HENNY PENNY®
Global Foodservice Solutions

Henny Penny
CFA Pressure Fryer

Electric Model 500
Gas Model 600

OPERATOR'S MANUAL

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.

TABLE OF CONTENTS

Section **Page**

TABLE OF CONTENTS

Section **Page**

SECTION 1. INTRODUCTION

1-1. INTRODUCTION

The Henny Penny pressure fryer uses a combination of pressure, heat, and time to produce a quality product. The advantage of this type fryer is the pressure allows the product to be cooked with less heat and less time than the conventional open-type fryers.

The Chick-fil-A controls for the Henny Penny Models 500 (electric) and 600 (gas) have many features to allow the Operator to produce consistent, quality products. The controls monitor not only cooking times and temperatures, but also peanut oil condition, product weights, product temperatures, and many other operational variables. The controls may vary the actual peanut oil temperature and cook times, based on changes of the operational variables.

The controls also have very extensive self-diagnostic functions which alert the Operator to both component and procedure problems.

Some unique features of the fryer are listed below:

- **Diagnostic function**-provides summary of fryer and Operator performance. See Diagnostic Mode and Special Functions Section.
- **Alarms and error messages**-provide immediate feedback for Operator error or fryer malfunction. See Warnings and Error Messages Section.
- **Status Mode**-allows the Operator to view basic fryer information and status. See Diagnostic Mode and Special Functions Section.
- **Information Mode**-gathers and stores historic information on the fryer and Operator performance, and can be viewed by the Operator. See Diagnostic Mode and Special Functions Section.
- **Oil Filter enforcement**-prevents the Operator from exceeding approved number of Cook Cycles before filtering the peanut oil. See Diagnostic Mode and Special Functions Section.
- **Manual Program Mode**-Operator can set time and temperature for nonstandard products. See Diagnostic Mode and Special Functions Section.
- **Easy toggle between English and Spanish operation.** See Diagnostic Mode and Special Functions Section.
- **Clean-Out Mode**-a preprogrammed function for cleaning the frypot. See Cleaning the Frypot Section.

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 independent Henny Penny distributor in your area, or call Henny Penny Corp. 1-800-417-8405 toll free or 1-937-456-8405.

1-4. SAFETY

The Henny Penny pressure fryer has many safety features incorporated. However, the only way to ensure a safe operation is to fully understand the proper installation, operation, and maintenance procedures, which are contained in this manual. 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

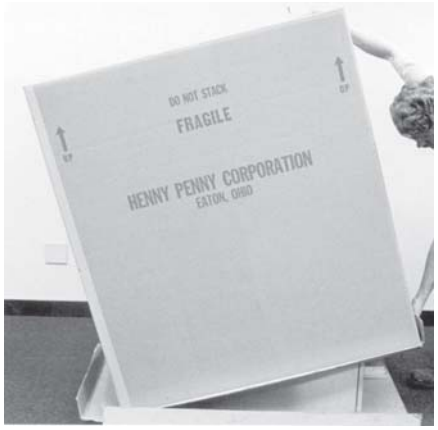
This section provides the installation instructions for the Henny Penny pressure fryer.

NOTICE

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

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

2-2. UNPACKING INSTRUCTIONS

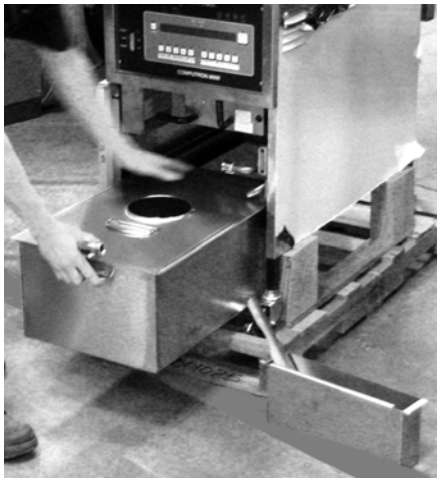


1. Cut the bands from around the carton.

NOTICE

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

2. Lift the main carton off the fryer.
3. Remove the inside packing from the fryer.
4. Open fryer lid and remove the basket plus all the accessories.

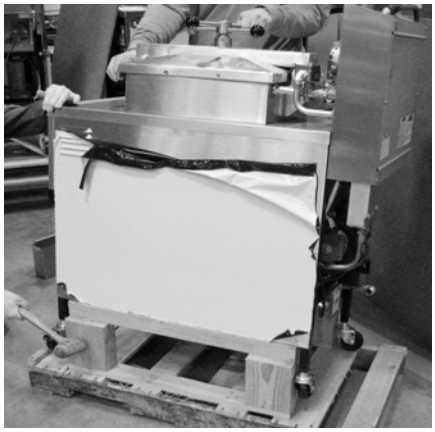


5. Open front door and remove the condensation drain pan.
6. Unscrew the filter union and remove the filter drain pan.

2-2. UNPACKING INSTRUCTIONS (Continued)

7. Close the front door.

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



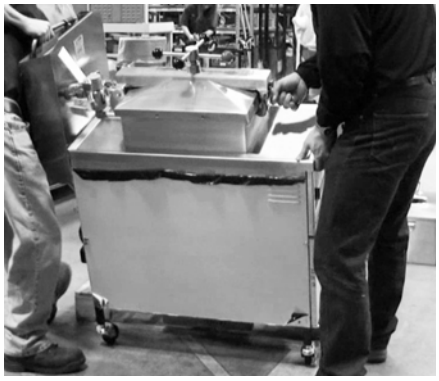
8. Tilt the fryer to one side so one side of the fryer frame is raised up off of the skid.

9. While one person holds the unit, another person hits the vertical wooden supports with a hammer pushing them under the fryer.

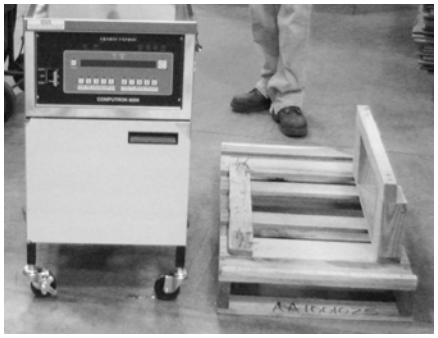
10. Return the fryer to fully upright.

11. Open front door, remove two vertical supports and a horizontal support and close the front door.

12. Unlock all 4 casters.



13. Lift fryer up so casters are above the skid, move the fryer off the skid, and set the fryer on the floor.



2-2. UNPACKING INSTRUCTIONS

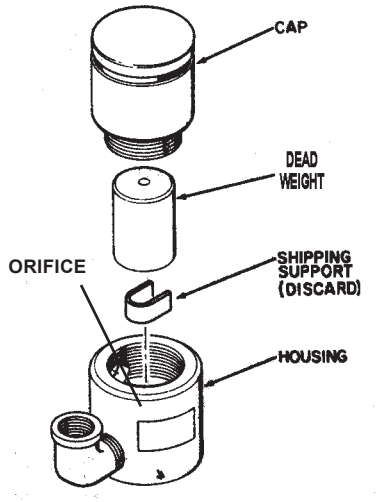


Figure 2-1

14. Prepare deadweight valve assembly for operation.

NOTICE

A metal shipping support is installed inside the dead-weight valveassembly and must be removed prior to installation and startup,or unit will NOT build pressure.

15. Unscrew the deadweight cap.
16. Remove the deadweight.
17. Remove and discard the shipping support.
18. Clean the deadweight orifice with a dry cloth.
19. Replace the deadweight and secure the deadweight cap.
20. Remove the protective paper from the fryer exterior and clean with the surfaces with a cloth, soap and water.

2-3. SELECTING THE FRYER LOCATION

The proper location of the fryer is very important for operation, speed, and convenience. 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. 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 finished 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 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.

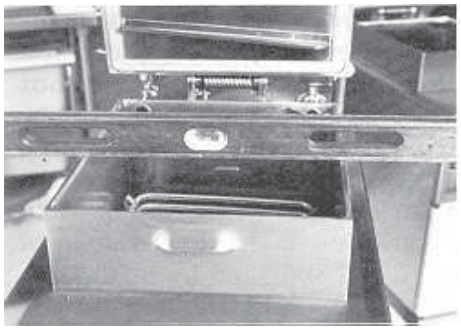
To avoid fire and ruined supplies, the area under the fryer should not be used to store supplies.

2-3. SELECTING THE FRYER LOCATION (Continued)

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, the fryer should be level from side to side and front to back. Place a level on the flat areas around the frypot collar, then adjust the leveling bolts or casters until the unit is level.

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. Take special precautions 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.

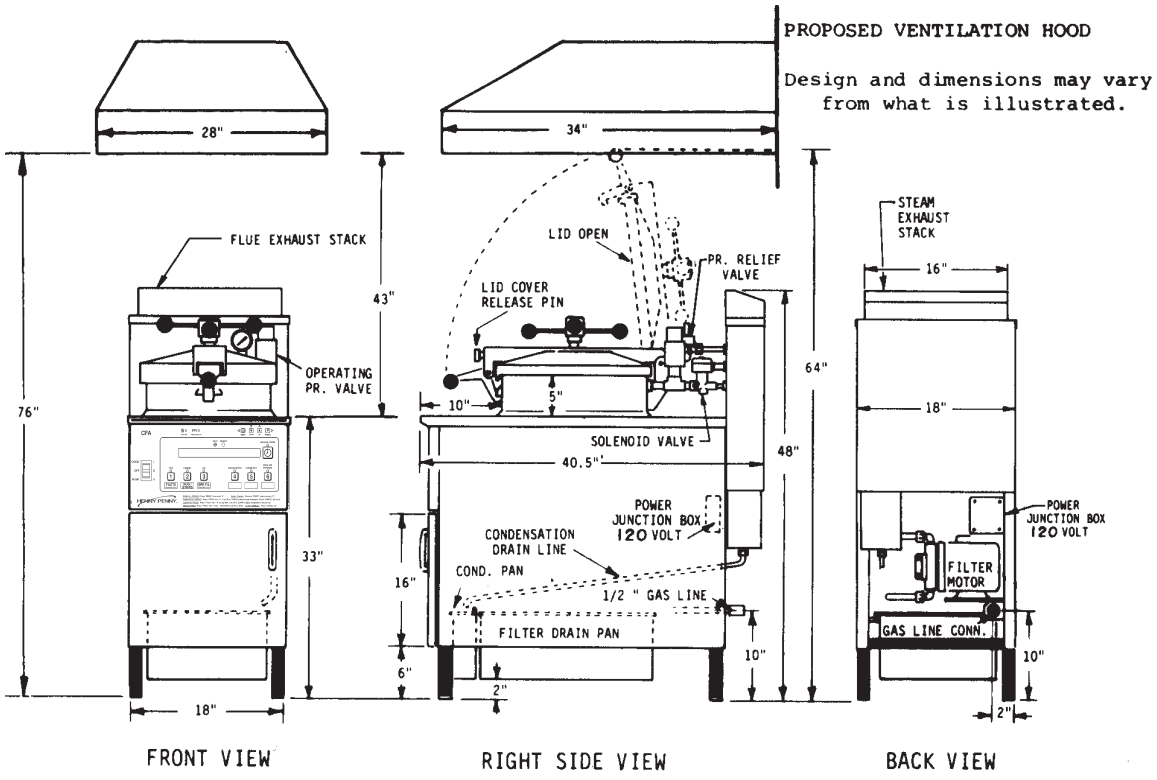
NOTICE

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

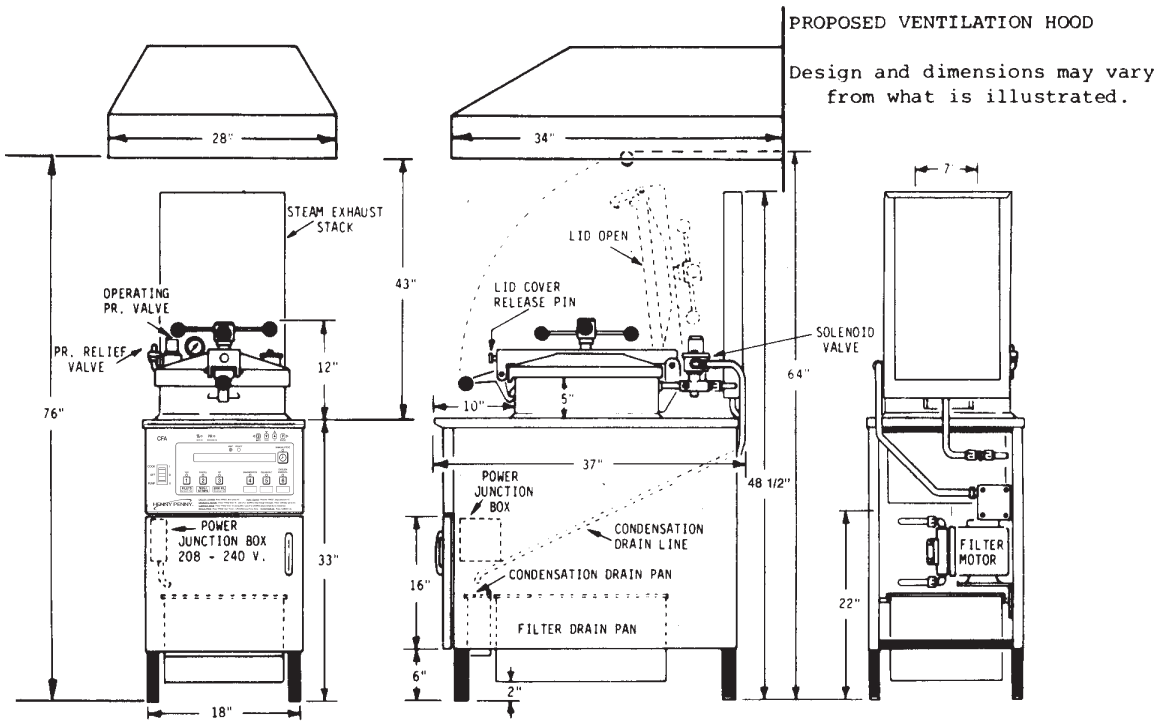
CAUTION

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.

2-4. VENTILATION 0F FRYER (Continued)



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 behind the front door of the fryer to determine the proper gas supply requirements.

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.

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

To avoid possible serious personal injury:

- **Installation must conform with American National Standard Z223.1 - (the latest edition) National Fuel Gas Code and the local municipal building codes. In Canada, installation must be in accordance with Standard CSA Bl49-& 2, Installation Codes Gas Burning Appliances, and local codes.**
- **The fryer and its individual shut-off 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 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).**
- **A standard 3/4 inch, black steel pipe and malleable fittings should be used for gas service connections.**
- **Do not use cast iron fittings.**
- **Although 3/4 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).**

2-6. GAS SUPPLY (Continued)

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

1. Installing a manual gas shut off valve and 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 (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 quickdisconnect device or its associated piping to limit the fryer movement.

3. See the illustration on the 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, unsnap the cable from the unit, and disconnect the flexible gas line. This allows better access to all sides of the 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.

