, and READY ○ lights.

CAUTION

Do not leave the burner on for more than 10 seconds without shortening in the frypot or damage to the frypot may result.

Shutdown Procedure

1. Turn main power switch to OFF position.

2. Turn the gas valve knob counterclockwise to the OFF position.

2-11. PILOT FLAME ADJUSTMENT

The pilot flame is preset at the factory. If adjustment is necessary, contact your local independent Henny Penny distributor.

2-12. PRESSURE REGULATOR ADJUSTMENT (GAS ONLY)

The gas regulator is preset at the factory at 3.5 inch water column (0.87 kPa) for natural gas (10.0 inch (2.49 kPa) for propane). If adjustment is necessary, contact your local independent Henny Penny distributor.

2-13. ELECTRICAL REQUIREMENTS (ELECTRIC FRYER)

The electric fryer is available from the factory wired for 208, 220/240, or 440/480 volts, single or three phase, 60 Hertz service. The proper power service cable must be ordered as an accessory or provided at installation. Check the data plate on the inside of the fryer door to determine the correct power supply.

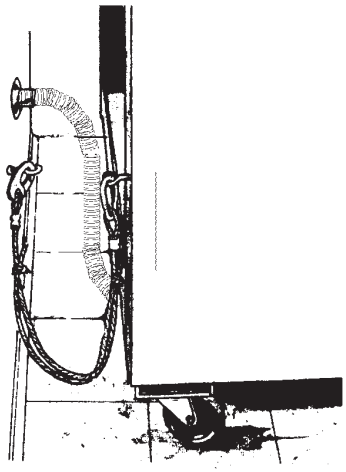
This fryer must be adequately and safely grounded (earthed) or electrical shock could result. Refer to local electrical codes for correct grounding (earthing) procedures or in absence of local codes, with The National Electrical Code, ANSI/NFPA No. 70-(the current edition). In Canada, all electrical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

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.

The field supply wiring to the fryer should be of the size indicated in the data table. It should be an insulated copper conductor rated for 600 volts and 90°C. For runs longer than 50 feet (15.24 m), use the next larger size wire.

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.

CABLE RESTRAINT



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

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.

Data Table
Supply Wiring and Fusing for Electric Fryer

Volts	Phase	KW	Amps	Supply Wire Size	Min. Fuse Size
208	Single	11.25	54	6	90
208	Single	13.50	65	4	100
208	Three	11.25	31	10	50
208	Three	13.50	38	8	60
240	Single	11.25	47	6	80
240	Single	13.50	56	6	90
240	Three	11.25	27	10	45
240	Three	13.50	33	8	50
480	Three	11.25	14	14	25
480	Three	13.50	16	14	25

2-14. ELECTRICAL REQUIREMENTS (GAS FRYER)

The gas fryer requires 120-volt, single-phase, 60-Hertz, 10-amp, 3-wire grounded (earthed) service, or 230-volt, single-phase, 50-Hz, 5 amp, 1 phase service. The 120-volt gas fryer is factory equipped with a grounded (earthed) cord and plug for your protection against shock, and should be plugged into a three prong grounded (earthed) receptacle. Do not cut or remove grounding (earthing) prong. A wiring diagram is located behind the right side panel, and can be accessed by removing the side panel. The 230-volt plug must conform to all local, state, and national codes.

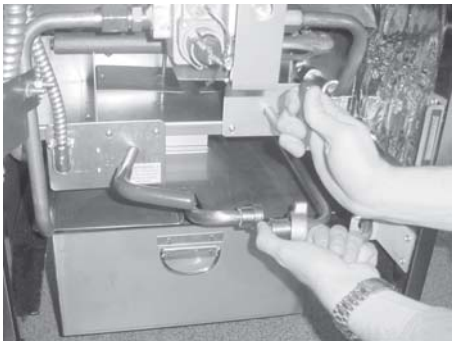
Do not disconnect the ground (earth) plug. This fryer MUST be adequately and safely grounded (earthed) or electrical shock could result. Refer to local electrical codes for correct grounding (earthing) procedures or in absence of local codes, with The National Electrical Code, ANSI/NFPA No. 70-(the current 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.

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.

2-15. CHECKING THE FILTER PUMP

Use the following testing procedure on new or cold fryers.

1. Open the front door of the fryer.
2. Loosen the filter union connection.
3. Turn the main power switch to the PUMP position. Open the filter valve. You will hear the electric motor running.



Step 4

CAUTION

Only run the pump for a few seconds or damage to the pump could result.

4. Place your thumb over the open filter union flare. You should feel suction. Close the filter valve. Turn off the pump.

2-16. MOTOR BEARINGS

The electric motor bearings are permanently lubricated. DO NOT LUBRICATE.

This completes the testing cycle. If any of the functions did not occur, recheck the installation. If a problem persists, refer to other sections of this manual or call an authorized Henny Penny distributor.

2-17. OPERATIONAL CHECKS

1. Check to see that the indicator needle in the pressure gauge is reading in the Operating Zone.
   - If pressure does not build, contact your local Henny Penny service office.
2. Check the drain valve and filter valve for leaks.
3. At the end of cook cycle:
   - The timer will sound.
   - The fryer automatically depressurizes.

SECTION 3. OPERATING INSTRUCTIONS

3-1. OPERATING CONTROLS

Refer to Figure 1.

Fig. No.	Item No.	Description	Function
1	1	Digital Display	Shows all the functions of the Cook Cycle, program modes, diagnostic modes, and alarms
1	2		Used to start and stop Cook Cycles
1	3		Lights when the shortening temperature is 5° F (3° C) below to 15° F (9° C) above the cooking temperature, signaling the operator that the shortening temperature IS at the proper temperature for cooking product
1	4	Product Select Buttons	Used to select the product for cooking and the LED above the selected product is lit; to start Cook Cycles with them; see section 2, Special Program Mode item SP-10
1	5	Menu Card Window	The name of the food product associated with each product selection button; the menu card strip is located behind the decal
1	6		Press to access program modes; once in the program mode, it is used to advance to the next setting;
1	7	COOK/PUMP Switch	A 3-way switch with a center OFF position; turn the switch to the COOK position to operate the fryer; turn the switch to the PUMP position to operate the filter pump; certain conditions must be met before operating the filter pump; these conditions are covered later in the Filtering section of the fryer manual
1	8 & 9		Used to adjust the value of the currently displayed setting in the Program modes

3-1. OPERATING CONTROLS (Continued)

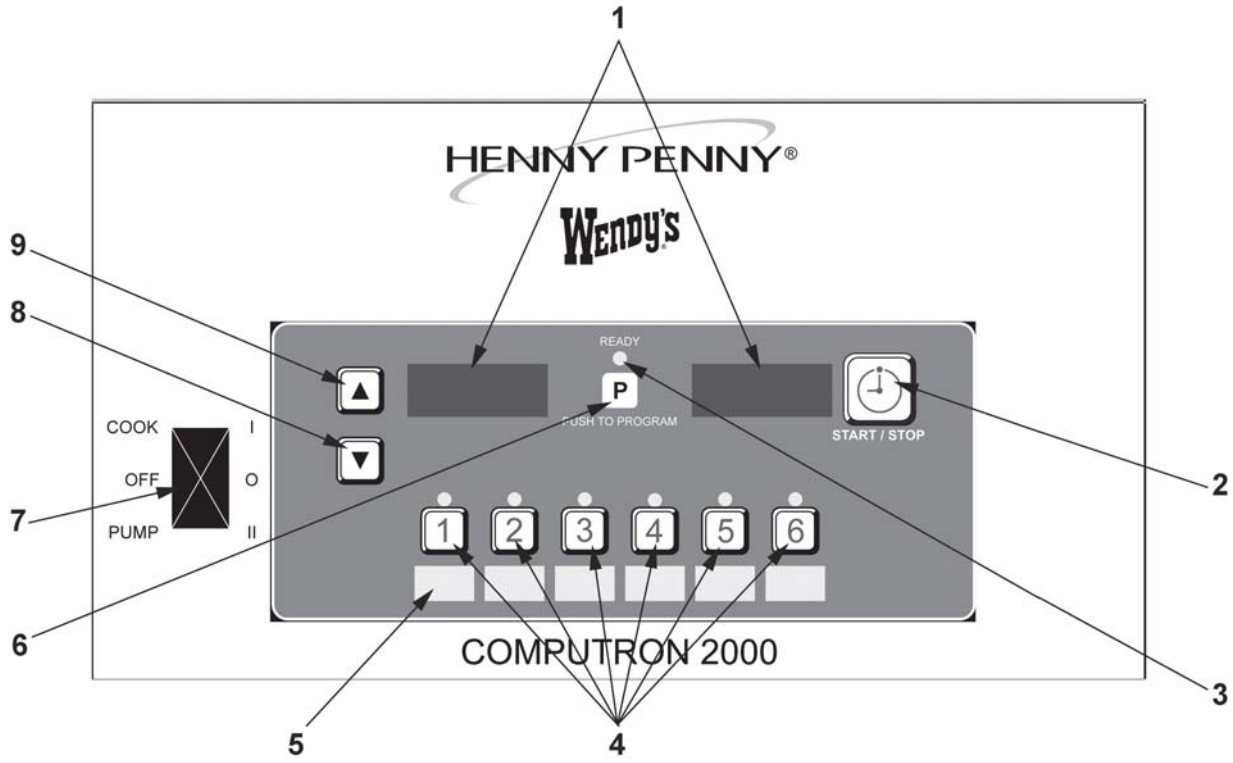


Figure 1 Control Panel

3-2. OPERATING COMPONENTS

The images at the end of this section, identify all the operator controls and the major components of the pressure fryer.

