



Henny Penny Pressure Fryers Chick-fil-A Controls Manual

Chick-fil-A Controls Operating Instructions

TABLE OF CONTENTS

Section	Page
Section 1. INTRODUCTION	1-1
1-1 Introduction	1-1
1-2 Assistance	1-1
1-3 Safety	1-2
Section 2. OPERATION	2-1
2-1 Operating Controls	2-1
2-2 Clock Set	2-3
2-3 Diagnostic Mode and Special Functions	2-5
2-4 Warnings and Error Messages	2-8
2-5 Basic Operations	2-11
2-6 Clean-Out Mode	2-16
2-7 Manually Setting New or Used Peanut Oil	2-17
2-8 Checking Temperature Probe Calibration	2-17
Section 3. TROUBLESHOOTING	3-1
3-1 Introduction	3-1
3-2 Troubleshooting	3-1
3-3 Diagnostic Mode Details	3-10
3-4 Information Mode Details	3-26
Warranty	

SECTION 1. INTRODUCTION

1-1. INTRODUCTION

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 section 2-4.
- **Alarms and Error Messages**-provide immediate feedback for Operator error or fryer malfunction. See section 2-5.
- **Status Mode**-allows the Operator to view basic fryer information and status. See section 2-4.
- **Information Mode**-gathers and stores historic information on the fryer and Operator performance, and can be viewed by the Operator. See section 2-4.
- **Oil Filter Enforcement**-prevents the Operator from exceeding approved number of cook cycles before filtering the peanut oil. See section 2-4.
- **Manual Program Mode**-Operator can set time and temperature for nonstandard products. See section 2-4.
- **Easy toggle between English and Spanish operation.** See section 2-4.
- **Clean-Out Mode**-a preprogrammed function for cleaning the frypot. See section 2-14.












1-2. ASSISTANCE

Should you require outside assistance, just call Henny Penny Corporation at 1-800-417-8405, or 937-456-8405.