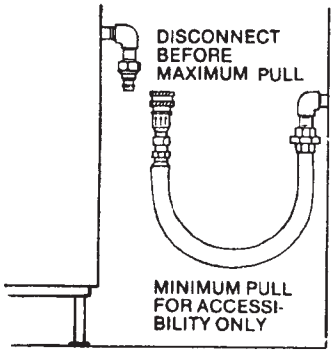
After the piping and fittings have been installed, check for gas leaks. A simple checking method is to turn on the gas and brush all connections with a soap solution. If bubbles occur, it indicates escaping gas. In this event, the piping connection must be redone.

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.

GAS PIPING

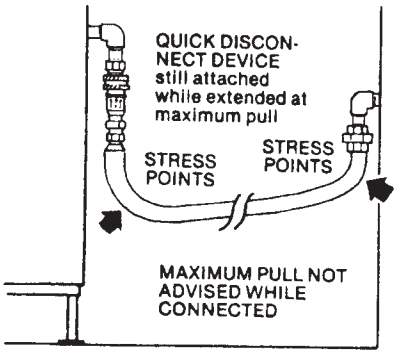
RIGHT

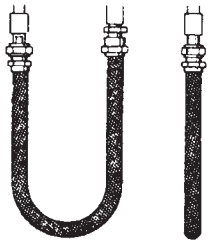
MINIMUM PULL of equipment away from wall permissible for accessibility to Quick Disconnect Device.



WRONG

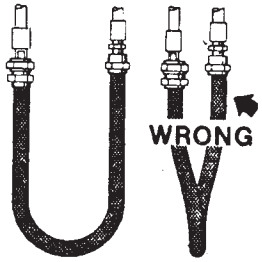
AVOID SHARP BENDS AND KINKS when pulling equipment away from wall. (Maximum pull will kink ends, even if installed properly, and reduce Connector life.)

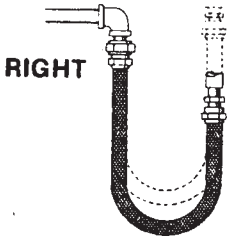




RIGHT

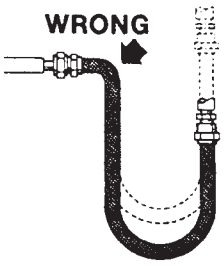
Couplings and hose should be installed in the same plane as shown at left. DO NOT OFFSET COUPLINGS—this causes torsional twisting and undue strain causing premature failure.

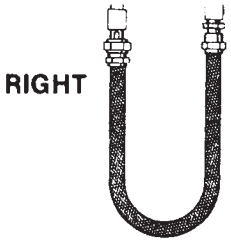




This is the correct way to install metal hose for vertical traverse. Note the single, natural loop.

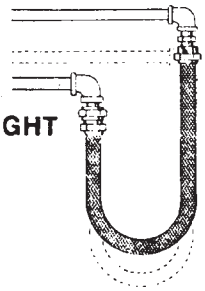
Allowing a sharp bend, as shown at right, strains and twists the metal hose to a point of early failure at the coupling.





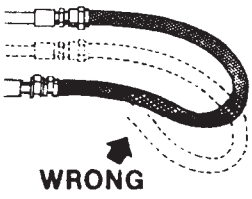
Maintain the minimum or larger bending diameter between the couplings for longest life.

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



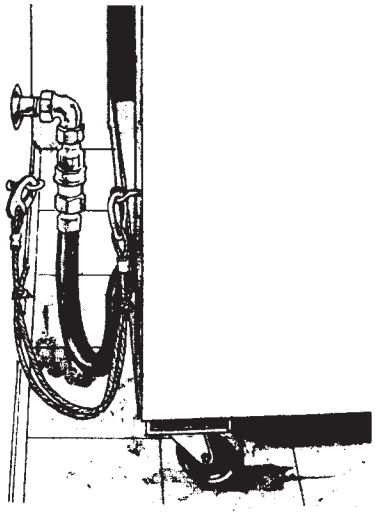
In all installations where "self-draining" is not necessary, connect metal hose in a vertical loop.

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 PRESSURE REGULATOR SETTINGS

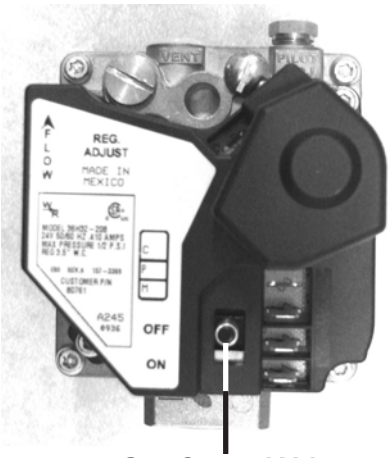
The gas pressure regulator on the automatic gas valve is factory set as follows:

Natural: 3.5 inches water column
Propane: 10.0 inches water column

NOTICE

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

2-9. GAS PILOT & BURNER LIGHTING AND SHUTDOWN PROCEDURE



Gas Control Valve "ON/OFF" Selector

Lighting Procedure - Solid State Ignition

1. Turn main power switch to OFF position.

2. Move "ON/OFF" selector on gas control valve to OFF position.

3. Wait a sufficient length of time to allow any gas which may have accumulated in the burner compartment to escape (at least 5 minutes).

4. Move "ON/OFF" selector on gas control valve to ON position.

5. Turn main power switch to ON position.

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

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

8. The burner lights and operates until the shortening temperature reaches a preset temperature, and when tempearture light goes out, set timer for desired length of time.

CAUTION

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

9. The frypot should be cleaned per the instructions in Section 3.

10. The frypot must be filled to the proper level with shortening. Refer to Filling or Adding Shortening Section.

Shutdown Procedure

1. Move "ON/OFF" selector on gas control valve to OFF position.

2. Turn main power switch to ON position.

2-9. GAS PILOT & BURNER LIGHTING AND SHUT DOWN PROCEDURES (Continued)

Lighting Procedure - Solid State Ignition

1. The gas valve knob has a dual function.
   a. Complete control of gas to the pilot and main burner.
   b. When in the pilot position, it is the reset mechanism for the automatic pilot.
2. Partially press and turn the gas valve knob to the OFF position.
3. Wait at least 5 minutes to allow any gas to escape that may have accumulated in the burner compartment.
4. Turn the COOK/PUMP switch to OFF.
5. Turn the gas valve knob to the PILOT position.
6. Press and hold the gas valve knob while lighting the pilot. Allow the pilot to burn about 30 seconds before releasing the knob.

   NOTICE

   If the pilot does not stay lit, repeat steps 5 and 6, allowing a longer period of time before releasing the gas valve knob.
7. Turn the gas valve knob to the ON position.
8. Turn the COOK/PUMP switch to COOK.
9. With the lid open, select a product on control panel, and listen for the gas burner ignition (no longer than 10 seconds) and then turn COOK/PUMP switch OFF.

   CAUTION

   Do not leave unit on, without peanut oil, for more than 10 seconds or damage to the frypot could result.
10. Clean the frypot per the instructions in the Cleaning the Frypot Section.
11. Fill the frypot with peanut oil to the proper level.
12. The fryer is now ready for operation.

    NOTICE

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

Shutdown Procedure

1. Turn main power switch to OFF.
2. Depress the gas control valve knob lightly and turn to the OFF position.

2-10. 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.

2-11. ELECTRICAL REQUIREMENTS (GAS FRYER)

The gas fryer requires 120 single phase, 60 Hertz, 10 or 5 amp, 2 wire + ground service. The gas fryer is factory equipped with a grounded cord and plug for your protection against shock and should be plugged into a 3 prong grounded receptacle. A wiring diagram is located behind the front door.

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.

2-12. ELECTRICAL REQUIREMENTS (ELECTRIC FRYER)

The electric fryer requires 208 or 240 volt, three phase, 50/60 Hertz service. The power cord may be already attached to the fryer or provided at installation. Check the data plate behind the front 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.

A separate disconnect switch with proper capacity fuses or breakers must be installed at a convenient location between the fryer and the power source. 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 wire size.

Supply Wiring and Fusing for Electric Fryer

Volts	Phase	KW	Amps	Supply Wire Size	Min. Fuse Size
208	Single	13.50	65	2	90
208	Three	13.50	38	6	50
240	Single	13.50	61	3	70
240	Three	13.50	35	6	50

SECTION 3. OPERATION

3-1. OPERATING COMPONENTS

Frypot

This reservoir holds the peanut oil, and is designed to hold 12 lb (5.4 kg) of product, with a "cold zone" for collection of crumbs

Lid Gasket

Provides the pressure seal for the frypot chamber

Deadweight Assembly

The deadweight style, pressure relief valve maintains a constant level of operating steam pressure within the frypot; excess steam is vented through the exhaust stack. (See Figure 3-1)

WARNING

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

Safety Relief Valve

An ASME approved, spring loaded valve, set at 14.5 psi; in the event the deadweight valve becomes clogged, this safety valve releases excess pressure, keeping the frypot chamber at 14.5 psi; if this occurs, turn the COOK/PUMP switch OFF to release all pressure from the frypot. (See Figure 3-1)

WARNING

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.

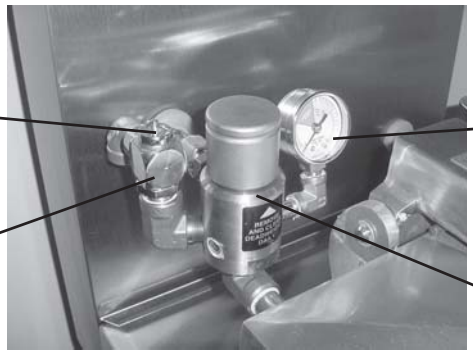


Figure 3-1

3-1. OPERATING COMPONENTS (Continued)

Safety Relief Valve Ring

DO NOT PULL THIS RING. SEVERE BURNS FROM THE STEAM WILL RESULT. (SEE FIGURE 3-1)

Pressure Gauge

Indicates the pressure inside the frypot; Figure 3-1

Solenoid Valve

An electromechanical device that allows pressure to be held in the frypot; the solenoid valve closes at the beginning of the Cook Cycle and automatically opens at the end of the Cook Cycle; if this valve becomes dirty or the teflon seat nicked, pressure will not build, and the valve must be repaired per Technical Manual

Drain Valve

A two-way ball valve that is normally closed; turn the handle to drain the peanut oil from the frypot into the filter drain pan

DO NOT OPEN THE DRAIN VALVE WHILE FRYPOT IS UNDER PRESSURE. HOT PEANUT OIL WILL EXHAUST, AND SEVERE BURNS WILL RESULT.

Drain Interlock Switch

Provides protection for the frypot in the event an Operator inadvertently drains the peanut oil from the frypot while the COOK/PUMP switch is on; the switch automatically shuts off the heat when the drain valve is opened

Condensation Drain Pan

Collection point for the condensation formed within the steam exhaust system; remove and empty periodically

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

3-1. OPERATING COMPONENTS (Continued)

High Limit

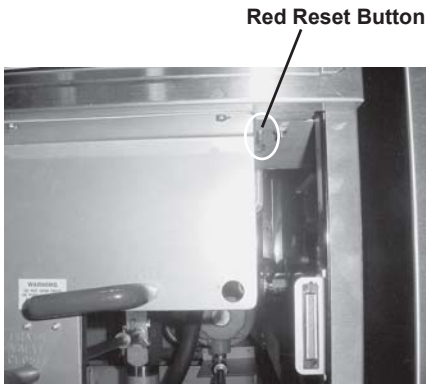


Figure 3-2

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 (See Figure 3-2)

Gas Control Valve (Model 600)

Controls the gas flow to the burner; the pilot is lit manually

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

Lid Limit Stop

An adjustable collar used to obtain the proper tightness between the lid gasket and the frypot rim; this limits the number of clockwise rotations of the spindle

Filter Drain Pan

The removable pan that houses the filter and catches the peanut oil when it is drained from the frypot; it is also used to remove and discard old peanut oil

When moving filter drain pan containing hot shortening, use extreme care to avoid burns from hot surfaces or splashing.

Filter Union

Connects the filter to the filter pump, and allows easy removal of the filter and filter drain pan

Filter Valve

When the COOK/PUMP switch is in the PUMP position, this two-way valve directs filtered peanut oil from the drain pan, back into the frypot

Contactors (Model 500)

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

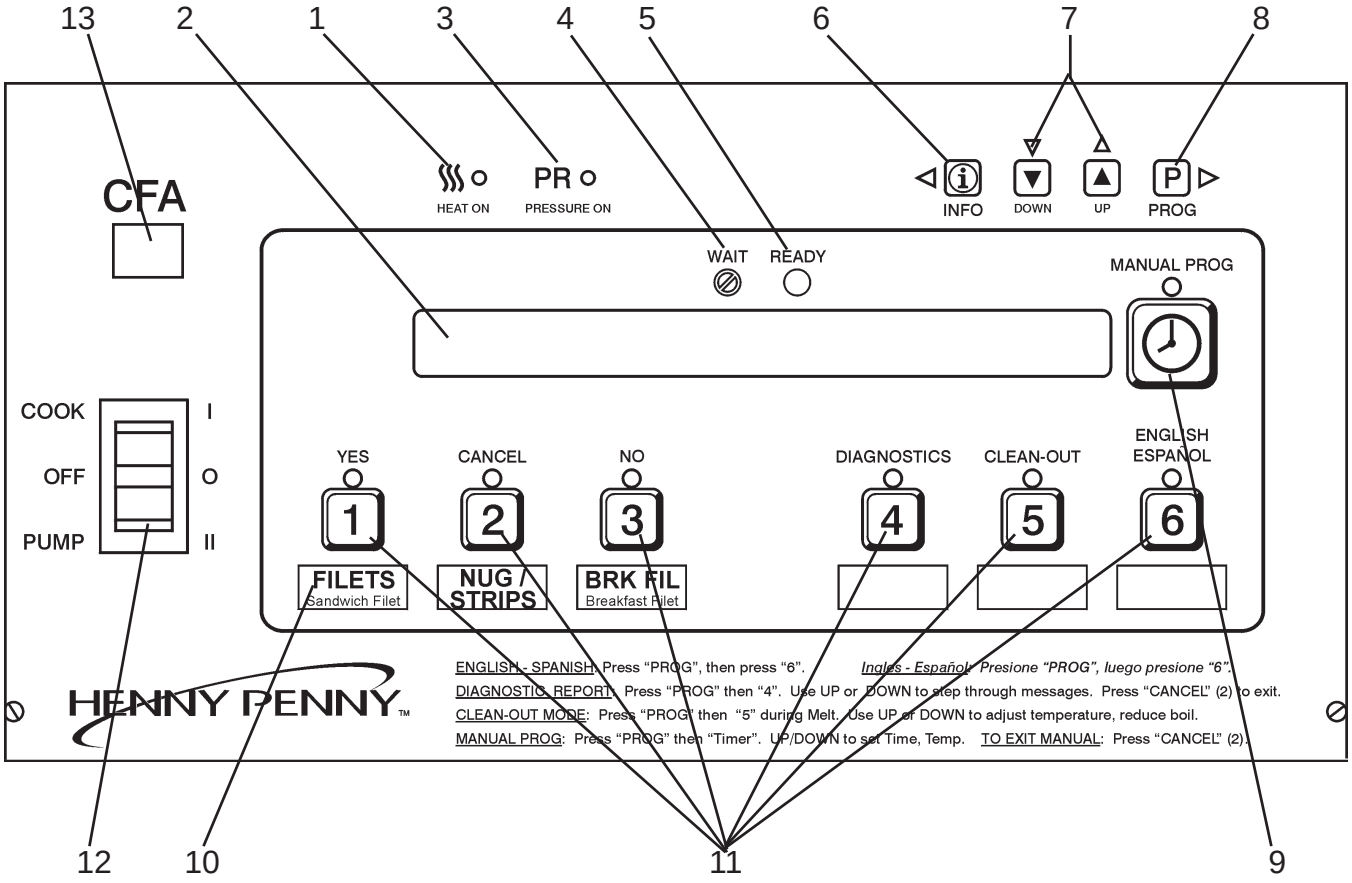
3-2. OPERATING CONTROLS

Figure 3-2 shows the location of following computer controls.