Fig. No.	Item No.	Description	Function
2	1	Lid Latch	A spring loaded latch that provides a positive latch to hold the lid closed; this latch, along with the spindle assembly and lid gasket, provides a pressure sealed frypot chamber
2	2	Lid Limit Stop	A threaded adjustable collar used to obtain the proper tightness between the lid gasket and the frypot rim; done by controlling the number of clockwise rotations of the spindle
2	3	Solenoid Valve	An electromechanical device that causes pressure to be held in the frypot; the solenoid valve closes at the beginning of the Cook Cycle and is opened automatically by the controls at the end of the Cook Cycle; if this valve becomes dirty or the teflon seat nicked, pressure won't build and must be repaired
2	4	Spindle Assembly	An assembly that is tightened after the lid is latched, and applies pressure to the top of the lid; the lid gasket then applies pressure against the frypot rim; after building one pound of internal pressure, the lid liner pushes a locking pin up into the locking collar, preventing the spindle from being turned while the frypot is pressurized
2	5	Safety Relief Valve Ring	 **DO NOT PULL THIS RING. SEVERE BURNS FROM THE STEAM WILL RESULT.**
2	6	Safety Relief Valve	This is an ASME approved spring loaded valve, set at 14.5 psi; if the deadweight assembly is clogged, this safety valve releases excess pressure, keeping the frypot chamber at 14.5 psi (999 mbar) if this occurs, turn the main power switch to OFF to release all pressure from the frypot  **If safety relief valve activates, turn main power switch to the OFF position. To avoid serious burns and injuries, have fryer serviced before next use.**

3-2. OPERATING COMPONENTS (Continued)

Fig. No.	Item No.	Description	Function
2	7	Deadweight Assembly	This deadweight style, pressure relief valve maintains a constant level of steam pressure within the frypot; excess steam is vented through the exhaust stack  **Failure to clean the deadweight assembly daily could result in the fryer building too much pressure. Severe injuries and burns could result.**
2	8	Pressure Gauge	Indicates the pressure inside the frypot
3	9	Frypot	Holds the cooking shortening and an adequate cold zone for collection of cracklings
3	10	Lid Spring	Assists in raising the lid, and then holding it open (shield covered)
3	11	Condensation Drain Channel	This channels the moisture, that collects on the lid liner when the lid is opened, into the drain line and prevents the moisture droplets from falling into the shortening
3	12	Lid Gasket	Provides the pressure seal for the frypot chamber
3	13 (Only the Handle is Shown)	Drain Valve	A two-way ball valve that is normally close; turn the handle to drain the shortening from the frypot, into the filter drain pan
3	14	Condensation Drain Pan	The collection point for the condensation, formed within the steam exhaust system; remove and empty periodically
3	15	Filter Union	Connects the filter to the filter pump, and allows easy removal of the filter and drain pan

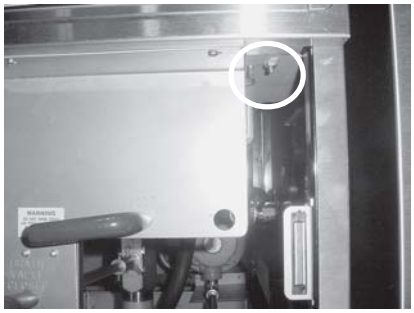
3-2. OPERATING COMPONENTS (Continued)

Fig. No.	Item No.	Description	Function
3	16	Filter Drain Pan	The removable pan that houses the filter and catches the shortening when it is drained from the frypot; it is also used to remove and discard old shortening  **When moving filter drain pan containing hot shortening, use extreme care to avoid burns from hot surfaces or splashing.**
3	17	Condensation Drain Line	A hose used to route the condensation collected within the steam exhaust system, to the condensation pan
3	18	Drain Interlock Switch	A microswitch that provides protection for the frypot in the event an operator inadvertently drains the shortening from the frypot while the main power switch is on; the switch automatically shuts off the heat when the drain valve is opened  **DO NOT OPEN THE DRAIN VALVE WHILE FRYPOT IS UNDER PRESSURE. HOT SHORTENING WILL EXHAUST AND SEVERE BURNS WILL RESULT**
3	19	Rinse Hose (Optional)	A hand-held hose used to rinse food particles from the frypot into the filter pan; attaches to a quick disconnect fitting
3	20	Filter Valve	When the power switch is in the PUMP position, this two-way valve directs filtered shortening from the drain pan, back into the frypot
3	21	Gas Control Valve (GasModels Only)	Controls the gas flow to the burner

3-2. OPERATING COMPONENTS (Continued)

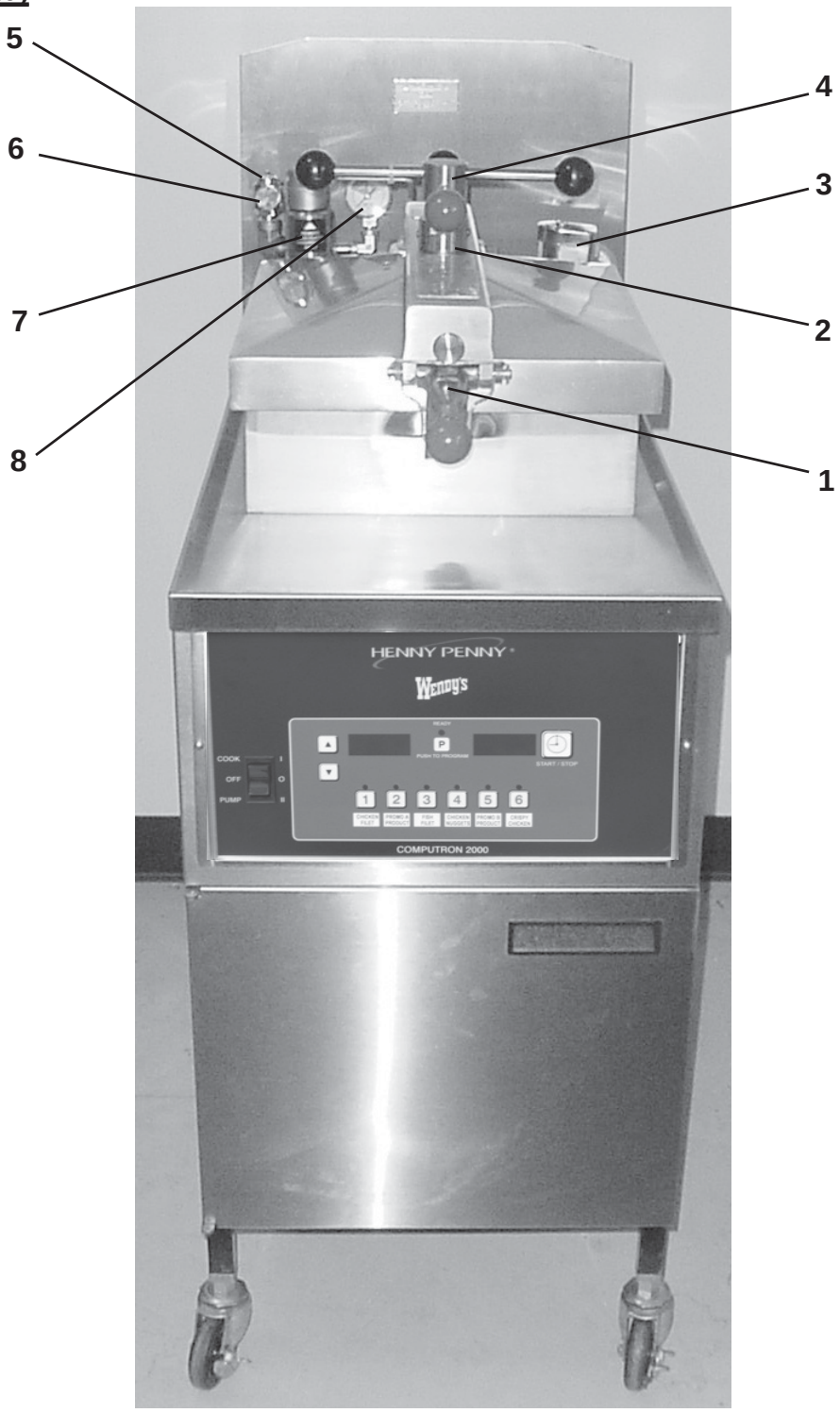
Fig. No.	Item No.	Description	Function
4	22	Circuit Breakers (Electric Models Only)	A protective device which breaks the circuit when the current exceeds the rated value
5	23	Contactors (Electric Models Only)	Relays that route power to the heating elements; one relay is in series with the high limit, the other one is in series with the controls
5	24	Transformer	Reduces the voltage down to accommodatethose components with low voltage
8	25	High Temperature Limit	A control that senses the temperature of the shortening; if the temperature of the shortening exceeds the safe operating limit, this control 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 red reset button, located under the control panel, behind the door
9	26	Circuit Breaker (Single Phase Electrics Only)	Opens the electrical circuit, and removes power to elements