SECTION 2. OPERATION

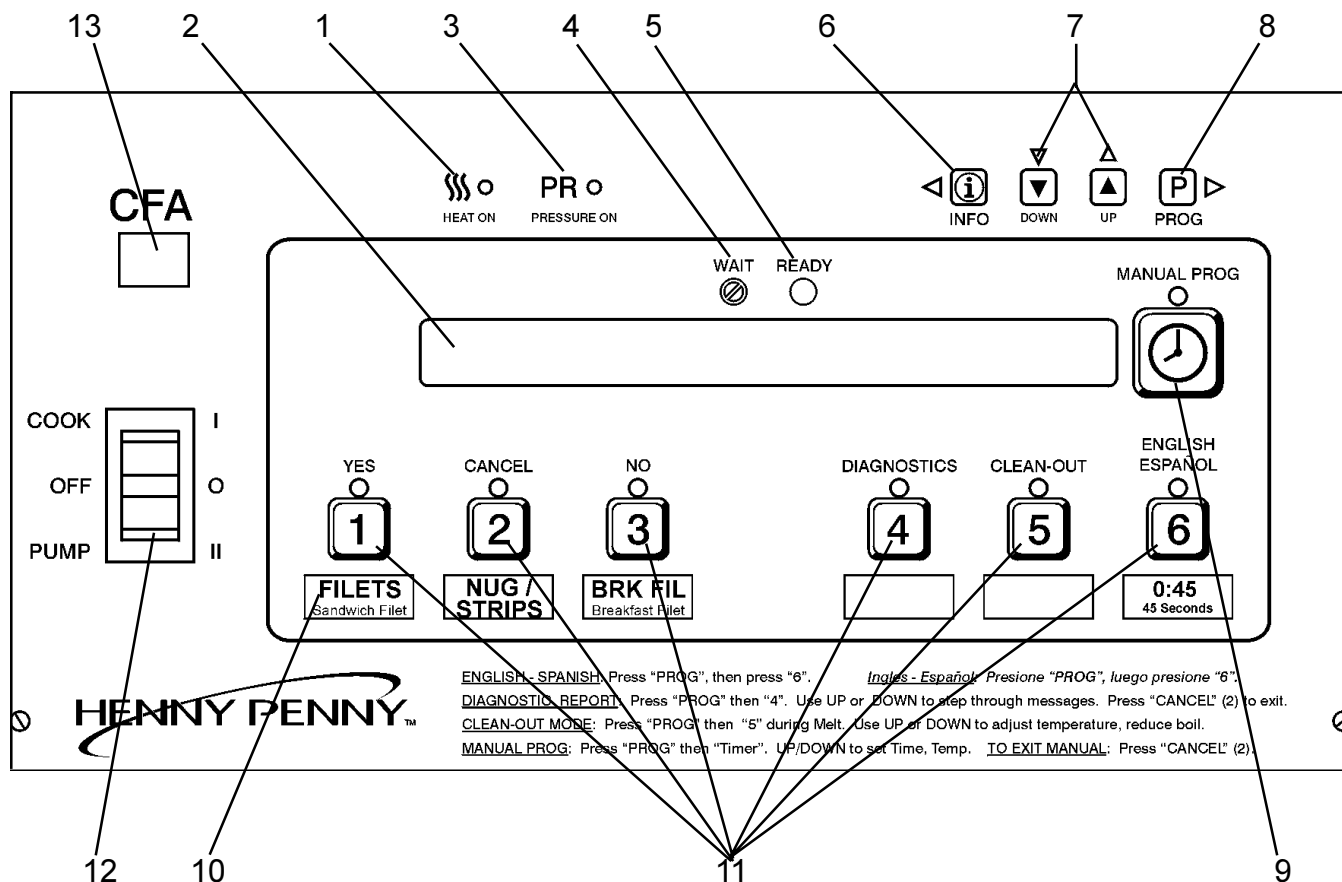
2-1. OPERATING CONTROLS

Figure 2-2 shows the location of following computer control items.

Figure No.	Item No.	Description	Function
2-2	1	 HEAT ON	Lights when the control calls for heat and the peanut oil should start heating.
2-2	2	Digital Display	Shows all the functions of the cooking cycle, Program Mode, Diagnostic Mode and alarms.
2-2	3	 PRESSURE ON	Lights when the solenoid closes and pressure starts to build inside frypot.
2-2	4		Flashes when the peanut oil temperature is NOT at the proper temperature for dropping product into the frypot.
2-2	5		Lights when the peanut oil temperature is 5°F below setpoint to 15°F above the cooking temperature, signaling product can now be cooked.
2-2	6	 INFO	Press to display current fryer information and status. If pressed in the Program Mode, shows previous settings. Pressing this along with  accesses the Information Mode which has <div style="text-align: center;">PROG</div> historic information on the Operator and fryer performance.
2-2	7	 DOWN  UP	Used to adjust the value of the currently displayed setting in the Program Modes.
2-2	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  it <div style="text-align: center;">INFO</div> 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.
2-2	9		Used to start and 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.

2-1. OPERATING CONTROLS**(Continued)**





















2-2	10	Menu Card	Shows name of food product selected. The menu card strip is located behind the decal.
2-2	11	Product Select	Press to select food products to be cooked, as well as, answering display prompts. Also, ^{DIAGNOSTICS}  accesses the diagnostics; ^{CLEAN-OUT}  , the Clean-Out Mode; and ^{ENGLISH ESPAÑOL}  , toggles between English and Spanish display. (Press  before entering any of the above modes.) PROG
2-2	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 must be met before operating the filter pump. These conditions are covered later in this section.
2-2	13	Unit Identification Window	The unit's model number and the control's hardware and software version numbers appear here.










Control Decal
Figure 2-2

2-2. CLOCK SET

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

2-2. CLOCK SET (Continued)

14. Press . Display shows “CS-6” then “CLOCK MODE” along with “1.AM/PM”.
PROG
15. “1.AM/PM” is 12 hour time, “2.24-HR” is 24 hour time. Press   to change.
DOWN UP
16. Press . Display shows “CS-7” then “DAYLIGHT SAVINGS ADJ” along with “2.US”.
PROG
17. Press   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 Saving 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  to exit.
PROG



2-3. DIAGNOSTIC MODE AND SPECIAL FUNCTIONS


Diagnostic Mode

To view summaries of the fryer and Operator performance, press  then . Press   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



On several of the screens you may have to press  or  to respond to questions asked.

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



See section 5-3 for more details of the Diagnostic Mode.

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 (section 3-14), this function resets.