Figure No.	Item No.	Description	Function
3-3	1	HEAT ON	Lights when the control calls for heat and the peanut oil should start heating
3-3	2	Digital Display	Shows all the functions of the Cooking Cycle, Program Mode, Diagnostic Mode and alarms
3-3	3	PR PRESSURE ON	Lights when the solenoid closes and pressure starts to build inside frypot
3-3	4	WAIT	Flashes when the peanut oil temperature is not at the proper temperature for dropping product into the frypot
3-3	5	READY	Lights when the peanut oil temperature is 5°F below setpoint to 15°F above the setpoint, signaling product can now be cooked
3-3	6	INFO	Press to display current fryer information and status; if pressed in the Program Mode, shows previous settings; pressing this along with PROG accesses the Information Mode which has historic information on the Operator and fryer performance
3-3	7	DOWN UP	Used to adjust the value of the currently displayed setting in the Program Mode
3-3	8	PROG	Press to access Program Mode; once in the Program Mode, it is used to advance to the next setting; if pressed along with INFO it accesses the Information Mode which has historic information on the Operator and fryer performance; it also allows access to the English-Spanish settings, diagnostics, Clean-Out Mode, and Manual Mode, if pressed before the appropriate button
3-3	9		Used to stop Cooking Cycles and to stop the timer at the end of a Holding Cycle; it is also used to program a Manual Program for nonstandard products

3-2. OPERATING CONTROLS (Continued)

3-3	10	Menu Card	Shows name of food product selected; the menu card strip is located behind the decal
3-3	11	Product Select Buttons	Press to select food products to be cooked, as well as, answering display prompts; also, DIAGNOSTICS 4 accesses the diagnostics; CLEAN-OUT 5, the Clean-Out Mode; and ENGLISH ESPAÑOL 6 toggles between English and Spanish display. (Press P PROG before entering any of the above modes.)
3-3	12	COOK/PUMP Switch	A 3-way switch with a center OFF position; turn the switch to COOK to operate the fryer; turn the switch to PUMP to operate the filter pump; certain conditions that must be met before operating the filter pump and are covered later in this section
3-3	13	Unit Identification Window	Unit model number and the control's hardware and software version numbers appear here



Control Decal
Figure 3-3

3-3. CLOCK SET

NOTICE

Upon initial start-up or PC board replacement, if "CLOCK SET" automatically appears in the display, skip steps 1, 2 and 3.

1. Press and hold PROG for 5 seconds until "LEVEL 2" shows in display.
2. Release PROG, then press PROG twice. "CLOCK SET" then "ENTER CODE" shows in display.
3. Press 1 2 3 . .
4. Display shows "CS-1" then "SET" then "MONTH", with the month flashing.
5. Press DOWN UP to change the month.
6. Press PROG. Display shows "CS-2" then "SET" then "DATE" with the date flashing.
7. Press DOWN UP to change the date.
8. Press PROG. Display shows "CS-3" then "SET" then "YEAR" along with the year flashing.
9. Press DOWN UP to change the year.
10. Press PROG. Display shows "CS-4" then "SET" then "HOUR" shows with the hour and "AM" or "PM" flashing.
11. Press DOWN UP to change the hour and AM/PM setting.
12. Press PROG. Display shows "CS-5" then "SET" then "MINUTE" with the minutes flashing.
13. Press DOWN UP to change the minutes.

3-3. CLOCK SET (Continued)

14. Press PROG. Display shows "CS-6" then "CLOCK MODE" along with "1.AM/PM".

15. "1.AM/PM" is 12 hour time, "2.24-HR" is 24 hour time. Press DOWN UP to change.

16. Press PROG. Display shows "CS-7" then "DAYLIGHT SAVINGS ADJ" along with "2.US".

17. Press DOWN UP to change to the following:

    a. "1.OFF" = No automatic adjustments for Daylight Savings Time.

    b. "2.US" = Automatically applies United States Daylight Savings Time adjustment. DST activated on the first Sunday in April. DST de-activated on the last Sunday in October.

    c. "3.EURO" = Automatically applies European (CE) Daylight Savings Time adjustment. DST activated on the last Sunday in March. DST de-activated on the last Sunday in October.

18. Clock Set is now complete. Press and hold PROG to exit.

3-4. DIAGNOSTIC MODE AND SPECIAL FUNCTIONS

Diagnostic Mode

To view summaries of the fryer and Operator performance, press PROG then DIAGNOSTICS 4. Press DOWN UP to view the following functions:

D1 - Adjust product color for all products (not individually)
D2 - The age of the peanut oil and life remaining
D3 - Outlet voltage monitoring
D4 - Fryer's heating performance
D5 - Slow or oversized product batches
D6 - Cook Cycles started before temperature recovered
D7 - Cook Cycles stopped more than 10 seconds before end of cycle
D8 - Cook Cycles not ended within 20 seconds after expired time
D9 - Number of times loading product took too long
D10 - Programmed variables changed by Operator

NOTICE

On several of the screens you may have to press YES 1 or NO 3 to respond to questions asked.

Press CANCEL 2 at any time to exit and return to normal operation.

See Diagnostic Mode Details Section.

Peanut Oil Life Function

Based on the number of Cook Cycles of specific products and the amount of time the fryer idles, the controls tell the Operator when to change the peanut oil.

"CHANGE OIL SOON" shows on the display when the controls determine it's time to change peanut oil. Unless the peanut oil is smoking or has a burnt flavor, the peanut oil does not need to be changed before this message shows on the display. After cleaning the frypot, using the Clean-Out Mode (see Cleaning the Frypot Section), this function resets.

Language Selection

Pressing PROG then ENGLISH ESPAÑOL 6 allows the Operator to choose to have the information on the display in English or Spanish.

3-4. DIAGNOSTIC MODE AND SPECIAL FUNCTIONS (Continued)

Manual Mode

This allows the Operator to quickly program a time and temperature for nonstandard products that are not on the menu card. This is to be a temporary setting and disables most of the advanced features of the controls. To enter Manual Mode:

1. Once out of the Melt Cycle, press PROG then .
2. Use DOWN UP to set cook time.
3. Press PROG and use DOWN UP to set temperature.
4. Press PROG to start Manual Mode. Display shows "MANUAL" and you start a Cook Cycle by pressing .
5. Press CANCEL 2 to exit Manual Mode.

Status Mode

Pressing INFO during idle time, allows Operator to view:

a. The temperature of the peanut oil
b. The temperature setpoint and any offset
c. The average peanut oil temperature during last Cook Cycle
d. The rate of temperature rise or fall
e. Date and time

Pressing INFO during a Cook Cycle allows the Operator to view:

a. The temperature of peanut oil, plus the degrees and rate the load compensation has affected the Cook Cycle (slows down or speeds up the timer)
b. The cooking step, the time left in Cook Cycle, setpoint temperature and whether pressure is on or off
c. The average peanut oil temperature in Cook Cycle so far
d. The rate of temperature rise or fall
e. Date and time

After 5 seconds, the control exits the Status Mode and the pressure fryer returns to normal operation.

Peanut Oil Filter Enforcement

Prevents the Operator from exceeding the set number of Cook Cycles before filtering the peanut oil. The number in the center of the display shows how many Cook Cycles remain before filter lockout occurs. For example, "5X" means the Operator can run 5 more Cook Cycles before filtering. This function cannot be bypassed.

3-4. DIAGNOSTIC MODE AND SPECIAL FUNCTIONS (Continued)

Information Mode

This mode gathers and stores historic information on the fryer and Operator performance. Press PROG and INFO at the same time and "*INFO MODE*" shows on display. Press PROG or INFO to access the steps and press DOWN to view the statistics within each step.

Information Mode is intended for technical use, but the Operator can view the following information:

1. E-LOG - last 10 errors and time they occurred
2. P-LOG - time of last 10 power-ups
3. HEAT-UPS - time of day and maximum heating rate (°/second) for the last 10 heat-ups
4. COOK DATA - information on the last Cook Cycle
5. TODAY'S DATA - data since the start of day (not including the last Cook Cycle)
6. PREV-DAY-SUN - creates a log of the last 7 days, using the information in TODAY'S DATA.
7. 7-DAY TOTALS -totals the information from the last 7 days
8. OIL DATA - information on the current peanut oil, not including today's cooking information
9. PREV OIL DATA - information on last batch of peanut oil
10. INP - provides test of fryer inputs
11. OUTP - shows the state of heater and pressure
12. POT TMP - temperature of peanut oil
13. CPU TMP - temperature of PC board
14. ANALOG - status of controller's a-to-d converter
15. AC VOLTS - status of the line voltage to fryer
16. AMPS (Electric models only) - the present amp readings to heaters.

See Information Mode Details Section.

3-5. WARNINGS AND ERROR MESSAGES

The controls monitor procedure problems and system failures with warnings and error codes. The display shows the warning or error code, and an alarm sounds.

Pressing CANCEL 2 cancels most warnings and pressing any control button stops most Error Code alarms. But there are some exceptions (see below). The display shows the error until the situation is corrected.

WARNINGS

DISPLAY	CAUSE	CORRECTION
"W-1" "LOW VOLTAGE"	Incoming supply voltage too low	Have voltage at plug and receptacle checked
"W-2" "SLOW HEAT-UP"	Faulty components or connections	Have elements, connections, and contactors checked
"W-3" "WAS NOT READY"	Product loaded into frypot before READY lights	Wait until peanut oil is at proper temperature before loading product
"W-4" "SLOW COOKING"	Frozen or too much product in frypot	Do not overfill or place frozen product into the frypot
"W-5" "SLOW COOKING"	Product loaded into frypot before READY lights	Wait until peanut oil is at proper temperature before loading product.
"W-6" "SLOW COOKING"	Faulty components or connections	Have elements, connections, and contactors checked
"W-7" "LOW AMPS"	Faulty components or connections	Have elements, connections, and contactors checked
"W-9" "DISCARD PRODUCT"	Product overcooked (may appear after a "W-6", "SLOW COOKING" warning)	Discard product immediately
"OIL TOO HOT"	Didn't allow peanut oil to drop down to current product's setpoint temperature	CANCEL button will not stop this warning; once the peanut oil temperature drops to set-point temperature, the alarm automatically stops
"E-4" "CPU TOO HOT"	PC board too hot	Check ventilation louvers on side of fryer for obstructions; if louvers are clear, have PC board checked; check cooling fan if present.

3-5. WARNINGS AND ERROR MESSAGES (Continued)

ERROR CODES

DISPLAY	CAUSE	CORRECTION
"E-5" "FRYER TOO HOT"	Controls sensing 405°F or above	Have heat components and temperature probe checked
"E-6" (A or B) "FRYER TEMP SENSOR FAILED"	Faulty temperature probe or connection	Have temperature probe and connection checked
"E-10" "HIGH LIMIT TRIPPED"	Peanut oil temperature too hot, drain valve opened while heat was on, or faulty high limit	Reset high limit per Operating Components; Section; check peanut oil temperature for overheating; have heat components checked if high limit continues to trip
"E-15" "DRAIN IS OPEN"	Drain is open or faulty microswitch	Close drain; have drain microswitch checked if error code persists
"E-25" "HEAT AMPS WERE TOO HIGH" (500 fryer only)	Wrong or faulty elements or wiring problem.	Have electrical supply, wiring, and elements checked NOTICE Because of the seriousness of this error code, turn the COOK/PUMP switch OFF and back to COOK to cancel.
"E-26" "HEAT AMPS ARE LOCKED ON" (500 fryer only)	Faulty contactors or PC board	Have the contactors and PC board checked NOTICE This error code could be displayed even with the COOK/PUMP switch turned OFF. Unplug fryer or shut off the wall circuit breaker to disconnect electrical power to fryer.
"E-41" "SYSTEM DATA LOST"	Memory scrambled; an individual product program may be scrambled; ex: "E-41 -2- DATA LOST"; this means product #2 program is scrambled	Turn the COOK/PUMP switch OFF and back to COOK; if error code persists, have the PC board checked or re-initialized
"E-41" "SYSTEM DATA LOST"	Memory scrambled; an individual product program may be scrambled; ex: "E-41 -2- DATA LOST"; this means product #2 program is scrambled	Turn the COOK/PUMP switch OFF and back to COOK; if error code persists, have the PC board checked or re-initialized

3-5. WARNINGS AND ERROR MESSAGES (Continued)

ERROR CODES

DISPLAY	CAUSE	CORRECTION
"E-41" "SYSTEM DATA LOST"	Memory scrambled; an individual product program may be scrambled; ex: "E-41 -2- DATA LOST"; this means product #2 program is scrambled	Turn the COOK/PUMP switch OFF and back to COOK; if error code persists, have the PC board checked or re-initialized
"E-46" "DATA SAVE FAILED"	Faulty eprom or PC board	Turn the COOK/PUMP switch OFF and back to COOK; if error code persists, have the PC board checked or re-initialized
"E-47" "ANALOG SYSTEM OR 12 VOLT FAILED"	Failure of 12 volt DC supply on the I/O board	Turn the COOK/PUMP switch OFF and back to COOK; if the WAIT and READY DO NOT light up when the 8888's are displayed, have the I/O board replaced
	Amp sensors plugged in backwards	Have positions of amp sensors checked
	Faulty PC board	Have control panel replaced
"E-48" INPUT SYSTEM ERROR"	Failure of 12 volt DC supply on the I/O board	Turn the COOK/PUMP switch OFF and back to COOK; if the WAIT and READY DO NOT light up when the 8888's are displayed, have the I/O board replaced
	Faulty PC board	Have control panel replaced
"E-70 A" "FAN VAC JUMPER MISSING"	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
"E-70 B" "PWR SW OR WIRES FAILED"	Faulty COOK/PUMP switch or switch wiring; faulty I/O board	Have COOKPUMP switch checked, along with its wiring; have I/O board checked
"E-92" "24 VOLT FUSE"	Blown 24 volt controller fuse, or bad 14-pin cable connection	Have the 14-pin cable connector checked or have the fryer checked for a short to ground in components such as the drain switch, solenoid, or high limit and wiring
	Stuck or clogged solenoid valve	Have solenoid checked and cleaned

3-6. FILLING OR ADDING PEANUT OIL

Figure 3-4

Electric Model 500

CAUTION

Hot shortening must always be at the upper level indicator line (Figure 3-4). 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 must be completely submerged when power is turned on. Fire or damage to the frypot could result.