Gas



Electric

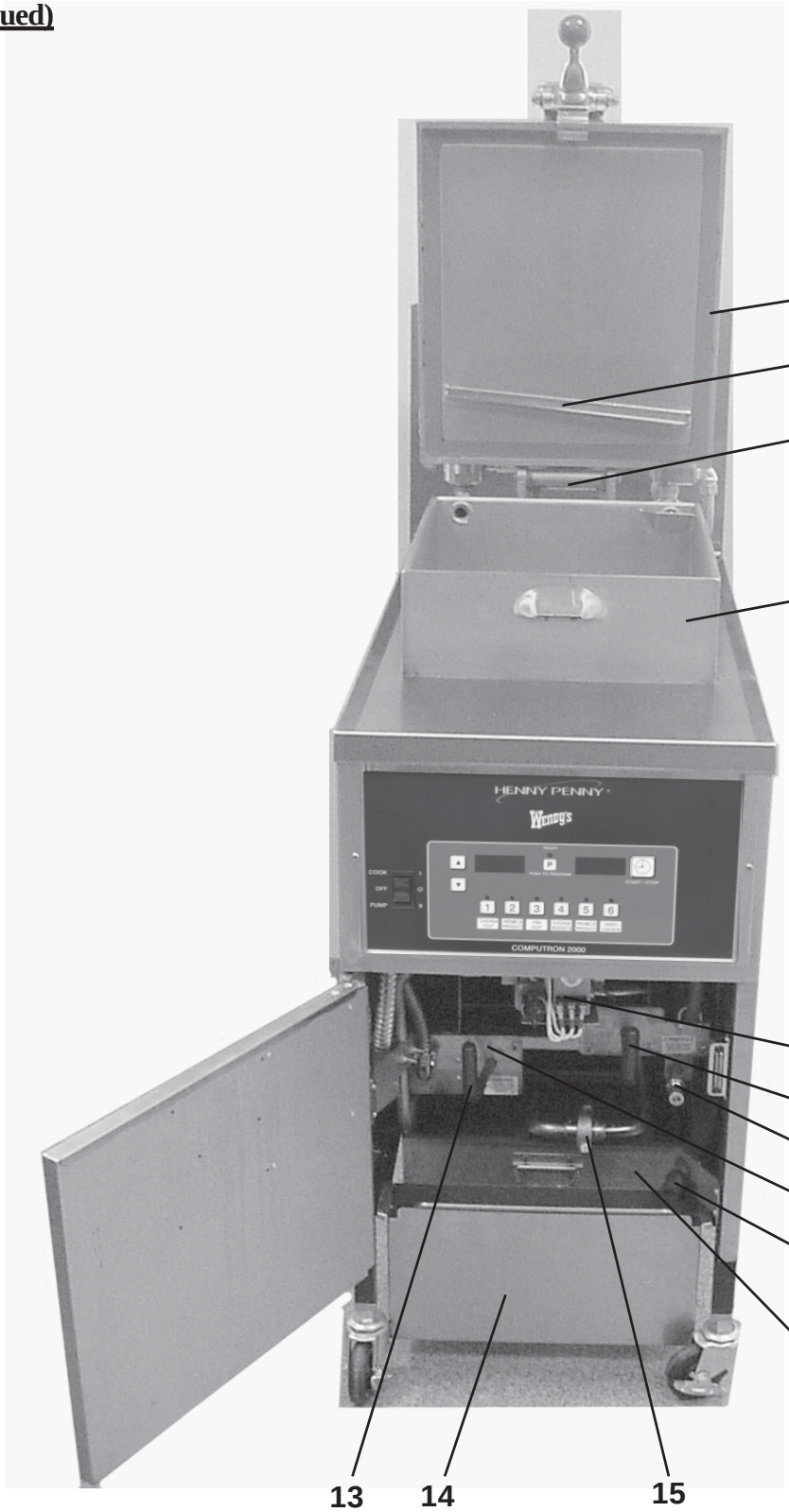
3-2. OPERATING COMPONENTS
(Continued)



ELECTRIC MODEL

Figure 2. Operating Controls

3-2. OPERATING COMPONENTS (Continued)



GAS MODEL

Figure 3. Operating Controls

3-2. OPERATING COMPONENTS (Continued)