Language Selection

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


2-3. 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  then  .
PROG
2. Use   to set cook time.
DOWN UP
3. Press  and use   to set temperature.
PROG DOWN UP
4. Press  to start Manual Mode. Display shows “MANUAL”
PROG
and you start a cook cycle by pressing  .
5. Press  to exit Manual Mode.
CANCEL
2

Status Mode

Pressing  during idle time, allows Operator to view:
INFO

- 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  during a cook cycle allows the Operator to view:
INFO

- 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
- 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 the Filter Lockout occurs. For example, “5X” means the Operator can run 5 more cook cycles before filtering. This function cannot be bypassed and greatly increases the life of the peanut oil.



2-3. DIAGNOSTIC MODE

AND SPECIAL

FUNCTIONS

(Continued)

Information Mode

This mode gathers and stores historic information on the fryer and Operator performance. Press  and  at the same time and


PROG

INFO

“*INFO MODE*” shows on display. Press  or  to access the

PROG

INFO

steps and press  to view the statistics within each step.

DOWN


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 section 5-4 for more details of the Information Mode.



2-4. 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  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  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  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 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 setpoint temperature, the alarm automatically stops.


**2-4. WARNINGS AND
ERROR MESSAGES
(Continued)**

ERROR CODES

DISPLAY	CAUSE	CORRECTION
“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.
“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. 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.
(500 fryer only) “E-25” “HEAT AMPS WERE TOO HIGH	Wrong or faulty elements or wiring problem.	<p>Have electrical supply, wiring, and elements checked.</p> <div data-bbox="961 1507 1380 1642" data-label="Image"> </div> <p><i>Because of the seriousness of this error code, turn the Cook/Pump switch OFF and back to COOK to cancel.</i></p>



**2-4. WARNINGS AND
ERROR MESSAGES
(Continued)**

ERROR CODES

DISPLAY	CAUSE	CORRECTION
(500 fryer only) “E-26” “HEAT AMPS ARE LOCKED ON”	Faulty contactors or PC board.	Have the contactors and PC board checked.  <i>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.</i>
“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-70” “PWR SW OR WIRES FAILED”	Faulty Cook/Pump switch or switch wiring. Faulty I/O board.	Have Cook/Pump 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. Stuck or clogged solenoid valve.	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. Have solenoid checked and cleaned.

2-5. 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 to 1/2 inch (6.4-12.7 mm) below level indicator line.
5. Connect power to the fryer.
6. On gas models, light the pilot light.
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   to set the number of days of old peanut oil.
DOWN UP
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 heats the peanut oil to preset temperature.



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.





Do not bypass the melt cycle unless enough melted peanut oil completely covers the elements in electric fryers or the curved frypot surface in gas fryers. Excessive smoking or fire could 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.

2-5. 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. 



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 section 3-9.
12. Follow the steps in Chick-fil-A's training materials to load the product.



*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 peanut oil age, product weights, product temperature, and other operational variables.



Do not overload, or place product with extreme moisture content into the basket. 12-14 lb (5.44-6.35 kgs.) is the maximum amount of product. Failure to follow these instructions can result in peanut oil overflowing the frypot, causing burns or damage to the fryer.

13. Close the lid quickly, latching the lid.



Do not press  until lid is closed, or the lid will try to lock as it is being tightened down.

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

2-5. BASIC OPERATION



(Continued)



LATCH THE LID PROPERLY AND ALIGN THE RED BALLS OR 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  . To stop a cook cycle, press  .

INFO

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 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, and the display flashes “DONE”. Press  to stop the alarm.



CHECK THE PRESSURE GAUGE READING. DO NOT ATTEMPT TO OPEN THE LID UNTIL THE PRESSURE DROPS TO ZERO. OPENING THE LID WHEN THE FRYPOT IS PRESSURIZED ALLOWS HOT PEANUT OIL AND MOISTURE TO ESCAPE FROM THE FRYPOT, RESULTING IN SEVERE BURNS.

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



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

2-5. 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.



Do not let 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.



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

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



*In the Cook mode, when “**FILTER SUGGESTED**”, shows in the display, the operator has the option to filter at this time, or to continue cooking. But, if the operator continues cooking, a Filter Lockout occurs within the next cook cycle, or two.*

When “**FILTER LOCKOUT**”, then “**YOU *MUST* FILTER NOW.....**” shows in the display,  is the only PROG

button that functions, until the peanut oil is filtered. Follow Chick-fil-A's training materials on filtering.