1. Henny Penny recommends using a high quality frying peanut oil in the pressure fryer. Some low grade peanut oils have a high moisture content which causes 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 requires 48 lbs (21.8 Kgs) of peanut oil. The frypot has 2 level indicator lines inscribed on the rear wall of the frypot, and the heated peanut oil is at the proper level when it's at the upper indicator line. Figure 3-4.

3. Cold peanut oil should be filled to 1/4 to 1/2 inch below the upper indicator line on electric units. The peanut oil expands when heated and should be even with the upper indicator line when the peanut oil is at cooking temperature.

3-6. FILLING OR ADDING PEANUT OIL (Continued)

Figure 3-5

Gas Model 600

CAUTION

Hot shortening must always be at the level indicator line (Figure 3-5). 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 frypot surface on gas fryers must be completely submerged when power is turned on. Fire or damage to the frypot could result.

1. Henny Penny recommends using a high quality frying peanut oil in the pressure fryer. Some low grade peanut oils have a high moisture content which causes 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 gas model requires 43 lbs (19.5 kgs) of peanut oil. The frypot has a level indicator line inscribed on the rear wall of the frypot which shows when the heated peanut oil is at the proper level. Figure 3-5.

3. Cold peanut oil should be filled to 1/4 to 1/2 inch below the indicator line. The peanut oil expands when heated and should be even with the indicator line when the peanut oil is at cooking temperature.

3-7. BASIC OPERATION

The following procedures should be followed on the initial start-up of the fryer, and each time the fryer is brought back into operation from a cold or shut down condition. These are basic, general instructions.

1. Check to see that the COOK/PUMP switch is turned OFF.
2. Make sure the drain valve and filter valve are closed.
3. Remove the fry basket from the frypot and leave lid up.
4. Make sure the peanut oil is filled to the proper level in the frypot; 1/4 to1/2 inch (6.4-12.7 mm) below level indicator line. See Filling or Adding Peanut Oil Section.
5. Connect power to the fryer.
6. On gas models, light the pilot light. Refer to Gas Pilot Lighting Procedures Section.
7. Turn the COOK/PUMP switch to COOK. Upon initial start-up "CLOCK SET" shows in display. Set the clock to your time, following prompts on the display, or see section 3-3 for help. Then display asks if the peanut oil is new or old. The controls automatically adjust the peanut oil temperature to the age of the peanut oil. Use ▽ DOWN ▽ UP to set the number of days of old peanut oil.
8. Unit automatically goes into the Melt Cycle, until the peanut oil temperature reaches 230°F (110°C). Then the controls go into the Heat Cycle and the peanut oil heats to a preset temperature.

NOTICE

Once melted peanut oil reaches the proper level in the frypot, the melt cycle can be bypassed by pressing and holding one of the Product buttons.

CAUTION

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

9. Stir the peanut oil as it is heating up from a cold start. Be sure to stir down into the bottom of the frypot.

3-7. BASIC OPERATION (Continued)

10. Once out of the Melt Cycle, WAIT flashes until 5° before setpoint temperature (plus any offset temperature). Then READY lights and the selected product shows on the display.

NOTICE

The heat cycles on and off about 4 degrees before the setpoint temperature to help prevent overshooting the setpoint temperature (proportional control).

11. If the peanut oil was not filtered the night before at shutdown, filter the peanut oil now. Refer to Filtering Instructions Section.

12. Follow the steps in Chick-fil-A's training materials to load the product.

NOTICE

Before loading product, make certain READY is lit, indicating that the peanut oil is at the correct cooking temperature for the type of product being cooked. The actual temperature may vary 20 degrees or more depending upon peanut oil age, product weights, product temperature, and other operational variables.

CAUTION

Be certain the shortening is never above the level indicator line. The maximum load size is 12 lbs. (5.4 kg.) for model 600 fryers; 14 lbs (6.4 kg.) for model 500 fryers. Failure to follow these instructions could result in a fire and/or damage to the fryer.

13. Close the lid quickly, latching the lid.

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

NOTICE

Do not press a product button until lid is sealed, or the lid will try to lock as it is being tightened down.

3-7. BASIC OPERATION (Continued)

LID MUST BE LATCHED PROPERLY OR PRESSURIZED SHORTENING AND STEAM MAY ESCAPE FRYPOT. SEVERE BURNS WILL RESULT.

15. Press the desired Product button to start a Cook Cycle. The display counts down the cooking time.

To check the peanut oil temperature press INFO. To stop a Cook Cycle, press .

The cook times may vary, compensating for peanut oil age, product weights, product temperature, and other operational variables.

16. Within a few minutes, the pressure gauge reading should increase to the OPERATING ZONE. If not, recheck the Installation and Operation procedures.

17. Near the end of the Cook Cycle, the fryer automatically depressurizes. Then at the end of the Cook Cycle, an alarm sounds. Press to stop the alarm.

<u>DO NOT</u> LIFT HANDLE OR FORCE LID LATCH OPEN BEFORE PRESSURE GAUGE READS "0" PSI. ESCAPING STEAM AND SHORTENING WILL RESULT IN SEVERE BURNS.

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

Do not spin or flip the spindle cross arm when opening the lid. Damage to the acme nut inside the cross bar could result.

3-7. BASIC OPERATION (Continued)

19. 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 peanut oil.

CAUTION

Do not let the lid slam up against its backstop because this could damage the hinge.

20. Follow the steps in Chick-fil-A's training materials to unload the product and check for doneness.

NOTICE

After the Cook Cycle, if the product needs to cook more, place basket back into frypot and press 6 for an additional 45 seconds.

21. Before frying next load, allow for the peanut oil to reheat and READY lights.

3-8. CARE OF PEANUT OIL

DANGER
OVERFLOW RISK

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 products requires filtering to keep the peanut oil clean. The peanut oil should be filtered after every 5 Cook Cycles for electric fryers, and after every 4 Cook Cycles for gas fyers. Refer to Filtering Instructions Section.

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

3. Discard peanut oil if display shows "CHANGE OIL SOON" or if peanut oil shows signs of excessive foaming or smoking.

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

DANGER
FIRE HAZARD

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.

3-9. FILTERING OF SHORTENING

At the end of the preset number of Cook Cycles (5 for electric; 4 for gas), an alarm sounds and "FILTER LOCKOUT" then "YOU *MUST* FILTER NOW" shows in the display. No Cook Cycles can be started until the peanut oil is filtered (The controls show how many cycles until next filtering, ex: "5X" in display.)

Chick-fil-A's training materials outline two methods of filtering the oil: a Quick Clean and a Thorough Clean. The Thorough Clean includes all the steps below (#1-10), whereas the Quick Clean omits step #6. Follow the steps in Chick-fil-A's training materials when filtering the oil.

1. Turn the COOK/PUMP switch to OFF and remove basket.

   NOTICE

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

2. Using a metal spatula, scrape any buildup from the sides of the frypot. Do not scrape heating elements on electric units or the curved surface of the gas frypot.

   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.

   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 peanut oil and could result in personal injury.

   Also, when using a crumb basket, it must be emptied as required and positioned properly under the drain valve to prevent splashing of hot peanut oil and severe burns.

   Surfaces of fryer and basket will be hot. Use care when filtering to avoid burns.

3. Turn the left drain handle counterclockwise half a turn first, then slowly to the full open position (handle pointed down for electric models and pointed up for gas models). This helps prevent splashing of hot peanut oil. Figure 3-6.

Figure 3-6 (Electric Model)

3-9. FILTERING OF SHORTENING (Continued)

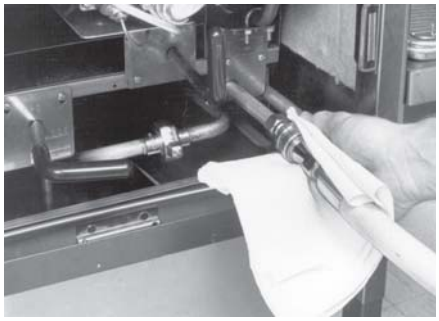


Figure 3-7

Figure 3-8

4. As the peanut oil drains from the frypot, use fryer brushes (Henny Penny part no. 12105-includes both brushes) to clean the frypot and heating elements (if electric unit). Use L-shaped brush to clean crumbs from the elements and from sides and bottom of frypot as peanut oil drains. Use poker brush to push crumbs through drain opening in bottom of frypot, if necessary.

5. When all peanut oil has drained, scrape or brush sides of frypot.

6. Rinse the frypot as follows:
   a. Attach the filter rinse hose to the quick-disconnect fitting, inside the door, next to the filter valve handle. Slide the collar back on the quick-disconnect fitting on the hose, push it onto the unit's fitting and let it snap into place. Figure 3-7.
   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 COOK/PUMP switch to the PUMP position. Hold nozzle carefully to avoid excessive splashing. Figure 3-8.

Use caution to prevent burns caused by splashing hot peanut oil.

   c. Rinse the frypot interior, especially areas like the frypot bottom. On electric models, rinse around heating elements.
   d. After sufficient rinsing, turn the left drain valve handle clockwise to close the drain valve (handle pointed horizontally).
   e. Turn the COOK/PUMP switch to OFF.

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, and then raise fitting end of the hose high for a minute to allow any peanut oil remaining in the hose to drain into the frypot.

3-9. FILTERING OF SHORTENING (Continued)

7. Turn the right filter valve handle counterclockwise to open the filter valve (handle pointed horizontally). Turn COOK/PUMP switch to PUMP and pump all peanut oil out of the filter drain pan and back into frypot, holding the lid closed for the first surge of peanut oil.

8. When the pump begins creating air bubbles in the peanut oil, all of the peanut oil should be out of drain pan. First, turn the right filter valve handle clockwise to close the filter valve (handle pointed up). Then turn the COOK/PUMP switch to OFF. This keeps the filter pump and lines from filling with peanut oil.

NOTICE

When air bubbles appear in peanut oil, immediately close the filter valve. This will prevent aeration of the shortening, therefore increasing shortening life.

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

10. If frying is to be continued, turn the COOK/PUMP switch to COOK and allow peanut oil to heat until READY lights.

3-10. FILTER PUMP PROBLEM PREVENTION

The following steps will help prevent filter pump problems.

1. Make certain the filter paper envelope is properly installed over the filter screens. Make sure the open end of the envelope is properly folded and clamped in place with the retaining clips so crumbs cannot enter the envelope. See Changing the Filter Envelope Section.

2. The filter valve is to be closed at all times during frying.

3. Make sure all peanut oil has been pumped from the filter lines and the pump by allowing the filter pump motor to run until air bubbles appear in the peanut oil.

3-11. FILTER PUMP MOTOR THERMAL PROTECTOR

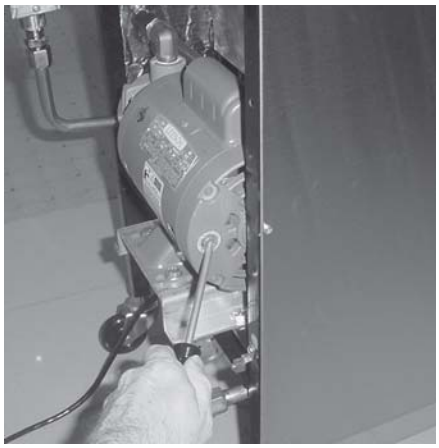


Figure 3-9

The filter pump motor is equipped with a manual reset button in case the motor overheats. This reset button is located in the rear of the motor. The filter motor is located on the rear of the fryer. Wait about 5 minutes to allow motor to cool before attempting to press the reset button. It takes some effort to reset, and a screwdriver can be used to help reset the button. Figure 3-9.

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.

3-12. CHANGING THE FILTER ENVELOPE

Figure 3-10

Figure 3-11

Change the filter envelope daily, or whenever it becomes clogged with crumbs. Proceed as follows:

1. Move the COOK/PUMP switch to OFF.
2. Remove and empty the condensation drain pan.
3. Disconnect the filter union and remove the filter drain pan from beneath the frypot. Figures 3-10 & 3-11.

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

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

4. Lift crumb basket and screen assembly from the drain pan.

3-12. CHANGING THE FILTER ENVELOPE (Continued)

5. Wipe the peanut oil and crumbs from the drain pan. Clean the drain pan with soap and water. Completely rinse with hot water.
6. Unscrew the suction standpipe from the screen assembly.
7. Remove the crumb screen and clean completely with hot water.
8. Remove the filter clips and discard the filter envelope.
9. Clean the top and bottom filter screen with soap and water. Rinse thoroughly with hot water.

NOTICE

Be sure that the filter screens, crumb screen, filter clips, and the suction standpipe are completely dry before assembly of filter envelope as water dissolves the filter paper.

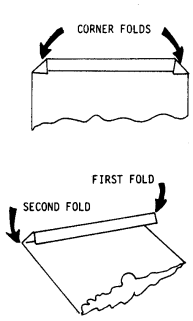


Figure 3-12

10. Assemble the top filter screen to the bottom filter screen.
11. Slide the screens into a clean filter envelope.
12. Fold the corners in and then double fold the open end. Figure 3-12.
13. Clamp the envelope in place with the two filter retaining clips.
14. Replace the crumb screen on top of the filter paper. Screw on the suction standpipe assembly.
15. Place complete filter screen assembly and crumb basket back into filter drain pan and slide pan back into place beneath the fryer.
16. Connect the filter union by hand. Do not use a wrench to tighten.
17. Slide the condensation drain pan back into place. The fryer is now ready to operate.

3-13. CLEANING THE FRYPOT

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

1. Turn the COOK/PUMP switch to OFF.

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 peanut oil is present in the frypot, turn the left drain handle counterclockwise half a turn first, then slowly to the full open position (handle pointed down for electric models, and pointed up for gas models).

3. Turn the left drain valve handle clockwise to close the drain valve (handle pointed horizontally) and discard the peanut oil. Then install filter drain pan under the fryer, leaving out the filter screens.

4. Follow the directions in Chick-fil-A's training materials and fill the frypot to the level indicator line with cleaning solution.

Always wear chemical splash goggles or face shield and protective rubber gloves when cleaning the frypot as the cleaning solution is highly alkalie. Avoid splashing or other contact of the solution with your eyes or skin. Severe burns and possible bindness will result. Carefully read the instructions on the cleaner. If solution comes in contact with your eyes, rinse thoroughly with cool water and see a physician immediately.