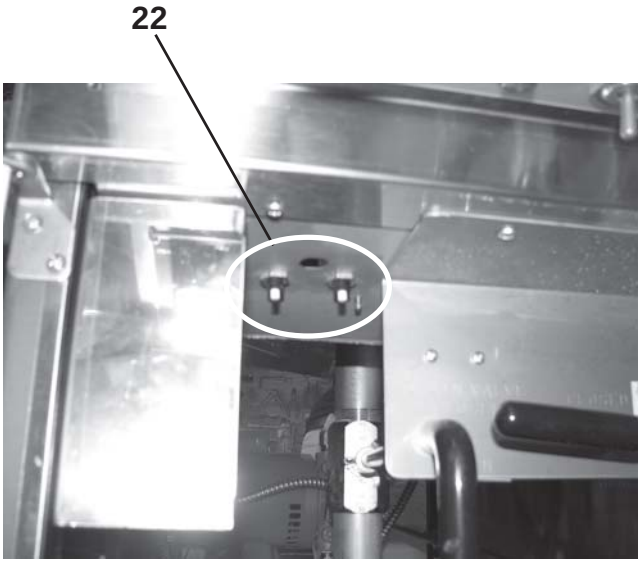


Figure 4. Operating Controls

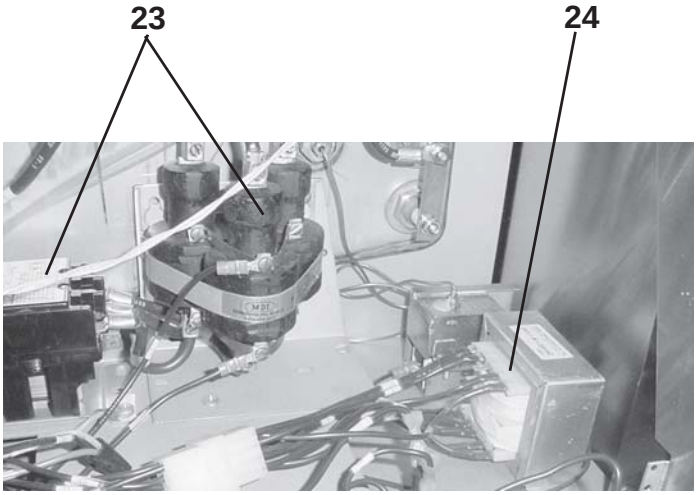


Figure 5. Operating Controls

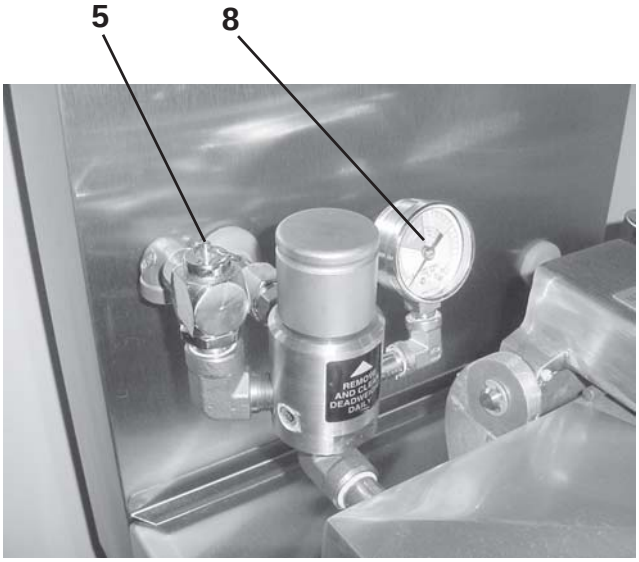


Figure 6. Operating Controls

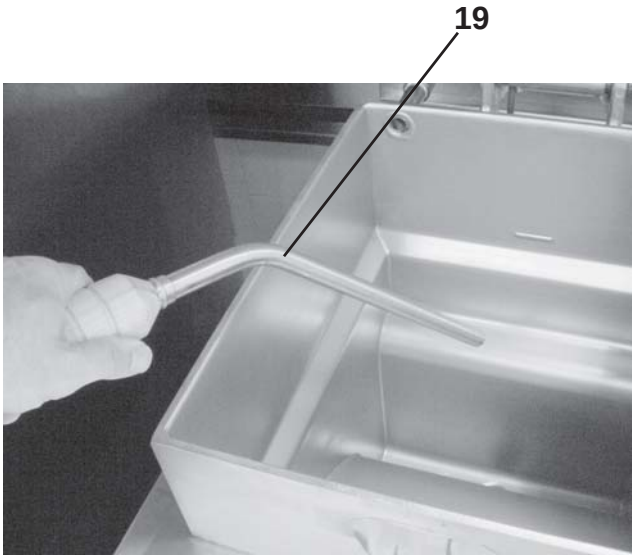


Figure 7. Operating Controls

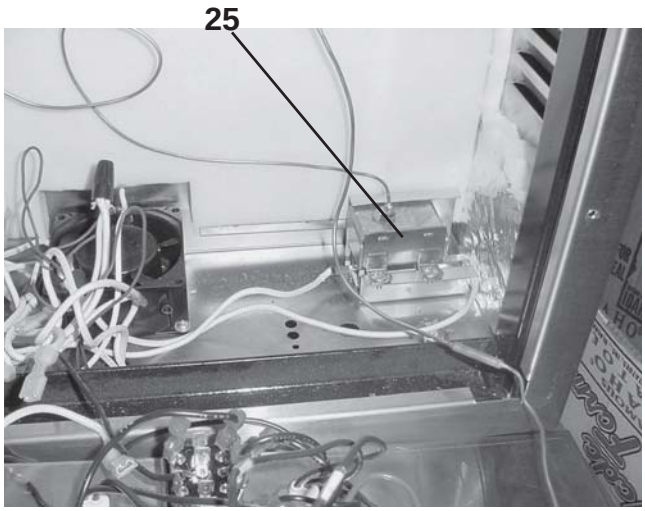


Figure 8. Operating Controls

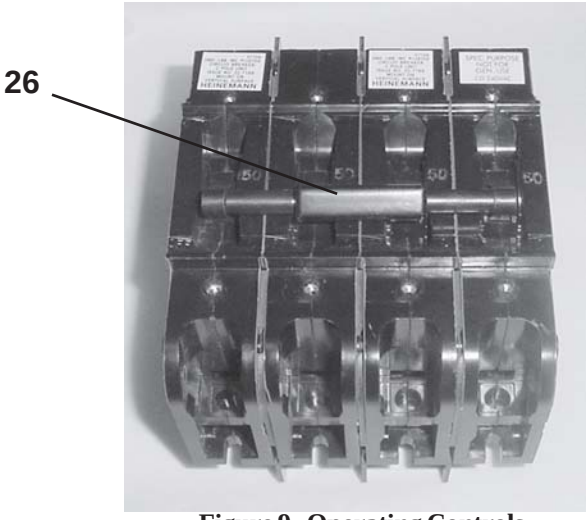


Figure 9. Operating Controls

3-3. FILLING OR ADDING SHORTENING

CAUTION

The shortening level must always be at the frypot level indicator on the rear of the frypot (see photo on next page). 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 elements on electric fryers, or the frypot surface on gas fryers, must be completely submerged. Fire or damage to the frypot could result.

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

WARNING
BURN RISK

To avoid severe burns when pouring hot shortening into frypot, wear gloves and take care to avoid splashing.

2. The electric model 500 requires 48 lbs. (21.8 kg) of liquid shortening, and the gas model requires 43 lbs. (19.5 kg). Model 500 fryers have 2 level indicator lines inscribed on the rear wall of the frypot, whereas the model 600 has only 1 level indicator. The level indicator lines show the proper shortening levels.

3. Cold shortening should be filled to 1/2-inch (12.7 mm) below a single level indicator line, and frypots with 2 level indicator lines, cold shortening should be even with the lower level indicator line. The shortening expands when heated and should be at the level indicator line when the shortening is hot, or the top level indicator line on model 500s.

3-4. CARE OF THE 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. Frying breaded food products requires frequent filtering to keep the shortening clean. The shortening should be filtered after every 3 to 6 Cook cycles. For the best quality product, Do not exceed 6 Cook Cycles without filtering. Refer to Filtering of Shortening Section.

2. Maintain the shortening at the proper cooking level. Add fresh shortening as needed.

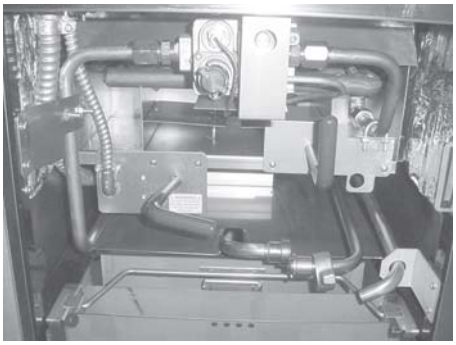
3. Do not overload the baskets with product (12 lbs. (5.4 kg.) for model 600 fryers and 14 lbs (6.4 kg.) for model 500 fryers, or place product with extreme moisture content into baskets.

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

3-5. BASIC OPERATIONS AND PROCEDURES

These are just basic procedures. Refer to Wendy's operating procedures for more detailed instructions.

VALVES CLOSED (ELECTRIC)



VALVES CLOSED (GAS)

Step 8

1. Be sure the drain valve is in the closed position.

2. Remove fry basket from frypot and leave lid up.

3. Fill the frypot with shortening.

CAUTION

When using new shortening, it is recommended to melt the shortening on an outside source before placing shortening in the frypot. Unless elements are completely covered in shortening, fire or damage to the frypot could result.

4. Move power switch to the COOK position. Unit automatically goes into the Melt Cycle. When the temperature reaches 230°F (110°C) the control goes into the Heat Cycle, and heats the shortening until the temperature setting is reached.

NOTICE

Bypass the Melt Cycle, if desired, by pressing a product button and holding it for 4 seconds.

CAUTION

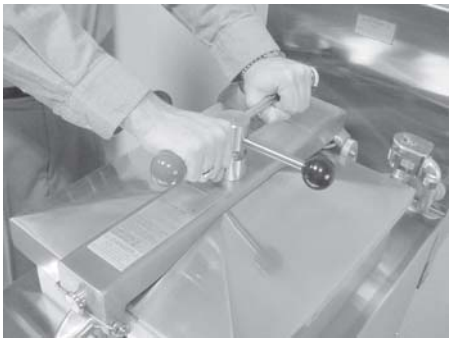
Do not bypass the Melt Cycle unless enough shortening has melted to completely cover all of the heating elements, or the curved surface of the gas frypot. If Melt Cycle is bypassed before these surfaces are covered, excessive smoking of the shortening or a fire will result.

5. Completely stir shortening to stabilize the temperature throughout the frypot.

6. If the shortening was not filtered the night before at shutdown, it should be filtered now, after the shortening reaches the frying temperature and before the fryer is used. Refer to Filtering of Shortening Section.

3-5. BASIC OPERATIONS AND PROCEDURES (Continued)

Step 8



Step 9

IF THE SHORTENING TEMPERATURE EXCEEDS 420°F (216°C), IMMEDIATELY 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.

6. Once the shortening temperature has stabilized at the set-point temperature and READY is lit, place the baskets into the shortening. Then place product into the basket.

Do not overload, or place product with extreme moisture content into the basket. 12 lbs. (5.4 kgs) for the models 500 and 600, 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.