Discard peanut oil if display shows “CHANGE OIL SOON**” or if peanut oil shows signs of excessive foaming or smoking. With prolonged use, the flashpoint of peanut oil is reduced. Discard peanut oil if it shows signs of excessive smoking or foaming, or serious burns, personal injury, fire and/or property damage could result.**

2-6. CLEAN-OUT MODE

The Chick-fil-A control has a Clean-Out Mode to clean the frypot upon initial start-up and every change of shortening.

Follow the steps in Chick-fil-A's training materials on Cleaning the Frypot.

When heating the cleaning solution, turn the Cook/Pump switch to COOK. Press  then . "CLEAN-OUT ?" then

"1=YES 3=NO" shows in display. Press  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   if necessary to adjust the temperature

and keep the cleaning solution from boiling over.













NEVER PRESSURIZE FRYER TO CLEAN. LEAVE THE LID OPEN. WATER UNDER PRESSURE IS SUPER HEATED AND CAUSES SEVERE BURNS IF IT COMES IN CONTACT WITH SKIN.





DO NOT let the cleaning solution boil. If the cleaning solution in the frypot starts to foam and boil over, IMMEDIATELY TURN THE COOK/PUMP SWITCH TO OFF. DO NOT try to contain it by closing the lid or severe burns could result.

2-7. MANUALLY SETTING NEW OR USED PEANUT OIL FUNCTION

1. Turn the Cook/Pump switch to off.
2. Press and hold  while turning the Cook/Pump switch to COOK, until **“IS OIL NEW OR USED?”** shows in the display.
3. Press  for new peanut oil, or  for used peanut oil.
4. If  was pressed, **“OIL IS NEW?”** shows in the display. Press  for YES, and **“THANK YOU”** shows in the display, and controls resume normal operation.
5. If  was pressed, **“OIL IS USED?”** shows in the display.
6. Press  for YES, and **“HOW OLD IS OIL?”** shows in display.
7. Press   to set the age of the peanut oil.
8. Press . **“THANK YOU”** shows in the display and controls resume normal operation.

2-8. CHECKING TEMPERATURE PROBE CALIBRATION

1. Heat peanut oil and stir completely until peanut oil temperature has stabilized and  is on.
2. Place an 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  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** on page 5-11. 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.

SECTION 3. TROUBLESHOOTING

3-1. 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.

3-2. 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)	<ul style="list-style-type: none"> • Temperature programmed too hot • Breeding product too far • Done alarm ignored for more than 20 seconds • Wrong Product button pressed 	<ul style="list-style-type: none"> • See Diagnostic Mode D 10, page 5-24. If temperature settings have been changed, have the controls reinitialized. • Bread product just before frying. • If the fryer hasn't been used since the problem batch, see Information Mode 4 H, page 5-27. For more information on this problem, see Information Modes 5 U, 6 U, 7 R, or 8 R, pages 5-28 to 5-31. • Be sure to press the correct product button. If the fryer hasn't been used since the problem batch, see Information Mode 4 B, page 5-27 to see what product button was pressed.
B. Too Dark (all batches)	<ul style="list-style-type: none"> • Temperature probe out of calibration. • Peanut oil too old. • Peanut oil too dark. • Faulty probe. "E6" 	<ul style="list-style-type: none"> • Check temperature probe calibration. See section 4-6. <ul style="list-style-type: none"> a.If less than 5° off, see Diagnostic Mode D 1, page 5-11. b.If between 5 and 15 degrees off, calibrate probe. If more than 15 degrees off, replace probe. • If peanut oil is smoking or has burnt taste, change peanut oil. • See Diagnostic Mode D 2, page 5-12. Change peanut oil if controls indicate it should be changed. • Filter peanut oil. • Change peanut oil. • If probe can't be recalibrated, have probe replaced.