3-13. CLEANING THE FRYPOT (Continued)

CAUTION

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

5. Turn the COOK/PUMP switch to COOK. Press PROG then CLEAN-OUT 5.

"CLEAN-OUT ?" then "1=YES 3=NO" shows in display. Press YES 1 to start Clean-Out Mode. The fryer displays "*CLEAN-OUT MODE*" and heats up to a preprogrammed temperature, then automatically begins a 15-minute timed countdown. Use DOWN UP, if necessary, to adjust the temperature and keep the cleaning solution from boiling over.

DANGER
BURN RISK

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.

WARNING
BURN RISK

If the cleaning solution in the frypot starts to foam and boil over, immediately turn the power switch to OFF and do not try to contain it by closing the fryer lid or severe burns could result.

NOTICE

Pour 2 cups of hot cleaning solution into the exhaust tank to keep it free and clear of obstructions.

6. Using the fryer brush (Henny Penny part number 12105), scrub the inside of the frypot, the lid frame, and around the counter-top of the fryer. Never use steel wool or green scrub pad to scrub the fryer. Place basket in frypot with cleaning solution and scrub basket.

3-13. CLEANING THE FRYPOT (Continued)

CAUTION

Do not use the cleaning solution on the lid or the lid hinge. These parts are aluminum and will corrode if the PHT cleaner comes in contact with them.

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 spray the unit with water, such as, with a garden hose. Failure to follow this caution could cause component failure.

7. After cleaning, turn the COOK/PUMP switch to OFF. Turn the left drain handle counterclockwise half a turn first, then slowly to the full open position (handle pointed down for electric models, and pointed up for gas models). Drain the cleaning solution from the frypot and discard. Take basket to sink to be cleaned.

8. Turn the left drain valve handle clockwise to close the drain valve (handle pointed horizontally) and refill the frypot with 2-3 gallons of cold water. Follow Chick-fil-A's training materials for rinsing and cleaning frypot, then re-fill with new peanut oil.

NOTICE

If using Henny Penny fryer cleaner, continue to the next steps.

9. Add approximately 8 ounces of distilled vinegar and re-start the Clean-Out Mode as described in step 5.

10. Using a clean brush, scrub the interior of the frypot and lid frame. This neutralizes the alkaline left by the cleaning compound.

11. Turn the left drain handle counterclockwise a half a turn first, then slowly to the full open position (handle pointed down for electric models, and pointed up for gas models). Drain the vinegar rinse water and discard.

12. Rinse down the frypot, using clean hot water, and then completely dry the drain pan and frypot interior.

NOTICE

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

3-13. CLEANING THE FRYPOT (Continued)

13. Replace the clean filter assembly in the drain pan and install under fryer.

14. Refill the fryer with fresh peanut oil.

NOTICE

After completing a Clean-Out Mode, the controls assume fresh peanut oil is now in the frypot and adjust the temperature accordingly. If the Clean-Out Mode was aborted before starting the 15 minute cycle or if fresh peanut oil is not in the frypot, manually set the controls to NEW or USED peanut oil per the Manually Setting New or Used Peanut Oil Function Section.

3-14. MANUALLY SETTING NEW OR USED PEANUT OIL FUNCTION

1. Turn the COOK/PUMP switch to OFF.
2. Press and hold CLEAN-OUT 5 while turning the COOK/PUMP switch to COOK, until "IS OIL NEW OR USED?" shows in the display.
3. Press DIAGNOSTICS 4 for new peanut oil, or CLEAN-OUT 5 for used peanut oil.
4. If DIAGNOSTICS 4 was pressed, "OIL IS NEW?" shows in the display. Press YES 1 for YES, and "THANK YOU" shows in the display, and controls resume normal operation.
5. If CLEAN-OUT 5 was pressed, "OIL IS USED?" shows in the display.
6. Press YES 1 for YES, and "HOW OLD IS OIL?" shows in display.
7. Press ▽ DOWN ▽ UP to set the age of the peanut oil.
8. Press ⏲. "THANK YOU" shows in the display and controls resume normal operation.

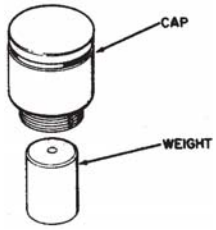
SECTION 4. PREVENTIVE MAINTENANCE

4-1. PREVENTIVE 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 of the fryer.

Procedure	Frequency
Filtering peanut oil	Electric-after 5 Cook Cycles; Gas-after 4 Cook Cycles; When "FILTER LOCKOUT" shows on display
Changing peanut oil	When "CHANGE OIL SOON" shows on display or when peanut oil is smoking or foaming excessively
Changing filter envelope	Daily
Cleaning frypot	Upon installation and change of peanut oil
Cleaning deadweight valve	Daily
Cleaning exhaust tubes	Daily
Cleanings safety relief valve	Annually
Checking rinse hose for deterioration	Weekly
Checking crumb basket	After each filtering
Lubricating spindle	Every 30 days
Reversing lid gasket	Every 90 days
Limit stop adjustment	Every 90 days
Checking tightness of element spreaders	Every 90 days

4-2. CLEANING THE DEAD WEIGHT VALVE



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

DANGER
BURN RISK

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

Step 3

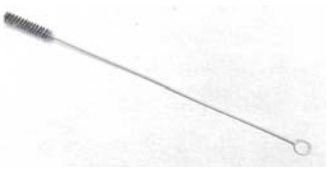
1. Turn the COOK/PUMP switch to OFF. Be sure all pressure has been released and open the lid.

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

WARNING

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).

Step 5

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 body with a clean lint-free cloth.

Step 6

6. Dry the deadweight and deadweight cap.

7. Replace the deadweight and hand tighten deadweight cap.

4-3. REMOVAL AND CLEANING OF SAFETY RELIEF VALVE

The safety relief valve should be cleaned once a year. Figure 3-13.

DANGER
BURN RISK

DO NOT ATTEMPT TO REMOVE 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 APPLIANCE WARRANTY.

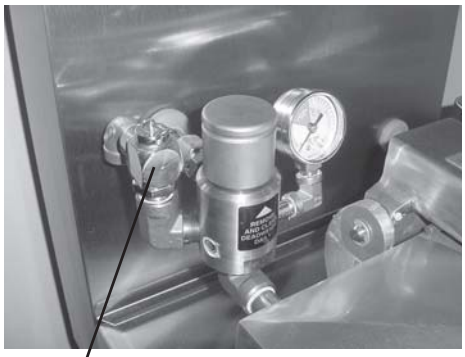


Figure 3-13

1. Open the lid and then remove the deadweight valve cap and deadweight.
2. Use a wrench to loosen the relief valve from the pipe elbow, turning counterclockwise to remove.
3. Clean the inside of the pipe elbow with hot detergent.

   NOTICE

   Turn the relief valve towards the rear of the fryer when reinstalling relief valve.
4. Immerse the safety relief valve in a soap water solution for 24 hours. Use a 1:1 dilution ratio. The valve cannot be disassembled. It is factory preset to open at 14-1/2 pounds of pressure. If it does not open or close, it must be replaced.

4-4. REVERSING LID GASKET

Reversing the lid gasket every 90 days, helps to prevent early failure of lid gasket and the loss of pressure during a Cook Cycle.

Figure 3-14

Figure 3-15

1. Open lid to the upright position.
2. Using a Phillip's head screwdriver, back out the lid liner screws (2 on each side) to about 1/2 inch (12.7 mm). Figure 3-14.
3. Using a thin blade screwdriver, pry out the gasket at the corners. Remove the gasket. Figure 3-15.

NOTICE

Check the gasket for any tears or nicks. Replace gasket if damaged.

4. Clean the gasket and gasket seat with hot water.
5. Rotate the gasket with the opposite side facing out.

NOTICE

Begin the installation by installing the four corners of the lid gasket, and smoothing the gasket into place from the corners. Then move to the middle of each side, working towards each corner.

4-5. CHECKING TEMPERATURE PROBE CALIBRATION

1. Heat peanut oil and stir completely until peanut oil temperature has stabilized and READY is on.
2. Place and electronic thermometer about 3 inches below the peanut oil's surface, in the center of the frypot. Let the temperature stabilize and remember the reading.
3. Press INFO to see the probe's temperature reading.

   If the displayed temperature is less than 5 degrees from the electronic thermometer's temperature, see D 1, Color Adjustment in Diagnostic Mode Details Section. If temperature differs from 5 to 15 degrees, or still can't get the correct color, have the probe calibrated. If temperature differs by more than 15 degrees, have probe replaced.

4-6. LIMIT STOP ADJUSTMENT

Step 2

Step 3

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

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.

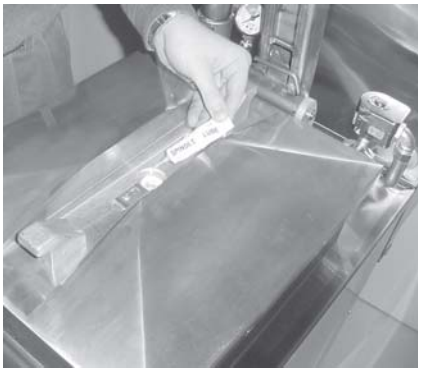
7. Turn the inner collar counterclockwise until it stops against the bottom hub of the spindle.

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).

4-7. LUBRICATE LID SPINDLE AND BALL SEAT



To extend the life of lid components, lubricate the ball seat and spindle, following the steps below, every 90 days..

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.

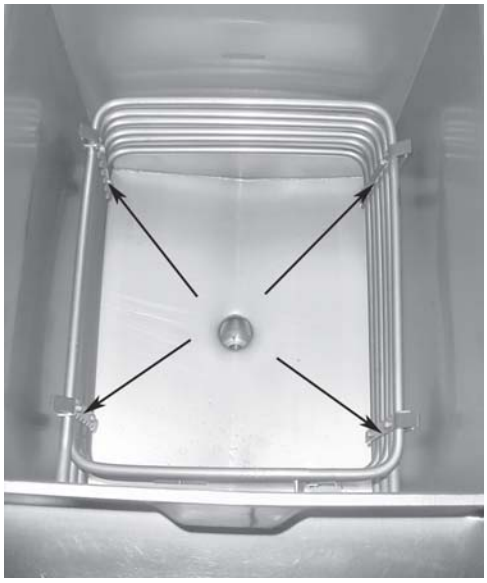
4. Turn spindle clockwise until it stops and then lubricate the threads on the spindle using the spindle lube.

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.

4-8. 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 (5 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 5. TROUBLESHOOTING

5-1. INTRODUCTION

This section provides troubleshooting information in the form of an easy to read table.

If a problem occurs during the first operation of a new fryer, recheck the Installation and Operation Sections of this manual.

5-2. TROUBLESHOOTING

To isolate a malfunction, proceed as follows:

1. Clearly define the problem (or symptom) and when it occurs.
2. Locate the problem in the Troubleshooting table.
3. Review all possible causes. Then, one at a time work through the list of corrections until the problem is solved.
4. Use the Diagnostic Mode to identify the problem and make possible adjustments.

If a problem keeps reoccurring, have a qualified service technician check the fryer for other causes.

Problem	Cause	Correction
	COOKING SECTION	
Product Color Not Correct:		
A. Too Dark (some batches)	• Temperature programmed too hot	• See Diagnostic Mode **D 10**; if temperature settings have been changed, have the controls reintialized
	• Breading product too far in advance	• Bread product just before frying
	• Done alarm ignored for more than 20 seconds	• If the fryer hasn't been used since the problem batch, see Information Mode **4 H;** for more information on this problem, see Information Modes **5 U, 6 U, 7 R, or 8 R**
	• Wrong product button pressed	• Be sure to press the correct product button; if the fryer hasn't been used since the problem batch, see Information Mode **4 B** to see what product button was pressed
B. Too Dark (all batches)	• Temperature probe out of calibration	• See Diagnostic Mode **D 1** to adjust color of product
		• Check temperature probe calibration; see Checking Temperature Probe Calibration Section; if less than 15 degrees off, have probe calibrated; if more than 15 degrees off, replace probe
	• Peanut oil too old	• If peanut oil is smoking or has burnt taste, change peanut oil
		• See Diagnostic Mode **D 2**; Change peanut oil if controls indicate it should be changed
	• Peanut oil too dark	• Filter peanut oil • Change peanut oil
	• Faulty probe "E6"	• If probe can't be recalibrated, have probe replaced

Problem	Cause	Correction
	COOKING SECTION (Continued)	
C. Too Light (all batches)	• Temperature probe out of calibration	• See Diagnostic Mode **D 1** to adjust color of product
		• Check temperature probe calibration; see Checking Temperature Probe Calibration Section; if less than 15 degrees off, have probe calibrated; if more than 15 degrees off, replace probe
	• Slow fryer heat-up/recovery	• See Diagnostic Mode **D 4** for present day's performance; or see Information Modes 5, 6, 7, 8, and 9 for more information on this problem
		• Low voltage; see Diagnostic Mode **D 3** for present day's voltage performance; see Information Modes 4, 5, 6, 7, 8, 9, and 15 for more information on this problem
		• Low gas pressure; have gas pressure checked going to burners, on gas fryers
	• Oil usage wasn't set for new peanut oil	• See Diagnostic Mode **D 2** for the age of the oil; see section 3-7 for setting the age of the oil
D. Too Light (some batches)	•Temperature programmed too low	• See Diagnostic Mode **D 10**; if temperature settings have been changed, without authorization, have the controls reintialized
	• Product placed in peanut oil before proper temperature	• If fryer hasn't been used since the problem batch, see Information Mode **4 C;** for more information on this see Information Modes **5 S, 6 S, 7 P, or 8 P**
	• Wrong product button pushed	• If fryer hasn't been used since problem batch, see Information Mode **4 B** to see what product was selected

Problem	Cause	Correction
	COOKING SECTION (Continued)	
D. Too Light (some batches) (Continued)	• Cook Cycle aborted before alarm and "DONE" flashes	• See Diagnostic Mode **D 7** to see how many times the Cook Cycle was stopped before the end of the cycle
	• Frozen product placed in peanut oil	• Use fresh or thawed product; see Diagnostic Mode **D 5** to see if the controls sensed any frozen or overloaded batches
Dryness of Product	• Moisture loss prior to cooking	• Use fresh product • Cover product with plastic wrap, reducing evaporation
	• Over-cooking the product	• Done alarm ignored for more than 20 seconds; if the fryer hasn't been used since the problem batch, see Information Mode **4 H**; for more information on this problem, see Information Modes **5 U, 6 U, 7R, or 8 R**
	• Time of Cook Cycle set too long	• See Diagnostic Mode **D 10**; if time settings have been changed, have the controls reintialized
	• Wrong product button pushed	• If fryer hasn't been used since problem batch, see Information Mode **4 B** to see what product was selected
	• Low operating pressure	• Check pressure gauge reading Check for pressure leaks
Burned Taste	• Burned peanut oil flavor	• Replace peanut oil
	• Peanut oil needs filtering	• Filter peanut oil more often
	• Frypot not properly cleaned	• Drain and clean frypot