7. Lift the basket slightly out of the shortening and shake basket to separate pieces.

8. Remove basket handle and close lid quickly, latching the lid.

9. Tighten the lid spindle clockwise, sealing the lid. Align red knob on the spindle with red knob on the latch.

LATCH THE LID PROPERLY AND ALIGN THE RED BALLS OR SEVERE BURNS WILL RESULT.

3-5. BASIC OPERATIONS AND PROCEDURES (Continued)

10. Press  to start a Cook Cycle. The display counts down the cooking time.

To check the shortening temperature press P or to stop a Cook Cycle, press and hold  .

11. Within a few minutes, the pressure gauge increases to the OPERATING ZONE. If it does not recheck the procedures and then refer to the troubleshooting section.

12. At the end of the Cook Cycle the fryer automatically depressurizes, an alarm sounds and the display flashes "DONE". To stop the alarm, press  .

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 FRYPOT IS PRESSURIZED ALLOWS HOT SHORTENING AND STEAM TO ESCAPE FROM THE FRYPOT, RESULTING IN SEVERE BURNS.

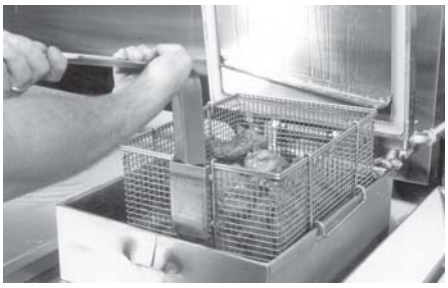
13. After pressure drops to zero, turn the spindle counterclockwise.

Do not flip or spin the spindle cross arm when opening the lid because it could damage the acme nut inside the cross bar.

14. Unlatch and raise the lid quickly to allow most of the condensation on the lid to drain through the drain channel and not into the shortening.

Do not let the lid slam up against the backstop cause damage to the hinge could result.

15. Using the detachable handle, lift the basket and hang it on the side of the frypot to drain. Dump product into holding pan.



Step 15

3-6. REGULAR MAINTENANCE SCHEDULE

As in all food service equipment, the Henny Penny pressure fryer does require care and proper maintenance. The table below provides a summary of scheduled maintenance.

Procedure	Frequency
Filtering of shortening	Every 3 to 6 frying cycles
Filter pump problem prevention	As required
Changing of shortening	As required
Changing the filter envelope	As required
Cleaning the frypot	Before changing the shortening
Cleaning the deadweight valve	Daily
Night closing procedures	Daily
Check optional rinse hose for deterioration	Weekly
Reversing the lid gasket	Quarterly
Lid lubrication	Quarterly
Limit stop adjustment	Quarterly
Check tightness of spreader bars	Quarterly
Clean safety relief valve	Annually

3-7. FILTER PUMP MOTOR PROTECTOR- MANUAL RESET

The filter pump motor is equipped with a manual reset button, located on the rear of the motor, in case the motor overheats. Wait about 5 minutes before attempting to reset this protective device to allow motor to cool. The filter motor is on the rear of the fryer. It takes some effort to push the reset, and a screwdriver can be used to help reset the button.

Electric fryers with serial numbers of HB013JB & below, and gas fryers with serial numbers of GA085JB & below, can push the reset button, by removing the access panel on the left side panel of the unit.

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

3-8. FILTERING OF SHORTENING

Frying breaded food requires frequent filtering. 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 main power switch to the OFF position. Remove and clean the fry basket in soap and water. Rinse thoroughly.

NOTICE

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

2. Use a metal spatula to scrape any build-up from the sides of the frypot. Do not scrape heating element on electric units, or the curved portion of the gas frypot.

Step 2

CAUTION

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

Do not bang the pot scraper, or other cleaning utensil, on the frypot rim. Damage to the frypot rim could result and the lid may not seal properly during a cook cycle.

WARNING

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 basket will be hot. Use care when filtering to avoid getting burned.

Step 4

3. Open the drain valve very slowly, half a turn at first and then slowly to the full open position. This will prevent excessive splashing of the hot shortening as it drains into the filter drain pan.

4. As the shortening drains from the frypot, use fryer brushes (Henny Penny part number 12105 includes both brushes) to clean the side of the frypot and the heating elements (if electric unit). If the drain fills with breading, use the white brush to push the breading into the filter pan.

3-8. FILTERING OF SHORTENING (Continued)

5. When all of the shortening has drained, scrape or brush the sides and the bottom of the frypot.
6. Rinse the frypot as follows:
   a. Close the drain valve.
   b. Open the filter valve.
   c. Lower lid and hold closed.
   d. Move the main power switch to the PUMP position. Carefully open the lid to see if the shortening is returning properly. Fill frypot 1/3 full, then turn off pump.

Step 6e

Step 7a

FAILURE TO HOLD THE LID CLOSED SO THAT THE FIRST SURGE OF THE RETURNING SHORTENING WILL NOT SPLASH OUT OF THE FRYPOT, WILL RESULT IN SEVERE BURNS.

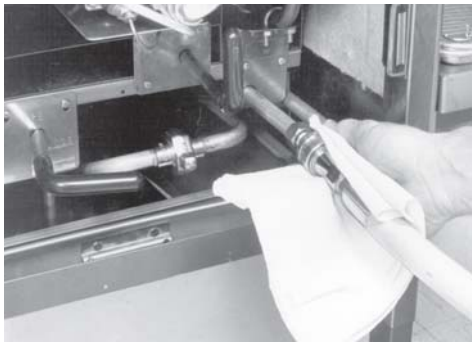
IF THERE ARE AIR BUBBLES COMING UP IN THE SHORTENING, IT'S POSSIBLE THAT THE FILTER CONNECTION AT THE UNION ON THE FILTER TUBE IS NOT TIGHTENED PROPERLY. IF SO, TURN OFF THE PUMP AND USE PROTECTIVE CLOTH OR GLOVE WHEN TIGHTENING THE UNION. THIS UNION WILL BE HOT AND SEVERE BURNS COULD RESULT.

   e. Wash down and scrub the sides of the frypot. Use "L" brush to clean the heating elements.
   f. After the sides and bottom are cleaned, open the drain valve.
7. If an optional filter rinse hose is available on your fryer, the following cleaning procedure may be used.
   a. Attach the filter rinse hose with its quick disconnect fitting to the male fitting inside the door next to the filter valve handle. To do this, slide back the spring ring on the female side of the quick disconnect fitting and let it snap into place over the male half of the fitting.

3-8. FILTERING OF SHORTENING (Continued)

Step 7b

Step 7c



Step 7f

b. While holding the wooden handle, make sure the hose nozzle is pointed down into the bottom of the frypot. Pull the lid down over the nozzle, close the filter valve, and move the main power switch to the PUMP position. Hold nozzle carefully to avoid excessive splashing.

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

c. Rinse the frypot interior. Especially work on hard to clean areas, like the frypot bottom. On electric models clean around heating elements.

d. After sufficient rinsing with shortening, close the drain valve.

e. Turn the main power switch to the OFF position.

ONLY CONNECT AND DISCONNECT THE FILTER RINSE HOSE WHEN THE MAIN POWER SWITCH IS IN THE OFF POSITION. ALSO, USE A DRY CLOTH OR GLOVE TO AVOID BURNS. FAILURE TO DO THIS COULD RESULT IN SEVERE BURNS FROM HOT SHORTENING SPRAYING FROM THE MALE FITTING.

f. Detach the hose. Raise the fitting end of hose high for a minute to allow the remaining shortening in the hose to drain into the frypot.

8. Pump all the shortening out of the filter pan and back into the frypot. Close lid during first surge of pumping.

3-8. FILTERING OF SHORTENING (Continued)

Step 9

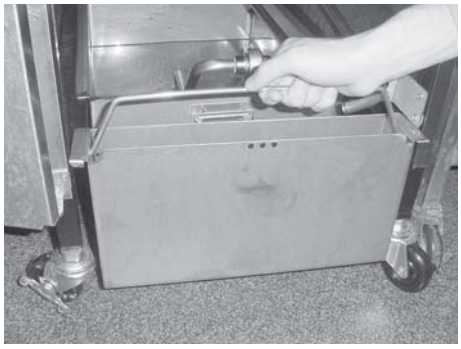
9. When the pump is pumping air only, the shortening in the frypot will appear to be boiling. Close the filter valve first and then move the main power switch from PUMP to OFF. This will keep the filter pump and lines from filling up with shortening.

NOTICE

When bubbling occurs, immediately close the filter valve. This prevents aeration of the shortening, therefore increasing shortening life.

10. Check the level of the shortening if necessary, until it reaches the level indicator line on the rear wall of the frypot, or the top level indicator line on model 500s..