Problem	Cause	Correction
COOKING SECTION (Continued)		
C. Too Light (all batches)	<ul style="list-style-type: none"> • Slow fryer heat-up/recovery. • Temperature probe out of calibration. • Oil usage wasn't set for new peanut oil. 	<ul style="list-style-type: none"> • See Diagnostic Mode D 4, page 5-15 for present day's performance. Or see Information Modes 5, 6, 7, 8, and 9 for more information on this problem, pages 5-28 to 5-32. • Low voltage. See Diagnostic Mode D 3, page 5-13 for present day's voltage performance. See Information Modes 4, 5, 6, 7, 8, 9, and 14 for more information on this problem, pages 5-27 to 5-32. • Low gas pressure. Have gas pressure checked going to burners, on gas fryers. • Check temperature probe calibration. See section 4-6. <ol style="list-style-type: none"> a.If less than 5° off, see Diagnostic Mode D 1, page 5-11. b.If between 5 and 15 degrees off, calibrate probe. If more than 15 degrees off, replace probe. • 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)	<ul style="list-style-type: none"> • Temperature programmed too low • Product placed in peanut oil before proper temperature • Wrong cook button pushed. 	<ul style="list-style-type: none"> • See Diagnostic Mode D 10, page 5-24. If temperature settings have been changed, without authorization, have the controls reinitialized. • If fryer hasn't been used since the problem batch, see Information Mode 4 C, page 5-27. For more information on this see Information Modes 5 S, 6 S, 7 P, or 8 P, pages 5-28 to 5-31. • If fryer hasn't been used since problem batch, see Information Mode 4 B, page 5-27 to see what product was selected.

Problem	Cause	Correction
COOKING SECTION (Continued)		
B. Too Light (Continued)	<ul style="list-style-type: none"> • Cook cycle aborted before alarm and “DONE” flashes. • Frozen product placed in peanut oil 	<ul style="list-style-type: none"> • See Diagnostic Mode D 7, page 3-20, to see how many times the cook cycle was stopped before the end of the cycle. • Use fresh or thawed product. See Diagnostic Mode D 5, page 3-17, to see if the controls sensed any frozen or overloaded batches.
Dryness of Product	<ul style="list-style-type: none"> • Moisture loss prior to cooking • Over-cooking the product. • Time of cook cycle set too long • Wrong cook button pushed. • Low operating pressure 	<ul style="list-style-type: none"> • Use fresh product. • Cover product with plastic wrap, reducing evaporation. • Done alarm ignored for more than 20 seconds. If the fryer hasn't been used since the problem batch, see Information Mode 4 H, page 3-27. For more information on this problem, see Information Modes 5 U, 6 U, 7R, or 8 R, pages 3-28 to 3-31. • See Diagnostic Mode D 10, page 3-24. If time settings have been changed, have the controls reinitialized. • If fryer hasn't been used since problem batch, see Information Mode 4 B, page 3-27 to see what product was selected. • Check pressure gauge reading. Check for pressure leaks.
Burned Taste	<ul style="list-style-type: none"> • Burned Peanut oil flavor • Peanut oil needs filtering • Frypot not properly cleaned. 	<ul style="list-style-type: none"> • Replace Peanut oil • Filter peanut oil more often. • Drain and clean frypot.

Problem	Cause	Correction
COOKING SECTION (Continued)		
Product not done	<ul style="list-style-type: none"> • Cook cycle aborted before alarm, and “DONE” flashes. • Frozen product placed in peanut oil • Wrong cook button pushed. • Temperature programmed too low or not programmed properly. • Temperature probe out of calibration. • Slow fryer heat-up/recovery. • Product too thick. 	<ul style="list-style-type: none"> • See Diagnostic Mode D 7, page 5-20, to see how many times the cook cycle was stopped before the end of the cycle. • Use fresh or thawed product. See Diagnostic Mode D 5, page 5-17, and if the controls sensed frozen or overloaded batches. • If fryer hasn't been used since problem batch, see Information Mode 4 B, page 5-27 to see what product was selected. • See Diagnostic Mode D 10, page 5-24. If temperature settings have been changed, have the controls reinitialized. • Check temperature probe calibration. See section 4-6. <ul style="list-style-type: none"> a.If less than 5° off, see Diagnostic Mode D 1, page 5-11. b.If between 5 and 15 degrees off, calibrate probe. If more than 15 degrees off, replace probe. • See Diagnostic Mode D 4, page 5-15 for present day's performance. Or see Information Modes 5, 6, 7, 8, and 9 for more information on this problem, pages 5-28 to 5-32. • Low voltage. See Diagnostic Mode D 3, page 5-13 for present day's voltage performance. See Information Modes 4, 5, 6, 7, 8, 9, and 14 for more information on this problem, pages 5-27 to 5-32, and 5-35. • Low gas pressure. Have gas pressure checked going to burners, on gas fryers. • Make sure chicken filets have been fileted.