Problem	Cause	Correction
	COOKING SECTION (Continued)	
Product not done	• Cook Cycle aborted before alarm, and "DONE" flashes	• See Diagnostic Mode **D 7** to see how many times the Cook Cycle was stopped before the end of the cycle
	• Frozen product placed in peanut oil	• Use fresh or thawed product; see Diagnostic Mode **D 5** to see if the controls sensed frozen or overloaded batches.
	• Wrong product button pushed	• If fryer hasn't been used since problem batch, see Information Mode **4 B** to see what product was selected
	• Temperature programmed too low or not programmed properly	• See Diagnostic Mode **D 10**; if temperature settings have been changed, have the controls reintialized
	• Temperature probe out of calibration	• Check temperature probe calibration; see Checking Temperature Probe Calibration Section; a. If less than 5° off, see Diagnostic Mode **D 1** b. If between 5 and 15 degrees off, calibrate probe; if more than 15° off, replace probe
	• Slow fryer heat-up/recovery	• See Diagnostic Mode **D 4** for present day's performance; or see Information Modes 5, 6, 7, 8, and 9 for more information on this problem
		• Low voltage; see Diagnostic Mode **D 3** for present day's voltage performance; see Information Modes 4, 5, 6, 7, 8, 9, and 15 for more information on this problem
		• Low gas pressure; have gas pressure checked going to burners, on gas fryers
	• Product too thick	• Make sure chicken filets have been fileted

Problem	Cause	Correction
	POWER SECTION	
With COOK/PUMP Switch in COOK position, fryer is completely without power	• Open circuit	• Check to see if fryer is plugged in • Check wall circuit breaker or fuse • Have a qualified service technician check power supply and COOK/PUMP switch
	PRESSURE SECTION	
Pressure will not exhaust at end of cooking cycle.	• Exhaust line from solenoid valve to exhaust tank clogged	• Turn unit off and allow fryer to cool to release pressure from frypot; have all pressure lines, exhaust stacks, and exhaust tank cleaned
	• Solenoid valve clogged	• Have solenoid checked and cleaned
Operating pressure too high	• Deadweight clogged	• Turn unit off and allow fryer to cool to release pressure from frypot; remove deadweight and clean, per Cleaning the Deadweight Valve Section.
	• Exhaust line to stack clogged	• Clean exhaust line to stack

DO NOT OPERATE UNIT IF PRESSURE GAUGE SHOWS HIGH PRESSURE CONDITIONS. SEVERE INJURIES AND BURNS WILL RESULT. IMMEDIATELY PLACE THE POWER/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.

Problem	Cause	Correction
	PRESSURE SECTION (Continued)	
Pressure does not build	• Not enough product in fryer or product not fresh	• Place proper quantity of fresh product within frypot to generate steam
	• Metal shipping spacer not removed from deadweight	• Remove shipping spacer; see Unpacking Section
	• Lid open or not latched	• Close and latch lid
	• Solenoid valve leaking or not closing	• Have solenoid valve checked or cleaned
	• Deadweight assembly leaking	• Have deadweight assembly repaired
	• Pressure not programmed	• See Diagnostic Mode **D 10**; if pressure settings have been changed, have the controls reintialized
	• Lid gasket leaking	• Reverse gasket or lid needs adjusted
	• Safety relief valve leaking.	• Check and replace if necessary
	FILTER SYSTEM SECTION	
Filter motor runs but pumps peanut oil slowly	• Pump clogged	• Have pump cleaned
	• Filter line connection loose	• Tighten all filter line connections
	• Solidified peanut oil in lines	• Clear all filter lines of solidified peanut oil
Filter switch on, motor does not run	• Defective COOK/PUMP switch	• Have switch checked
	• Defective motor	• Have motor checked
	• Motor thermal protector tripped	• Reset thermal protector per Filter Pump Motor Thermal Protector Section

Problem	Cause	Correction
FILTER SYSTEM SECTION (Continued)		
Motor hums but will not pump	• Clogged lines or pump	• Have pump and lines removed and cleaned • Have pump seal, rotor and rollers replaced
HEATING OF PEANUT OIL SECTION		
Peanut oil will not heat	• Blown fuse or tripped circuit breaker	• Reset breaker or replace fuse
	• Faulty cord and plug	• Check cord and plug
	• Faulty PC board	• Have control panel checked
	• Faulty or tripped high limit "E10"	• Reset high limit per Operating Components Section; if high limit doesn't reset, have it checked
	• Drain valve open "E15"	• Close drain valve
	• Possible faulty probe "E6"	• Have temperature probe checked
	• Possible faulty contactor (electric models)	• See Diagnostic Modes **D 4;** see if "CHECK COILS, CONTACTORS AND WIRING" shows on display
	• Gas valve knob turned to the OFF position (gas models)	• Make sure the gas valve knob is turned to ON
	• Faulty thermocouple on gas control valve (gas models)	• Have thermocouple checked
	• Faulty COOK/PUMP switch • Faulty drain switch "E15" • Possible faulty gas control	• See Information Mode10 and check to see if the input code is present; if not, have fryer checked by a certified service technician

Problem	Cause	Correction
HEATING OF PEANUT OIL SECTION (Continued)		
Peanut oil heating slowly	• Low or improper amps	• See Infomation Mode **16** for present amperage; or see Information Modes 4, 5, 6, 7, 8, 9, for more information on this problem; Diagnostic Mode **D 4** gives present day's heating performance
	• Low or improper voltage	• See Diagnostic Modes **D 3 & D 4** for present day's voltage and heating performance; or see Information Modes 4, 5, 6, 7, 8, 9, and 15 for more information on this problem
	• Weak or burnt out elements (elec. model) • Burnt or charred connectors • Faulty contactor (electric models)	• See Diagnostic Modes **D 4;** see if "CHECK COILS, CONTACTORS AND WIRING" shows on display; if so, have fryer checked by a certified service technician
	• Wire(s) loose	• Have wires tightened
	• Supply line too small - low gas volume (gas models)	• Increase supply line size; refer to installation instructions
	• Improper ventilation system (gas models)	• Refer to installation instructions

5-3. DIAGNOSTIC MODE DETAILS

The Chick-fil-A fryer controllers provide diagnostic functions that let an Operator review operating and performance data for the fryer.

The information provided by Diagnostic Mode can be used to monitor procedural errors, such as, not waiting for the READY light before starting a Cook Cycle, canceling cycles early, etc.

In addition, Diagnostic Mode allows slight adjustment to product color, reports the age and accumulated wear of the oil, and reports information about the performance of the line voltage supply.

Accessing Diagnostic Mode

To activate Diagnostic Mode, press the PROG button, then press DIAGNOSTICS 4 button. The controller displays the following message:

" *DIAGNOSTIC* "
" *REPORT* "

When this introduction message is finished, the controller displays Diagnostic step D 1 (see below).

DOWN UP are used to step through the report items. Press DOWN to step forward to the next item. Press UP to step backward through the report items.

The report information is grouped into sections, D 1 through D 10. Most sections have several related items.

To toggle between English and Spanish Display Mode, press PROG button then press 6 .

To exit Diagnostic Report Mode at any point, press CANCEL 2 .

5-3. DIAGNOSTIC MODE DETAILS (Continued)

D 1: Color Adjustment

This step lets the user make slight adjustments to the product color. The first step of this item asks "IS PRODUCT COLOR OK?"

If product color is okay and no change is desired press YES 1 or DOWN to move on to the next item, or press CANCEL 2 to exit Diagnostic Mode.

If a change *is* desired, press NO 3 (i.e. color is *not* okay). The controller shows "ADJUST DARKNESS", then displays the darkness control slider:

" LT - - - - - + - - - - - DK"

A blinking asterisk (*) indicates the current position. ◁ INFO and P ▷ PROG are used to adjust the darkness setting.

To make the product darker, press P ▷ PROG to move the blinking " * " toward the DK (darker) side.

To make the product lighter, press ◁ INFO to move the blinking " * " toward the LT (lighter) side.

When done adjusting, press CANCEL 2 to exit and return to normal operating mode.

Any temperature adjustment activated by the color adjustment feature will be reflected in the normal setpoint display as part of the offset from the basic product cook temperature. To view the present regulating temperature, press ◁ INFO twice.

In the example, "SETPT = 315°F + 6" the product cook temperature is 315°F and has an additional offset of 6°F to compensate for the age of the oil, how long the fryer sits idle, and any color adjustments.

5-3. DIAGNOSTIC MODE DETAILS (Continued)

D 2: Oil Wear Report

This section displays information about the age of the present batch of peanut oil.

The first step shows how many days of use this oil has:

"D2: THIS OIL IS "
"D2: 4 DAYS OLD "

NOTICE

The controller only counts days in which the fryer is in use.

Press DOWN to move on to the second step. This step shows the age of the peanut oil by percentage of its expected lifetime. The peanut oil's present, accumulated wear is compared to the wear setting at which the controller will prompt for the oil to be changed.

"D2: THIS OIL IS "
"D2: 16% USED "

This information can be used as the oil nears the end of its life (i.e. 95%), to plan ahead for when a clean-out will be required.

Press DOWN to move on to the next section.

5-3. DIAGNOSTIC MODE DETAILS (Continued)

D 3: Line Voltage Performance Report

This section displays information about how good the line voltage supply has been for the present day and for the present batch of oil.

The controller continually monitors the line voltage supplied to the fryer (when the fryer is on). If the line voltage drops below [90%] of its nominal value, the controller signals a "LOW VOLTAGE" alarm. This alarm sounds at the end of each Cook Cycle for which low voltage has been detected. While not cooking, the low voltage alarm can sound as frequently as every 30 minutes.

NOTICE

" [ ]" around a value, such as [90%], means this value is programmable and might change with later software versions.

Voltage Report for Today

If no low voltage warnings have been detected for the present day, the controller shows, "D3: VOLTAGE OK, D3: TODAY "

If one or more low voltage warnings have been detected for the present day, the following sequence example could be displayed:

"D3: YOU HAD 3"
"D3: LOW VOLTAGE"
"D3: WARNINGS"
"D3: TODAY"

(Press ▼ DOWN)

"D3: MIN VOLTAGE"
"D3: TODAY = 83%"

(Press ▼ DOWN)

"D3: MAX VOLTAGE"
"D3: TODAY = 101%"

(Press ▼ DOWN)

5-3. DIAGNOSTIC MODE DETAILS (Continued)

"D3: ARE OTHER"
"D3: FRYERS"
"D3: HAVING THIS"
"D3: PROBLEM"
"D3: TODAY?"

Press YES 1 or NO 3 .

If YES 1 is pressed (other fryers are not having this problem):

"D3: FACILITY"
"D3: OR UTILITY"
"D3: PROBLEM"

If NO 3 is pressed (other fryers are not having this problem):

"D3: CHECK CORD,"
"D3: WIRING,"
"D3: AND BREAKER"

In either case, press DOWN to move on to the next step.

Voltage Report for Present Batch of Peanut Oil

This report for the present batch of oil does not include data from the today. It includes data for all days on the present batch of oil before today.

For example, if low voltage warnings started appearing today but had not been displayed before, the previous item might report "3 LOW VOLTAGE WARNINGS TODAY" while this step reports "VOLTAGE OK SINCE LAST OIL CHANGE".

If no low voltage warnings have been detected before today for the present batch of oil, the controller shows:

"D3: VOLTAGE OK"
"D3: SINCE LAST"
"D3: OIL CHANGE"

5-3. DIAGNOSTIC MODE DETAILS (Continued)

If one or more low voltage warnings have been detected before today, the following sequence is displayed:

"D3: BEFORE TODAY"
"D3: 27 LOW VOLT"
"D3: WARNINGS"
"D3: ON THIS OIL"

(Press  DOWN)

"D3: MIN VOLTAGE"
"D3: BEFORE TODAY"
"D3: = 85%"

(Press  DOWN)

"D3: MAX VOLTAGE"
"D3: BEFORE TODAY"
"D3: = 105%"

Press  DOWN to advance to the next section.

D 4: Heating Capacity Report
This section reports the present status of the heating system.

The controller examines a history of heat-up data and determines whether or not the heating system is operating normally. The heat capacity is said to be bad only if the most recent heat-up failed to meet the expected heat-up rate and three of the last four heat-ups also failed to achieve the expected rate. That is, a single slow heat-up will not trigger a slow heat warning. The slow heat warning is activated only after repeated low-rate heat-ups is observed.

The controller can't assess the integrity of the heating system if the fryer has been experiencing voltage problems. Low heat rates observed in this situation might be due to voltage problems rather than heater problems.

5-3. DIAGNOSTIC MODE DETAILS (Continued)

If the fryer has witnessed two or more low voltage warnings today, the following report is displayed:

"D4: CAN'T TEST"
"D4: HEAT CAPACITY"
"D4: DUE TO"
"D4: VOLTAGE"
"D4: PROBLEMS"

Otherwise, if the assessed heat capacity rating is presently "good" and there has been at most one heat-up today that failed to achieve the expected rate, the following report is displayed:

"D4: HEATING"
"D4: CAPACITY"
"D4: IS FINE"

Otherwise, if the heat capacity is presently assessed as "bad", or presently assessed as "good" but two or more heat-ups today have not reached the expected heat-up rate, the following report sequence is generated:

"D4: YOU HAD 75%"
"D4: SLOW HEATS"
"D4: TODAY"

(Press ▼ DOWN)

"D4: HAVE 20%"
"D4: SLOW HEATS"
"D4: THIS OIL"

(Press ▼ DOWN)

"D4: HAD 0%"
"D4: SLOW HEATS"
"D4: LAST OIL"

(Press ▼ DOWN)

If the heat capacity is assessed as bad (low heat-up rate on last heat-up, and on three of the last four heat-ups), then the heating coils are suspect and the following message is displayed:

"D4: CHECK COILS,"
"D4: CONTACTORS,"
"D4: AND WIRING"

5-3. DIAGNOSTIC MODE DETAILS (Continued)

Otherwise, the heating coils are presumed to be good and the following messages appear:

"D4: HEATER COILS "
"D4: APPEAR OK "

(Press )

"D4: CHECK "
"D4: CONTACTORS, "
"D4: CONNECTIONS, "
"D4: AND WIRING "

D 5: Cook Times (Slow Cooks) Report
This section summarizes the slow cooking status for each product.

Actual cook times for Cook Cycles can vary from the programmed cook time setting, due to the load compensation feature. Load Compensation slows the cook timer down when the actual peanut oil temperature is below a reference value, and speeds up the cook timer countdown when peanut oil temperature is above the reference.

When the peanut oil temperature is lower than expected during a Cook Cycle, the overall cook time will be longer than normal. If the actual cook time stretches beyond a programmed limit, the controller counts a "SLOW COOK" event and sounds an alarm at the end of the Cook Cycle.

If low voltage or low amps are detected during the Cook Cycle, the warning message indicates "LOW VOLTAGE" or "LOW AMPS", but the cycle will still count as a "slow cook". If the voltage and amps have been fine during the Cook Cycle but the cycle was started before the Ready light came on, then the warning message indicates "SLOW COOK — WAIT FOR READY LIGHT". Otherwise, the slow cooking problem will be attributed to a "bad batch" of product: cooking too much in one load, or cooking product that is too cold (i.e. frozen product on a pressure fryer when the product should be fresh).