11. After completing the filtering operation, empty and replace the condensation drain pan.



Step 11

12. 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.

3-9. FILTER PUMP PROBLEM PREVENTION

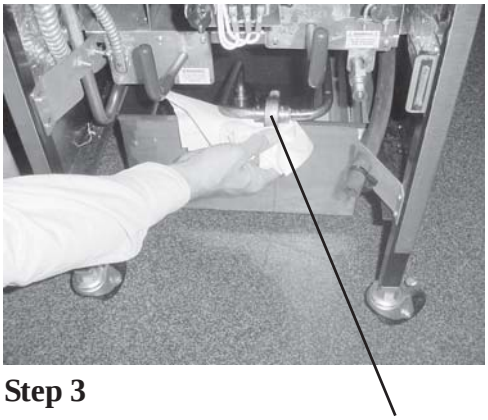
The following steps will help prevent filter pump problems:

1. Make certain the charcoal filter is installed with the smooth side down and the arms on the frame are clamped down over the protrusions on the outside of the frame.
2. The filter valve is to be closed at all times during frying.
3. Pump all the shortening from the filter lines by running the filter pump motor until the shortening in the frypot appears to be bubbling or boiling.

3-10. CHANGING THE FILTER ENVELOPE

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

1. Move the main power switch to the OFF position.
2. Remove and empty the condensation drain pan.
3. Disconnect the filter union and remove the drain pan from under the frypot. If available, a drain pan may have casters under it, allowing easy transport of filter pan and filter assembly.



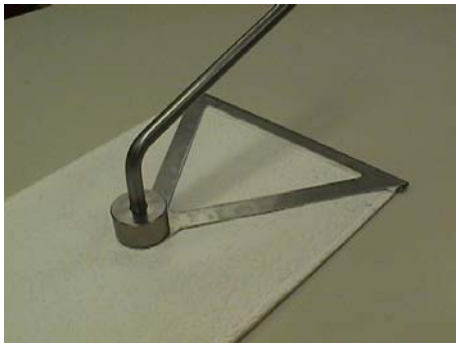
Step 3

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

If the filter pan is moved while full of shortening, use care to prevent splashing, or burns could result.

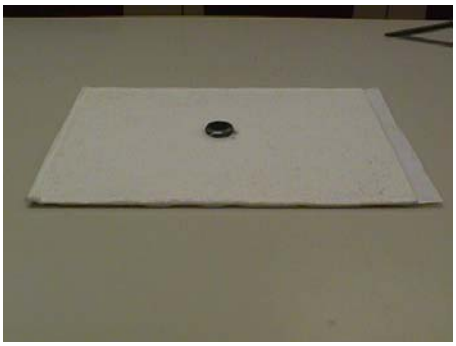
4. Lift the screen assembly from the drain pan.
5. Wipe the shortening and crumbs from the drain pan. Clean the drain pan with soap and water, then thoroughly rinse with hot water.

3-10. CHANGING THE FILTER ENVELOPE (Continued)



Step 6

6. Unthread the suction standpipe from the screen assembly.



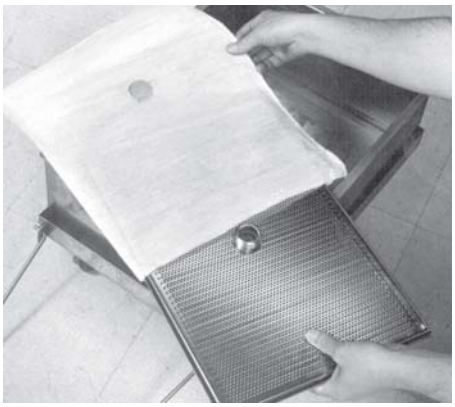
Step 7

7. Remove the sealer bar and discard the filter envelope.

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

NOTICE

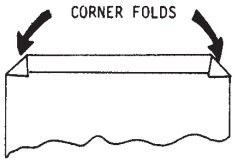
Be sure that the filter screens, sealer bar, and the suction standpipe are thoroughly dry before assembly of filter envelope as water dissolves the filter paper.



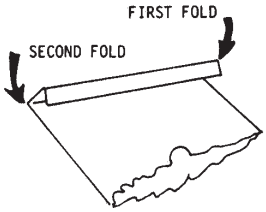
Step 9

9. Assemble the top filter screen to the bottom filter screen and slide the screens into a new filter envelope.

3-10. CHANGING THE FILTER ENVELOPE (Continued)



10. Fold the corners in and then double fold the open end.



Step 10

11. Clamp the envelope in place with the sealer bar.

12. Screw on the suction standpipe assembly.

Step 11

13. Place complete filter screen assembly back into filter drain pan and slide pan back into place beneath the fryer.

14. Connect the filter union by hand. Do not use a wrench to tighten.

15. Slide the condensation drain pan back into place. The fryer is now ready to operate.

3-11. CLEANING THE FRYPOT

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 to OFF, and unplug unit from the wall receptacle.

Moving either the frypot, or filter pan, while containing hot shortening is not recommended. Hot shortening can splash out. Severe burns could result.

The filter drain pan must be as far back under the 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.

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

3. Close the drain valve and discard the shortening in the filter pan. Then install the filter drain pan under the fryer, leaving out the filter screen assembly.

4. Refer to Wendy's frypot cleaning procedures.

DO NOT CLOSE LID WITH WATER AND/OR CLEANER IN FRYPOT. WATER UNDER PRESSURE BECOMES SUPERHEATED. WHEN LID IS OPENED, ESCAPING WATER AND STEAM WILL RESULT IN SEVERE BURNS.

3-11. CLEANING THE FRYPOT (Continued)

CAUTION

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.

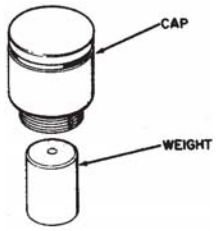
Do not use a water jet (pressure sprayer) to clean unit or component damage could result.

NOTICE

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

3-12. CLEANING THE DEADWEIGHT ASSEMBLY

At the end of each day, the deadweight assembly valve must be cleaned as follows:



Step 3

Step 6

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

1. Turn the main power switch to the OFF position. Be sure all pressure has been released and open the lid.

2. Unscrew the deadweight cap and remove the cap and dead weight.

Deadweight cap may be hot. Use protective cloth or glove, or burns could result.

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

3. Clean the exhaust tube with stainless steel brush (Henny Penny part number 12147).

4. Clean the deadweight cap and weight in hot detergent water. Make certain to thoroughly clean the inside of the valve cap and the deadweight.

5. Clean the deadweight orifice and the inside of the deadweight assembly body with a clean lint-free cloth.

6. Dry the deadweight and deadweight assembly cap.

7. Replace deadweight and deadweight assembly cap. Finger tighten the cap.

3-13. OPERATING INSTRUCTIONS FOR OPTIONAL DIRECT-CONNECT SHORTENING SYSTEM

Figure 1

1. Connect the female quick disconnect, that is attached to the hose in the rear of the fryer, to the correct male quick disconnect at the wall. Once attached, the hose can remain connected unless the fryer is moved. Figure 1.

CAUTION

In order for the system to work properly, attach the hose to the shortening return line only.

2. Open the drain valve and drop the shortening from the frypot, into the drain pan.

Figure 2

3. Once all shortening is gone from frypot, turn the red handle counterclockwise, into the down position and hold. Figure 2.

4. While holding the handle down, turn the COOK/PUMP switch to the PUMP position. Shortening is now pumped from the drain pan.

5. Once all the shortening is out of the drain pan, turn the COOK/PUMP switch to the OFF position.

6. Turn red handle back to original position.

7. Frypot is now ready for fresh shortening.

3-14. REVERSING THE LID GASKET

Reversing the lid gasket helps to prevent early failure of lid gasket and the loss of pressure during a cook cycle.

1. Back the 4 lid liner screws (2 on each side) out about 1/2 inch (12.7 mm).

2. Using a thin blade screwdriver pry out the gasket at the corners, and then pull gasket from lid.

NOTICE

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

3. Clean the gasket and gasket seat with hot water and cleaning detergent. Rinse with clean hot water.

4. Install the gasket with the "good" side out and tighten the 4 screws.

NOTICE

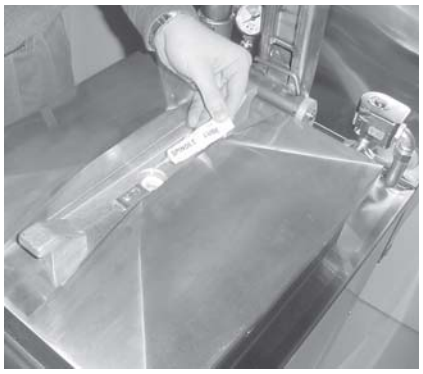
Install the four corners of the lid gasket. Smooth the gasket into place, working from the corners towards the middle of each side.