Problem	Cause	Correction
POWER SECTION		
With Cook/Pump Switch in Cook position, fryer is completely without power	<ul style="list-style-type: none"> • Open Circuit. 	<ul style="list-style-type: none"> • 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		
<p>Pressure will not exhaust at end of cooking cycle.</p> <p>Operating pressure too high</p>  <p>DO NOT OPERATE UNIT IF HIGH PRESSURE CONDITIONS EXIST, SEVERE INJURIES AND BURNS WILL RESULT. PLACE THE COOK/PUMP SWITCH IN THE "OFF" POSITION IMMEDIATELY. RELEASE THE PRESSURE BY ALLOWING UNIT TO COOL. THE PRESSURE WILL THEN DROP. DO NOT RESUME USE OF UNIT UNTIL CAUSE OF HIGH PRESSURE HAS BEEN FOUND AND CORRECTED.</p>	<ul style="list-style-type: none"> • Exhaust line from solenoid valve to exhaust tank clogged. • Solenoid valve clogged. • Dead weight clogged. • Exhaust line to stack clogged. 	<ul style="list-style-type: none"> • Turn unit off and allow fryer to cool to release pressure from frypot; have all pressure lines, exhaust stacks, and exhaust tank cleaned. • Have solenoid checked and cleaned. • Turn unit off and allow fryer to cool to release pressure from frypot; remove dead weight and clean, per section 3-16. • Clean exhaust line to stack.

Problem	Cause	Correction
PRESSURE SECTION (Continued)		
Pressure does not build	<ul style="list-style-type: none"> • Not enough product in fryer or product not fresh. • Metal shipping spacer not removed from dead weight. • Lid open or not latched. • Solenoid valve leaking or not closing. • Dead weight valve leaking. • Pressure not programmed. • Lid gasket leaking. • Safety relief valve leaking. 	<ul style="list-style-type: none"> • Place proper quantity of fresh product within frypot to generate steam. • Remove shipping spacer. See Unpacking Section. • Close and latch lid. • Have solenoid valve checked or cleaned. • Have Dead weight valve repaired. • See Diagnostic Mode D 10, page 3-24. If pressure settings have been changed, have the controls reinitialized.. • Reverse gasket or lid needs adjusted. • Check and replace if necessary.
FILTER SYSTEM SECTION		
Filter motor runs but pumps peanut oil slowly	<ul style="list-style-type: none"> • Pump clogged • Filter line connection loose. • Solidified peanut oil in lines 	<ul style="list-style-type: none"> • Have pump cleaned. • Tighten all filter line connections. • Clear all filter lines of solidified peanut oil.
Filter switch on, motor does not run	<ul style="list-style-type: none"> • Defective Cook/ Pump switch • Defective motor • Motor thermal protector tripped 	<ul style="list-style-type: none"> • Have switch checked. • Have motor checked. • Reset thermal protector.

Problem	Cause	Correction
FILTER SYSTEM SECTION (Continued)		
Motor hums but will not pump.	<ul style="list-style-type: none"> • Clogged lines or pump 	<ul style="list-style-type: none"> • Have pump and lines removed and cleaned. • Have pump seal, rotor and rollers replaced.
HEATING OF PEANUT OIL SECTION		
Peanut oil will not heat	<ul style="list-style-type: none"> • Blown fuse or tripped circuit breaker • Faulty cord and plug. • Faulty PC Board. • Faulty or tripped high limit. “E10” • Drain valve open. “E15” • Possible faulty probe. “E6” • Possible faulty contactor (electric models) • Gas Valve knob turned to the Off position (gas models) • Faulty Thermocouple (gas models) 	<ul style="list-style-type: none"> • Reset breaker or replace fuse. circuit breaker at supply box. • Check cord and plug and Check power at receptacle. power at wall receptacle. • Have control panel checked. • Reset high limit per section 3-1. If high doesn't reset, have it checked. • Close drain valve. • Have temperature probe checked. • See Diagnostic Modes D 4, page 5-15. See if “CHECK COILS, CONTACTORS AND WIRING” shows on display. • Make sure the Gas Valve knob is turned to ON. • Have thermocouple checked.
	<ul style="list-style-type: none"> • Faulty Cook/Pump switch. • Faulty drain switch. “E15” • Possible faulty gas control 	<ul style="list-style-type: none"> • See Information Mode 10, page 5-35 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	<ul style="list-style-type: none"> • Low or improper amps • Low or improper voltage 	<ul style="list-style-type: none"> • See Information Mode 16, page 5-35, for present amperage. Or see Information Modes 4, 5, 6, 7, 8, 9, for more information on this problem, pages 5-27 to 5-32. Diagnostic Mode D 4 gives present day's heating performance. • See Diagnostic Modes D 3 & D 4, pages 5-13 & 5-15 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, pages 5-27 to 5-32 and 5-35.
	<ul style="list-style-type: none"> • Weak or burnt out elements (elec. model) • Burnt or charred connectors. • Faulty contactor (electric models) 	<ul style="list-style-type: none"> • See Diagnostic Modes D 4, page 5-15. See if "CHECK COILS, CONTACTORS AND WIRING" shows on display. If so, have fryer checked by a certified service technician.
	<ul style="list-style-type: none"> • Wire(s) loose • Supply line too small - low gas volume. (gas models) • Improper ventilation system. (gas models) 	<ul style="list-style-type: none"> • Have wires tightened • Increase supply line size. Refer to installation instructions. • Refer to installation instructions.