If none of the products has more than 5% slow Cook Cycles today, the following report is made:

"D5: COOK TIMES"
"D5: LOOK OK"
"D5: TODAY"

5-3. DIAGNOSTIC MODE DETAILS (Continued)

Otherwise, if one or more cook products have generated a slow cook warning more than 5% of the time, but four or more low voltage or slow heat-up warnings (any combination) have been generated today, then the report is as follows:

"D5: SOME SLOW"
"D5: COOKS TODAY"
"D5: MAYBE DUE TO"
"D5: VOLTAGE OR"
"D5: COIL PROBLEMS"

Such a report is saying the slow cooking may be the result of low voltage (which significantly reduces heat capacity) or the result of other problems with the heating system. In this case, the slow cook problems might not have anything to do with user error.

Otherwise, the slow cooking is generally attributed to user error: cooking too much product in one load, cooking frozen product (in the pressure fryer) when it should be fresh, or cooking before the Ready light illuminates, etc.

An individual "XXXXX IS COOKING SLOWLY TODAY" report item is generated for each product that has had more than 5% slow cook warnings today. This report item is triggered based solely on the number of slow cooks for that product, whether those slow cooks are due to voltage or heating problems, or due to cooking before ready, cooking too much, or cooking frozen product.

"D5: "FILET" (← Product Name)
"D5: COOKING SLOW"
"D5: TODAY"

(Press )
DOWN

If any of the slow cooks for this product are suspected as being due user error, a second, "bad batch" report is generated for the product.

"D5: "NUG-STRP" (← Product Name)
"D5: COOKING SLOW"
"D5: TODAY"

(Press )
DOWN

5-3. DIAGNOSTIC MODE DETAILS (Continued)

"D5: POSSIBLE"
"D5: OVERSIZED"
"D5: OR FROZEN"
"D5: BATCH OF"
"D5: "NUG-STRP" " (←Product Name)
"D5: DETECTED"
"D5: 3 TIMES"
"D5: TODAY"

(Press )
DOWN

"D5: POSSIBLE"
"D5: OVERSIZED"
"D5: BATCH OF"
"D5: "FRIES"
"D5: DETECTED"
"D5: 5 TIMES"
"D5: TODAY"

D 6: "Cooked Before Ready" Report

This section shows how many Cook Cycles were started before the READY light was on. This is strictly a user error.

If the fryer was in the ready range when the user begins to load product, but is out of the ready range by the time the Cook Cycle is started, the control will not give you an alarm.

If the fryer wasn't ready before loading, an alarm sounds and "WAS NOT READY" warning is generated. The number of times this has happened today is indicated by the following report item:

"D6: COOKED"
"D6: BEFORE READY"
"D6: 11 TIMES"
"D6: TODAY"

(Press )
DOWN

5-3. DIAGNOSTIC MODE DETAILS (Continued)

The number of "WAS NOT READY" warnings for this batch of peanut oil is also reported. Note that this value does not yet include the not ready warnings generated today.

"D6: BEFORE TODAY,"
"D6: COOKED"
"D6: BEFORE READY"
"D6: 8 TIMES"
"D6: ON THIS OIL"

(Press )

Finally, the controller identifies how many times the not ready warning was generated for the previous batch of peanut oil:

"D6: LAST OIL,"
"D6: COOKED"
"D6: BEFORE READY"
"D6: 24 TIMES"

D 7: "Stopped Too Soon" Report

This section shows how many Cook Cycles were stopped early by the user, before the cook timer had counted down to 0:00 and the "*DONE*" indication was given. This is strictly a user error.

Cycles that are canceled after cooking for less than 30 seconds are not counted here. For example, if a cycle is accidentally started, and the Cook Cycle is canceled after just a few seconds, this cycle will not be counted as a Stopped Too Soon Cycle.

Also, some allowance is given for stopping a cycle a *little* early. The user can cancel the cycle up to 10 seconds early without penalty.

Otherwise, however, any cycle that was stopped with more than 10 seconds remaining (0:10) on the cook clock with be counted as a Stopped Too Soon Cycle.

The first item displays what percent of cycles today were stopped with more than 0:10 remaining. All products are grouped into one count.

"D7: 8% OF LOADS"
"D7: WERE STOPPED"
"D7: TOO SOON"
"D7: TODAY"

(Press )

5-3. DIAGNOSTIC MODE DETAILS (Continued)

The number of Stopped Too Soon cycles for this batch of peanut oil is reported next. Note that this value does not yet include the Cook Cycles from today.

"D7: BEFORE TODAY "
"D7: 3% OF LOADS"
"D7: WERE STOPPED"
"D7: TOO SOON"
"D7: ON THIS OIL"

(Press )
DOWN

Finally, the controller identifies percentage of Stopped Too Soon Cycles for the previous batch of peanut oil:

"D7: LAST OIL"
"D7: 5% OF LOADS"
"D7: WERE STOPPED"
"D7: TOO SOON"

D 8: "Beeped *DONE* Too Long" Report

Diagnostic Report section 8 reveals how many Cook Cycles beeped "*DONE*" for more than 20 seconds before the user pressed the timer button to stop the cycle. This is strictly a user error.

The controller cannot detect when the product is actually removed from the fryer. It only identifies how long the controller beeped "*DONE*" before the user pressed  to stop the alarm.

The first item displays the percent of today's Cook Cycles that beeped "*DONE*" for more than 20 seconds before the user pressed  to stop it. All products are grouped into one count.

"D8: 10% OF LOADS"
"D8: BEEPED 'DONE'"
"D8: TOO LONG"
"D8: TODAY"

(Press )
DOWN

5-3. DIAGNOSTIC MODE DETAILS (Continued)

The number of Beeped Done Too Long Cycles for this batch of peanut oil is reported next. Note that this value does not yet include the Cook Cycles from today.

"D8: BEFORE TODAY "
"D8: 7% OF LOADS"
"D8: BEEPED 'DONE'"
"D8: TOO LONG"
"D8: ON THIS OIL"

(Press the DOWN button...)

Finally, the controller identifies percentage of Beeped Done Too Long Cycles for the previous batch of peanut oil:

"D8: LAST OIL"
"D8: 6% OF LOADS"
"D8: BEEPED 'DONE"
"D8: TOO LONG"

D 9: Irregular Loading Report

For most Cook Cycles, the controller determines when the product was placed into the peanut oil. This report identifies the percentage of cycles for which this determination was not successful.

This drop detection detects most loads, but can fail for several reasons. Anytime the detection routine fails to find the true drop point, the controller logs an irregular loading count.

Examples of failed drop detection might be: the Operator takes too long to load the product to the time he presses the start button, or the Operator cooks a very light product load, one or two filets, for example.

In these instances, no drop point will be found and that Cook Cycle counts as an Irregular Loading Cycle. Only products that have more than 5% of loads with missed detection's are reported.

5-3. DIAGNOSTIC MODE DETAILS (Continued)

Loading Report for Today

If no products have a failed to detect rate of more than 5%, the controller shows:

"D9: LOADING"
"D9: LOOKS OK"
"D9: TODAY"

Otherwise, for each product that has more than 5% of loads in which the controller failed to detect the drop point, the following message is displayed:

"D9: IRREGULAR"
"D9: LOADING"
"D9: FOR 8% OF"
"D9: "FILET" (← Product Name)
"D9: TODAY"

Loading Report for Present Batch of Peanut oil

The data for this batch of peanut oil does not yet include Cook Cycles from today.

If no products have a failed to detect rate of more than 5%, the controller shows:

"D9: LOADING "
"D9: LOOKS OK "
"D9: THIS OIL "

Otherwise, for each product that has more than 5% of loads in which the controller failed to detect the drop point, the following message is displayed:

"D9: FOR THIS OIL,"
"D9: IRREGULAR "
"D9: LOADING "
"D9: FOR 12% OF "
"D9: "NUG-STRP" " (← Product Name)

5-3. DIAGNOSTIC MODE DETAILS (Continued)

Loading Report for Previous Batch of Peanut oil
If no products have a failed to detect rate of more than 5%, the controller shows:

"D9: LOADING"
"D9: LOOKED OK"
"D9: PREVIOUS OIL"

Otherwise, for each product that has more than 5% of loads in which the controller failed to detect the drop point, the following message is displayed:

"D9: PREVIOUS OIL,"
"D9: IRREGULAR"
"D9: LOADING"
"D9: FOR 6% OF"
"D9: "BRK-FIL" (← Product Name)

D 10: Non-Standard Program Items Report
The last section in the diagnostic report identifies how many programmable settings have been altered from their original, factory default settings.

For each of the various program modes, the controller either reports that all settings match original values or reports N items do not match original values. This report makes it easy to see if any cook parameters or other settings have been changed from CFA settings.

Some programming items may have been changed from original values under the direction of CFA corporate headquarters. In some cases, a controller should have values that don't match original values. A report that "all items match original values" could actually be an indication that something isn't set right.

Keep in mind also that the number of such approved alterations might be different for different versions of software.

If all product cook settings match the original, factory default values, the controller displays the following message:

"10: ALL PROD'S"
"10: MATCH"
"10: ORIG. VALUES"

5-3. DIAGNOSTIC MODE DETAILS (Continued)

If any of the product settings do not match original values, the following message is displayed (with one or more of the product numbers blinking):

"10: PROD'S 123456"
"10: DO NOT MATCH"
"10: ORIG. VALUES"

In this case, the blinking numbers indicate which products do not match original settings. If the numbers 3 and 5 are the only numbers blinking, then product #3 and product #5 each have at least one setting changed from their factory preset values. Products 1, 2, 4, and 6 are confirmed to exactly match their original settings.

The second item in D 10 identifies how many items in CFA Programming Mode have been changed from their original values. These Chick-fil-A settings mainly deal with special Chick-fil-A controller features like oil wear, heat-up monitoring, new oil compensation, oil idle compensation, drop detection, amps and voltage alarms, and Clean-out Mode.

If all items in CFA Prog Mode match their original, factory preset values, the following report is made:

"10: ALL CFA ITEMS"
"10: MATCH"
"10: ORIG. VALUES"

If any of the items in CFA Prog Mode do not match their original values, the following message is displayed (with the actual number of changed items):

"10: 2 CFA ITEMS"
"10: DO NOT MATCH"
"10: ORIG. VALUES'

A similar report is made for Special Program Mode. Special Program (SP) Mode settings deal with °F/°C display, speaker tone and volume, Melt and Idle Modes, and how the product buttons function (start cook or merely select product).

"10: ALL SP ITEMS"
"10: MATCH "
"10: ORIG. VALUES "

"10: 1 SP ITEMS "
"10: DO NOT MATCH "
"10: ORIG. VALUES "

5-3. DIAGNOSTIC MODE DETAILS (Continued)

The final item in D 10 identifies if any changes have been made to the heat control settings. These settings affect the fryer's heating algorithms, and include the PC factors, rate-of-rise compensations, and heat pulse cycle time, etc.

"10: ALL HC ITEMS"
"10: MATCH"
"10: ORIG. VALUES"

"10: 3 HC ITEMS"
"10: DO NOT MATCH"
"10: ORIG. VALUES"

5-4. INFORMATION MODE DETAILS

This historic information in this mode can be recorded and used for operational and technical help.

Press PROG and INFO at the same time and "*INFO MODE*" shows in the display, followed by "1. E-LOG".

NOTICE

Press and hold PROG to exit Information Mode at any time, or after 2 minutes, controls automatically exit back to normal operation.

1. E-LOG (error code log)
Press DOWN and "1A. (date & time) *NOW* shows in display. This is the present date and time.

Press DOWN and if a error was recorded, "1B. (date, time, and error code infromation)" shows in display. This is the latest error code that the controls recorded.

Press DOWN and the next latest error code information can be seen. Up to 10 error codes (1B to 1K) can be stored in the E-LOG section.

Press PROG to continue to P-LOG.

2. P-LOG (power-up log)
Press DOWN and "2A. (date & time) *NOW* shows in display. This is the present date and time.

Press DOWN and the latest power-up is shown, "2B. (date, time,) PWR-UP".

5-4. INFORMATION MODE DETAILS

Press ▼ DOWN and the next latest power-up date is shown. Up to 10 power-ups (2B to 2K) can be stored in the P-LOG section.

Press P PROG ▷ to continue onto the heat-up log.

3. HEAT-UP'S

Press ▼ DOWN and "3A. (date & time) *NOW* shows in display. This is the present date and time.

Press ▼ DOWN and the latest heat-up is shown, along with the heat-up rate, ex: "3B. MAY-22, 8:37A 1.25". The heat rate is the maximum rate (degrees/second) the controller recorded during the shown time frame.

Press ▼ DOWN and the next latest heat-up is shown. Up to 10 heat-ups (3B to 3K) can be stored in the HEAT-UP log.

Press P PROG ▷ to continue onto the COOK DATA.

4. COOK DATA

Press ▼ DOWN to step through the following data:

FUNCTION	DISPLAY EXAMPLE
Time of day the last Cook Cycle was started	4A. STARTED 10.25A
Product (last product cooked)	4B. PRODUCT -1-
Ready? (was fryer ready before start?)	4C. READY? YES
Drop detect status	4D. DETECT / T-14
Drop adjust (real time seconds)	4E. DROP ADJ T-14
Cook time adj (clock adjust)	4F. CK TM ADJ -13
Actual elapsed cook time (real seconds)	4G. ACT TIME 4:50
Stopped: time remaining, or secs past done	4H. STOP DONE+2
Slow cook for this cycle?	4I. SLOW? NO
Frozen or overload? (bad batch)	4J. FRZ/OVL? NO
Avg temp during Cook Cycle	4K. AVG TMP 317°F
Max voltage during Cook Cycle	4L. MAX VOLT 99%
Min voltage during Cook Cycle	4M. MIN VOLT 97%
Max amps during Cook Cycle	4N. MAX AMPS 35
Min amps during Cook Cycle	4O. MIN AMPS 34

Press P PROG ▷ to continue onto today's data log.

5-4. INFORMATION MODE DETAILS

5. TODAY'S DATA (automatically resets each day)
Press [▼] DOWN to step through the following data:

FUNCTION	DISPLAY EX:
Today's Date	5A. DATE APR-12
Time of day last heat-up was completed	5B. LAST HEAT 9:45A
Peak heat-up rate (°F/Sec) for last heat-up	5C. LAST RATE 0.82
Was last heat-up acceptable?	5D. LAST OK? YES
Heat cap. status (based on last 4 ht-ups)	5E. HEAT CAP GOOD
Number of monitored heat-ups today	5F. HEAT-UPS 2
Number of slow heat-ups	5G. SLOW HT'S 0
Max time to heat 270°F to 310°F today	5H. MAX HT TM 1:17
Lowest peak rate for today's heat-ups	5I. MIN RATE 0.82
Maximum voltage today (when fryer on)	5J. MAX VOLT 99%
Minimum voltage today (when fryer on)	5K. MIN VOLT 95%
No. of "LOW VOLTAGE" warnings	5L. LO VOLT'S 0
Maximum amp draw today	5M. MAX AMPS 35
Minimum amp draw today	5N. MIN AMPS 33
Number of "Low Amps" warnings today	5O. LO AMP'S 0
Non-cooking time (hh:mm) while fryer was on	5P. IDLE HRS 1:23
Oil wear accumulated so far today	5Q. OIL WEAR 3
Total number of Cook Cycles today	5R. TOT CK'S 11
No. of cycles started before ready	5S. NOT RDY'S 2
No. cycles quit early (0:11 or more remaining)	5T. QUIT 11+ 0
No. cycles beeped *DONE* 21 sec or more	5U. DONE 21+ 1
Individual product cook counts	5V. Px CK CT 2
Individual product not detected counts	5W. Px NO DET 0
Individual product slow cook counts	5X. Px SLO CT 0
Individual product frozen or overloaded	5Y. Px FRZ/OV 0

NOTICE

During steps 5V through 5Y, press the product buttons (or Manual Prog) to see data on individual product items.