3-15. LID LUBRICATION

To extend the life of lid components, lubricate the ball seat and spindle, following the steps below.

1. Close and latch the lid, and turn the spindle counterclockwise until it stops.

2. Press down on the front of the cross bar, pull out the release pin, lift the latch, and raise the cross bar.



3. Using spindle lube (part no. 12124), lubricate the ball seat in the center of the lid cover.

4. Turn spindle clockwise until it stops and then lubricate the threads on the spindle using the spindle lube.

5. Turn the spindle counterclockwise until it stops, line up the lid cover with the cross bar, pull the release pin out, and firmly press the cross bar back into place.

6. The fryer is now ready for use.

3-16. LIMIT STOP ADJUSTMENT

To extend the life of the lid gasket and help prevent steam leakage, check the limit stop adjustment quarterly, following the steps below.

Step 2

Step 3

1. Close and latch lid, and turn spindle counterclockwise until it stops.

2. Using a 3/16" Allen wrench, loosen the 2 set screws on the outer collar of the limit stop.

3. Turn the inner collar clockwise until it stops.

NOTICE

Insert a small screwdriver or Allen wrench in the hole in the inner collar to assist you in turning the collar.

4. Turn spindle clockwise until it stops. The lid gasket is now touching the frypot rim.

5. From the front of the fryer, turn the spindle at least 3/4 of a turn, but not over 1 turn. One of the spindle arms should be lined up with the red ball of the latch, at this time.

6. Slightly turn the spindle past this position, so it should show in about the 7 o'clock position.

NOTICE

The 7 o'clock position is only to allow slight additional turning of the spindle to relieve any side pressure against the locking pin. Side pressure holds the pin in the locked position, even after all the pressure has released.

When adjustment is complete, if a black ball on the spindle is lined up with the red ball on the latch, unscrew the black ball and the red ball on the spindle and change places on the spindle. The red ball on the spindle should now line up with the red ball on the latch.

3-16. LIMIT STOP ADJUSTMENT (Continued)

7. Turn the inner collar counterclockwise until it stops against the bottom hub of the spindle.

8. Tighten Allen screws.

NOTICE

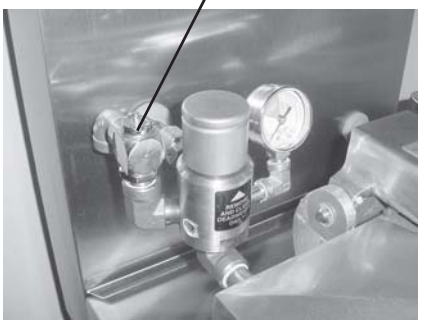
If the lid cover fails to seal properly, steam escapes from around the gasket during frying. Readjust the limit stop, this time turning the spindle 1 full turn after the initial contact of the lid gasket with the frypot rim (step 5).

3-17. CLEANING THE SAFETY RELIEF VALVE

DANGER
BURN RISK

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

DO NOT DISASSEMBLE OR MODIFY THIS SAFETY RELIEF VALVE. TAMPERING WITH THIS VALVE COULD CAUSE SERIOUS INJURIES AND WILL VOID AGENCY APPROVALS AND APPLI - ANCE WARRANTY.



1. Remove deadweight cap and deadweight.

2. Use a wrench to loosen the valve from the pipe elbow, turn counterclockwise to remove.

3. Clean the inside of the pipe elbow with hot water.

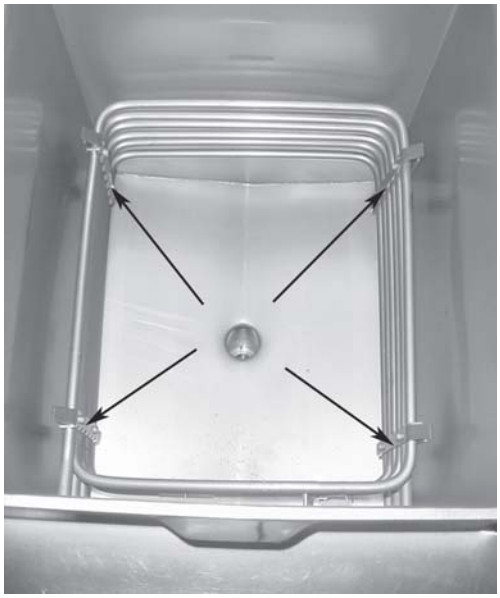
NOTICE

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

4. Immerse the safety relief valve in a soapy water solution for 24 hours. Use a 1 to 1 dilution rate. The valve cannot be disassembled. It is factory preset to open at 14-1/2 pounds of pressure (999 mbar). If it does not open or close, it must be replaced.

3-18. CHECK & TIGHTEN ELEMENT SPREADER BARS (Model 500 only)

To extend the life of the temperature probe, high limit, and elements, every 90 days check the tightness of the element spreader bar screws, following the steps below:



WARNING
BURN RISK

Drain shortening and allow fryer to cool before proceeding with the following steps. Surfaces of the fryer will be hot and burns could result.

1. Check that all spreader bars are in place (4 sets), and using a 5/16” socket or wrench, tighten all the element spreader screws.

NOTICE

If the bolts or spreaders are missing or damaged, order kit no. 14685 from your nearest Henny Penny distributor.

2. Pump shortening back into frypot and unit is now ready for use.

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 programming product times and set-points, and Special Programming, which are the more detailed settings.

NOTICE

If "LOCK" shows in the display when trying to change the set-points or times, the controls must be unlocked before making changes. See Special Programming for unlocking procedures.

4-2 TIME AND SET-POINT PROGRAMMING

To Change Set-Point Temperatures

1. Press and hold P until "PROG MODE" shows in the display.
2. Press the desired product button and the LED above the button is on and the set-point temperature flashes.
3. Press the ▲▼ to change the set-point temperature. Press and hold ▲▼ and the values increases by 5.
4. Once the ▲▼ are released, the set-point is saved after 2 seconds.
5. To reset set-point temperature to default settings, press and hold both ▲▼ simultaneously.

To change Product Cooking Times

1. Press and hold P until "PROG MODE" shows in the display.
2. Press the desired product button and the LED above the button is on and the set-point temperature flashes.
3. Press P and the cook time flashes.
4. Press the ▲▼ to change the product cooking time.
5. Once the ▲▼ are released, the time is saved after 2 seconds
6. To reset cooking time to default settings, press and hold both ▲▼ simultaneously.

4-3. SPECIAL PROGRAM MODE

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

- Degrees Fahrenheit or Celsius
- System Initialization
- Program Lock or Unlock
- Fryer Type
- CPU Temperature
- Inputs Status (high limit, drain switch, fan switch, module)
- Outputs Status (fan, module, heat, pressure)

1. Press and hold P while turning on the COOK/PUMP switch. "SPEC PROG" show in the displays, followed by:

2. "DEG °F or °C" Press the  to change °F to °C, or vice versa.

   Press P to proceed to the next step.

   NOTICE

   To exit from the Special Program Mode at any time, press and hold P for 2 seconds

3. "INIT —>" shows in the display. Press and hold  to reset the controls to factory settings. Display shows "In-3", "In-2", "In-1", followed by "INIT SYS" and then "DONE".

   Press P to proceed to the next step.

4. "PROG UNLK" or "PROG LOCK" show in the displays. Press  to change controls from "UNLK" to "LOCK" or vice versa. In the lock mode, the time and temperature can't be changed until the controls are unlocked.

   Press P to proceed to the next step.

4-3. SPECIAL PROGRAM MODE (Continued)

5. "FRYR" shows in the left display and the type of fryer shows in the right display. Press  to change to the type.

   "ELEC" means an electric model;
   "GAS" means a gas model;
   "GAS" "SSI" means gas model with solid state ignition (do not have to light pilot light)

   Press P to proceed to the next step.

6. "CPUB" shows in the left display, and the temperature of the CPU board shows in the right display.

   Press P to proceed to the next step.

7. "INPUTS" shows in the display. Press 1 to display the status of the inputs. "H"= high limit; "D"= drain switch; "F"= fan switch; "M"=MV signal from ignition module on SSI gas fryers.

   A display showing "_" means an open condition;
   "*" means a closed condition.

   Press P to proceed to the next step.

8. "OUTPUTS" shows in the display. Press 1 to display the status of the outputs.