Press [P] PROG ▷ to continue onto prev-day-sun log.

5-4. INFORMATION MODE DETAILS

6. PREV DAY - SUN

Press [▼] DOWN to step through the following data. During each step, press [⏱] to choose the day of the week, of the past 7 days.

FUNCTION	DISPLAY EX:
Day this data was recorded for	6A. DATE APR-8
Time of day last heat-up was completed	6B. LAST HEAT 8:15P
Peak heat-up rate (°F/Sec) for last heat-up	6C. LAST RATE 0.88
Was that day's last heat-up acceptable?	6D. LAST OK? YES
Heat cap. status (based on last 4 ht-ups)	6E. HEAT CAP GOOD
Number of monitored heat-ups that day	6F. HEAT-UPS 7
Number of slow heat-ups	6G. SLOW HT'S 0
Max time to heat 270°F to 310°F that day	6H. MAX HT TM 1:11
Lowest peak rate for that day's heat-ups	6I. MIN RATE 0.67
Maximum voltage that day (when fryer on)	6J. MAX VOLT 102%
Minimum voltage that day (when fryer on)	6K. MIN VOLT 98%
No. of "LOW VOLTAGE" warnings	6L. LO VOLT'S 0
Maximum Amp Draw that day	6M. MAX AMPS 35
Minimum Amp Draw that day	6N. MIN AMPS 34
No. of "LOW AMPS" warnings that day	6O. LO AMP'S 0
Non-cooking time (hh:mm) while fryer was on	6P. IDLE HRS 7:09
Oil wear accumulated that day	6Q. OIL WEAR 39
Total number of Cook Cycles that day	6R. TOT CK'S 18
Number of cycles started before ready	6S. NOT RDY'S 2
No. cycles quit early (0:11 or more remaining)	6T. QUIT 11+ 1
No. cycles beeped *DONE* 21 sec or more	6U. DONE 21+ 3
Individual product cook counts	6V. Px CK CT 12
Individual product not detected counts	6W. Px NO DET 1
Individual product slow cook counts	6X. Px SLO CT 0
Individual product frozen or overloaded	6Y. Px FRZ/OV 1

NOTICE

During steps 6V through 6Y, press the product buttons (or Manual Prog) to see data on individual product items.

Press [P ▷] PROG to continue onto 7-day totals log.

5-4. INFORMATION MODE DETAILS

7. 7-DAY TOTALS

Press [▼] DOWN to step through the following data:

FUNCTION	DISPLAY EX:
Oldest day in the previous days history	7A. SINCE APR-5
Number of days with data included in totals	7B. DAYS CNT 6
Number of monitored heat-ups	7C. HEAT-UPS 30
Number of slow heat-ups	7D. SLOW HT'S 1
Max time to heat 270°F to 310°F	7E. MAX HT TM 3:25
Lowest peak rate of all heat-ups	7F. MIN RATE 0.47
Maximum voltage	7G. MAX VOLT 102%
Minimum voltage	7H. MIN VOLT 91%
No. of "LOW VOLTAGE" warnings	7I. LO VOLT'S 0
Maximum amp draw	7J. MAX AMPS 35
Minimum amp draw	7K. MIN AMPS 32
Number of "LOW AMPS" warnings	7L. LO AMP'S 0
Non-cooking time (hrs) while fryer was on	7M. IDLE HRS 43
Total oil wear accumulated	7N. TOT WEAR 278
Total number of Cook Cycles	7O. TOT CK'S 125
Number of cycles started before ready	7P. NOT RDY'S 7
No. cycles quit early (0:11 or more remaining)	7Q. QUIT 11+ 1
No. cycles beeped *DONE* 21 sec or more	7R. DONE 21+ 3
Individual product cook counts	7S. Px CK CT 77
Individual product not detected counts	7T. Px NO DET 3
Individual product slow cook counts	7U. Px SLO CT 0
Individual product frozen or overloaded	7V. Px FRZ/OV 1

NOTICE

During steps 7S through 7V, press the product buttons (or Manual Prog) to see data on individual product items.

Press [P] PROG ▷ to continue onto oil data log.

5-4. INFORMATION MODE DETAILS

8. OIL DATA (current batch; resets by Clean-Out Mode)
Press [▼] DOWN to step through the following data:

FUNCTION	DISPLAY EX:
The day current batch of oil was started	8A. SINCE APR-1
Number of days with data included in totals	8B. DAYS CNT 10
Number of monitored heat-ups	8C. HEAT-UPS 75
Number of slow heat-ups	8D. SLOW HT'S 2
Max time to heat 270°F to 310°F	8E. MAX HT TM 3:25
Lowest peak rate of all heat-ups	8F. MIN RATE 0.43
Maximum voltage	8G. MAX VOLT 102%
Minimum voltage	8H. MIN VOLT 91%
No. of "LOW VOLTAGE" warnings	8I. LO VOLT'S 0
Maximum amp draw	8J. MAX AMPS 35
Minimum amp draw	8K. MIN AMPS 32
No. of "LOW AMPS" warnings	8L. LO AMP'S 0
Non-cooking time (hrs) while fryer was on	8M. IDLE HRS 43
Total oil wear accumulated	8N. TOT WEAR 278
Total number of Cook Cycles	8O. TOT CK'S 125
Number of cycles started before ready	8P. NOT RDY'S 7
No. cycles quit early (0:11 or more remaining)	8Q. QUIT 11+ 1
No. cycles beeped *DONE* 21 sec or more	8R. DONE 21+ 3
Individual product cook counts	8S. Px CK CT 77
Individual product not detected counts	8T. Px NO DET 3
Individual product slow cook counts	8U. Px SLO CT 0
Individual product frozen or overloaded	8V. Px FRZ/OV 1

NOTICE

During steps 8S through 8V, press the product buttons (or Manual Prog) to see data on individual product items.

Press [P] PROG ▷ to continue onto prev oil data log.

5-4. INFORMATION MODE DETAILS

9. PREV OIL DATA (moved here from Oil Data log; assumes new peanut oil)

Press [▼] DOWN to step through the following data:

FUNCTION	DISPLAY EX:
The day previous batch of oil was started	9A. BEGAN MAR-9
Number of days with data included in totals	9B. DAYS CNT 18
Number of monitored heat-ups	9C. HEAT-UPS 98
Number of slow heat-ups	9D. SLOW HT'S 0
Max time to heat 270°F to 310°F	9E. MAX HT TM 1:31
Lowest peak rate of all heat-ups	9F. MIN RATE 0.57
Maximum voltage	9G. MAX VOLT 101%
Minimum voltage	9H. MIN VOLT 96%
Number of "LOW VOLTAGE" warnings	9I. LO VOLT'S 0
Maximum amp draw	9J. MAX AMPS 35
Minimum amp draw	9K. MIN AMPS 33
Number of "LOW AMPS" warnings	9L. LO AMP'S 0
Non-cooking time (hours) while fryer was on	9M. IDLE HRS 62
Total oil wear accumulated	9N. TOT WEAR 1523
Total number of Cook Cycles	9O. TOT CK'S 653
Number of cycles started before ready	9P. NOT RDY'S 25
Num. cycles quit early with 0:11 or more rem	9Q. QUIT 11+ 3
Num. cycles beeped *DONE* 21 sec or more	9R. DONE 21+ 13
Individual product cook counts	9S. Px CK CT 466
Individual product not detected counts	9T. Px NO DET 31
Individual product slow cook counts	9U. Px SLO CT 0
Individual product frozen or overloaded	9V. Px FRZ/OV 5

NOTICE

During steps 9S through 9V, press the product buttons (or Manual Prog) to see data on individual product items.

Press [P▷] PROG to continue onto INP A_VHDSF_M checks.

5-4. INFORMATION MODE DETAILS

10. INP A_VHDSF_M

This mode displays the status of components and inputs. If the input signal is detected, an identifying letter is displayed (see below). If the signal is not detected, "_" is displayed.

With the COOK/PUMP switch turned to COOK, and all inputs detected, "H_ P_ A_VHDSF_M" shows in the display, for electric fryers; "H_ P_ A_VHDSFP_" for gas fryers. See below for definition of codes.

A = COOK/PUMP switch turned to COOK
B = COOK/PUMP switch in PUMP position
V = Volts - 24 VAC detected
H = High Limit - If "H" is present, the high limit is good; if "H" is missing, the high limit is tripped (overheated) or faulty
D = Drain switch - If "D" is present, the drain handle is closed; if "D" is missing, the drain is open or faulty
S = COOK/PUMP switch "on" interlock circuit: If "S" is present, the COOK/PUMP switch is in the COOK position; if the "S" is missing, the power switch is either off, failed, or wired incorrectly
F = Fan
P = PV - Detects 24 V jumper to PV terminal - gas fryers only
M = MV - Detects 24 V jumper to MV terminal - electric fryers only

Press DOWN to view the specific status of each input. An underscore ("_") indicates the input is not presently detected. A checkmark ("/") indicates the signal is detecting a normal input. A blinking ("X") indicates the signal is presently detected, but is detected as a half-wave (partially failed) input.

NOTICE

The V, H, D, S, F, P, and M signals below are wired in series. The first signal missing out of this sequence will generally cause all signals to the right of it to be missing as well.

Press P PROG to continue onto OUTP H* P_ checks.

5-4. INFORMATION MODE DETAILS

11. OUTP H* P_

This mode displays the status of components and outputs. If the output signal is detected, an identifying letter is displayed (see below), followed by an "*". If the output is off, "_" is displayed.

H = Heat output
P = Pressure output

If heat is on, "H*" shows in display. If heat is off, "H_" shows in display. If controls senses a problem with the heat output, "H*" shows in display, with the "*" flashing.

If pressure is on, "P*" shows in display. If pressure is off, "P_" shows in display. If controls senses a problem with the pressure output, "P*" shows in display, with the "*" flashing.

Press ▼ DOWN to view the "amps" status of each output.

"H\" and "P\" in the display means the amps are good. A flashing "X" behind the H or P means a problem exists.

Press ▼ DOWN to view the no connect/ground ("NC/GD") status of each output. This monitors a possible problem with the relays on the output PC board.

"H\" and "P\" in the display means everything on the output PC board is good. A flashing "X" behind the H or P means a problem exists.

Press ▼ DOWN to view the outputs and inputs (see step 10) together.

Press P PROG ▷ to continue onto the POT TMP reading.

12. POT TMP

This step shows the present peanut oil temperature. The display shows "12. POT TMP (temp.)".

Press P PROG ▷ to continue onto the CPU TMP reading.

13. CPU TMP

This step shows the present PC board temperature.

Press P PROG ▷ to continue onto the ANALOG reading.

5-4. INFORMATION MODE DETAILS

14. ANALOG <1> 2344

This step displays the present status of any channel of the controller's a to d converter. This feature may be useful to a technician troubleshooting a problem with the fryer or controller.

The displayed value can be toggled between volts and bits by pressing YES 1. If the displayed value has a decimal point, it is voltage (0 to 5 VDC). If no decimal point is shown, the value is a-to-d bits (0 - 4095).

Press P PROG ▷ to continue onto AC volts reading.

15. AC VOLTS 98%

This item displays the present status of the line voltage supply to the fryer. The displayed value is averaged over a 10-second period, so brief dips or fluctuations in the voltage might not show up in this display.

The voltage is normally displayed as a "percent of nominal" value, where 100% would indicate that voltage is right on the nominal value (i.e. 208 volts for a 208v fryer). The display can be toggled to an actual Voltage value by pressing 6.

Press P PROG ▷ to continue onto AMPS reading.

16. AMPS 33 33 33

For electric fryers, this display shows the present readings from the fryer's amps sensors, which monitor the electrical current supplied to the heaters. (These sensors are not present on gas fryers.)

On pressure fryers, these values indicate the current through each supply leg to the heaters. These values do not correspond directly to the current through an individual heater coil.

The amps values should normally cycle on and off with the heat light, and all three values should be about the same.

NOTICE

Press and hold P PROG ▷ to exit Information Mode at any time, or after 2 minutes, controls automatically exit back to normal operation.

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 gas eight head fryers
blower	located on the rear of a gas eight head 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 that enable 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
deadweight seat	indentation on both ends of deadweight
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 fryer frypot
exhaust hose	a hose used to vent steam from the frypot on eight head fryers
fill lines	the lines marked on the interior real 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 includes a crumb catcher)*
flame sensors *(gas fryers only)*	the sensors that shut off the gas supply to eight head gas fryers if the pilot lights go out or do 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 (212°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 real 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 being 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
poker brush	a brush that is included with the fryer that is used to clear the drain in the bottom of the frypot. *(also referred to as straight brush)*
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 release 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

HENNY PENNY
4 HEAD PRESSURE FRYER

SPECIFICATIONS

Height	64" (162.6 cm) - with lid open
Width	18" (45.7 cm)
Depth	40.5” (102.9 cm) - Gas 37” (94.0 cm) - Electric
Pot Capacity	4 Head of chicken - 12 lb (5.4 kg) 43 lb peanut oil (19.5 kg) - Gas 48 lb peanut oil (21.8 kg) - Electric
Electrical	**Gas** 120 VAC, 1 Phase, 50/60 Hz, 10 Amp, 2 Wire + Ground **Electric** 208 VAC, 3 Phase, 60 Hz, 13.5 KW, 38 Amp 208 VAC, 1 Phase, 60 Hz, 13.5 KW, 65 Amp 240 VAC, 3 Phase, 60 Hz, 13.5 KW, 35 Amp 240 VAC, 1 Phase, 60 Hz, 13.5 KW, 61 Amp
Heating	**Gas** Propane or Natural Gas; 80,000 BTU/Hr. **Electric** Three, 4500 Watt, immersible elements
Pressure	12 PSI operating pressure 14.5 PSI safety relief pressure
Shipping Weight	Approximately 300 lb (136.0 Kg.)

NOTE

A data plate, located on inside the front door, gives the information of the type of fryer, serial number, warranty date, and other information pertaining to fryer.

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

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FM05-004-F Henny Penny Corp., Eaton, Ohio 45320, Revised 07-28-10