   "P"=pressure;
   "I"=ignition module on SSI gas fryers;
   "H"=heat;
   "F"= fan (24V gas systems only)
   "MV" "NO"= no 24V gas system

   A display showing "_" means output is off;
   "*" means output is on.

   Press P to proceed to the next step, or press and hold P to exit Special Programming.

SECTION 5. TROUBLESHOOTING

5-1. TROUBLESHOOTING GUIDE

Problem	Cause	Correction
Power switch ON but fryer completely inoperative	• Open Circuit	• Fryer plugged in • Check breaker or fuse at wall
Pressure not exhausting at end of cook cycle	• Solenoid or Exhaust line clogged	• Turn OFF and allow fryer to cool to release the pressure in frypot; have all lines, solenoid, and exhaust tank cleaned
Operating pressure too high	• Deadweight clogged	• Turn OFF and allow fryer to cool to release the pressure in frypot; clean deadweight; see Cleaning the Deadweight Assembly Section

DANGER
BURN RISK

DO NOT OPERATE UNIT IF PRESSURE GAUGE SHOWS HIGH PRESSURE CONDITIONS. SEVERE INJURIES AND BURNS WILL RESULT. IMMEDIATELY PLACE THE COOK/PUMP SWITCH IN THE OFF POSITION, WHICH RELEASES THE PRESSURE BY ALLOWING THE UNIT TO COOL. DO NOT RESUME USE OF UNIT UNTIL CAUSE OF HIGH PRESSURE HAS BEEN FOUND AND CORRECTED.

Pressure does not build	• Not enough product in frypot • Metal shipping spacer not removed from deadweight • Lid gasket leaking	• Place full capacity product in frypot when using fresh shortening • Remove shipping spacer; see Unpacking Instructions Section • Reverse or replace lid gasket
Shortening not heating	• Gas valve knob turned to the OFF position • Drain valve open (“E-15”) • High temperature limit tripped (“E-10”)	• Make sure gas control valve knob is turned to the ON position • Close drain valve • Reset high temperature limit; see Operating Controls Section
Foaming or boiling over	• Water in shortening • Condensation line clogged	• Change shortening • Remove and clean condensation line
Shortening not draining	• Drain valve clogged	• Push cleaning rod through open drain valve
Filter motor won’t run	• Motor overheated	• Reset motor; see Filter Pump Motor Protector-Manual Reset Section

NOTICE

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

5-2. ERROR CODES

This section provides error codes and their information in the form of an easy-to-read table.

If a problem occurs during the first operation of a new fryer, recheck the Installation Section .

5-3. ERROR CODE TABLE

In the event of a control system failure, the digital display shows an error message coded as follows: "E-4", "E-5", "E-6", "E-10", "E-15", "E-20-A, B, D", "E-41", "E-46", & "E-70. An alarm sounds when an error code is displayed, and to silence this alarm, press any button.

DISPLAY	CAUSE	PANEL BOARD CORRECTION
"E-4" "CPU TOO HOT"	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; check cooling fan, if present
"E-5" "OIL TOO HOT"	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-6A" "OIL PROB OPEN"	Temperature probe open	Turn switch to OFF position; then turn switch back to ON; if display shows "E-6", have the temperature probe checked
"E-6B" "OIL PROB SHRT"	Temperature probe shorted	Turn switch to OFF position, then turn switch back to ON; if display shows "E-6", have the temperature probe checked
"E-10" "HIGH LMT TRIP"	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

3-2. ERROR CODE TABLE (Continued)

DISPLAY	CAUSE	PANEL BOARD CORRECTION
"E-15" "DRAN IS OPEN"	Drain switch failure	Close drain, using the drain valve handle; if display still shows "E-15", have the drain microswitch checked
"E-20C" (SSI gas fryers only)	Ignition module(s) failure	Turn switch to OFF, then back to COOK to try the ignition process again, and if "E-20C" persists, have ignition modules checked
"E-20D" (SSI gas fryers only)	No ignition	Turn switch to OFF, then back to COOK to try the ignition process again, and if "E-20D" persists, have gas valve and gas flow checked
"E-41" "E-46"	Programming failure	Turn switch to OFF, then back to COOK; if display shows any of the error codes, try to reinitialize the control (Section 2-3); if error code persists, have the control board replaced
"E-70A"	Missing or broken wire in pins 1 and 2 of P11 connector, or faulty connector	Have jumper wire between pins 1 and 2 checked
	Faulty I/O board	Have I/O board checked and replaced, if necessary
"TEMP TOO" LOW FOR PRESSURE"	Possible water in frypot	Make sure oil is in frypot and at the proper level

GLOSSARY

HENNY PENNY PRESSURE FRYERS

air valve	a valve that allows air into the filter lines when the pump is on in the mixing mode on eight head fryers
airflow switch	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 on eight head gas fryers
blower	located on the rear of an eight head 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
breading	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 chamber *(gas fryers only)*	the area on four head fryers in which the gas combustion that heats the shortening takes place
burner tubes *(gas fryers only)*	the tubes in eight head fryers 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
condensation drain pan	a pan located at the bottom of the fryer that collects condensation from the steam exhaust system; the pan should be removed and emptied periodically
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
cool	a preset temperature, usually 250° F (121° C) or less, which can be manually or automatically switched to, to save the life of the shortening, when not cooking.
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 enabling the eight head fryer lid to lift easily
cracklings	the crumbs of breading 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
deadweight	a metal cylinder that works with the orifice to regulate the amount of steam entering the deadweight assembly
deadweight valve assembly	an assembly that controls pressure inside the frypot; the entire deadweight assembly should be cleaned according to the recommended procedures; the assembly is made up of the deadweight, the deadweight cap, the deadweight orifice, the deadweight valve, and the deadweight body
deadweight cap	a threaded cap that screws onto the deadweight valve housing
deadweight orifice	an opening that regulates the amount of steam entering the deadweight assembly
deadweight body	a container that holds the deadweight assembly
dilution box *(gas fryers only)*	a metal air intake device on the rear of eight head fryers which allows the blower to pull in fresh air
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
drop temperature	the starting, preset cooking temperature, at which product is placed in the shortening
dumping table	a table onto which the cooked product is dumped after removal from the frypot
exhaust hose	a hose used to vent steam from the frypot on eight head fryers
fill lines	the lines marked on the interior rear wall of the frypot that show the proper shortening level *(also referred to as level indictor lines)*
filter clips	the clips are the part of the filter screen assembly that holds the filter envelope closed
filter union	the threaded connection between the fryer and the filter system that can be connected or released without tools
filter drain pan	a pan that rolls or 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 quick disconnect	an optional connection on the fryers allowing the filter rinse hose to be connected or released without tools
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, and two filter clips *(Note: four head fryers have three filter screens that include a crumb catcher)*
flame sensors *(gas fryers only)*	the sensors that shut off the gas supply to eight head gas fryers if the pilot light goes out or does not light

flashpoint	the temperature at which shortening ignites
frypot	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) on eight head fryers and 450°F (232°C) on four head fryers
idle	a preset temperature, usually 250° F (121° C) or less, which can be manually or automatically switched to, to save the life of the shortening, when not cooking.
ignition modules	two modules that send electrical energy to the spark igniters that ignite the pilot lights on eight head 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	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, lid latch, and lid gasket *(Note: on four head fryers, the lid assembly includes spindles)*
lid gasket	the gasket around the lid that creates a seal when the lid is properly latched
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 while it is locked into place
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
P-H-T	the automatic control of pressure, heat, and time to produce appealing food product

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
pressure gauge	the gauge located on the left rear corner of the frypot that shows the pressure inside the frypot
pressure pad	a piece of plastic on eight head fryers located between the lid locking arm and the lid casting that helps create the seal for the lid; only a service technician should perform maintenance or repair on the pressure pad
product	a food item cooked in the fryer
ready	the starting, preset cooking temperature, at which product is placed in the shortening
safety relief valve	a spring-loaded valve that automatically releases excess pressure if the operating valve becomes obstructed; if the safety relief valve activates, turn the Power/Pump switch to OFF to release all pressure from the frypot
setpoint	a preset cooking temperature; the setpoint is a programmable feature
shipping spacer	a spacer located in the deadweight assembly for protection during shipment
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
sift breading	the process of removing clumps from breading
solenoid valve	a valve used to generate or release pressure for the cook cycle
spark igniters *(gas fryers only)*	the igniters that create a spark to ignite the pilot lights on eight head gas fryers *(see ignition modules)*
standpipe	the pipe through which oil 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
temperature probe	a round probe that is located in the inside of the frypot that measures the temperature of the oil in the frypot; the probe communicates with the control panel

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FM07-219-B Henny Penny Corp., Eaton, Ohio 45320, Revised 12-26-07