3-3. 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  button, then press  button. The controller displays the following message:

“*DIAGNOSTIC* “
“ *REPORT* “

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

  are used to step through the report items. Press  to step forward to the next item. Press  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  button then press  .




To exit Diagnostic Report Mode at any point, press  .


3-3. DIAGNOSTIC MODE DETAILS (Continued)

D 1: Color Adjustment

This step lets the user make slight adjustments to the product color. The color adjustment is performed by increasing or decreasing the regulating temperature of the fryer.


The first step of this item asks “IS PRODUCT COLOR OK?”


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

If a change *is* desired, press  (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.  and

 are used to adjust the darkness setting.

To make the product darker, press  to move the blinking “ * “ toward the DK (darker) side.

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

When done adjusting, press  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  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.

3-3. 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 “




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

Press  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  to move on to the next section.

3-3. 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.



“[]” 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

3-3. DIAGNOSTIC MODE DETAILS (Continued)



“D3: ARE OTHER”

“D3: FRYERS”

“D3: HAVING THIS”

“D3: PROBLEM”

“D3: TODAY?”


Press  or .

If  is pressed (other fryers are having this problem):

“D3: FACILITY”

“D3: OR UTILITY”

“D3: PROBLEM”

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

“D3: CHECK CORD,”

“D3: WIRING,”

“D3: AND BREAKER”

In either case, press  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”

3-3. 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  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.

3-3. 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”

3-3. 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 )
DOWN

“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”

3-3. 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 “XXXXXX 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

3-3. 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.

It is understood that the peanut oil temperature could be in the Ready range when the user begins loading product, and could drop out of the Ready range by the time the user finishes loading, closes the lid, and starts the cook timer. This is normal, acceptable operation. The controller accepts a cook cycle as “ready” if the peanut oil temperature was in the Ready range at any time in the [90] seconds before the button was pressed to start the cook cycle.

A “**WAS NOT READY**” warning is generated at the start of a cook cycle only if the oil temperature was not in the ready range at any time during the [90] second period before the cook timer was started. 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

3-3. 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 )
DOWN

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 will 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 )
DOWN

3-3. 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” cook 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

3-3. 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” cook 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.

The controller continually monitors the temperature and notes sudden changes. When the user presses the button to start a cook cycle, the controller checks to see if any sudden change was observed prior to the start of the cycle. If a sudden temperature drop was noted in the [90] second period before the start of the cook timer, the controller interprets this to be the moment when the product was placed into the peanut oil. The cooking timer then adjusts accordingly.

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 more than [90] seconds from the time he starts loading 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.

3-3. 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)

3-3. 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 Chick-fil-A’s settings.

Some programming items may have been changed from original values under the direction of Chick-fil-A’s 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”

3-3. 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 section 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, Clean-out Mode, and Amps and Voltage alarms.

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 “

3-3. DIAGNOSTIC MODE DETAILS (Continued)

The final item in section 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”


3-4. INFORMATION MODE DETAILS

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


Press  and  at the same time and “*INFO MODE*”


shows in the display, followed by “1. E-LOG”.





Press and hold  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  and “1A. (date & time) *NOW*” shows in display. This is the present date and time.


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

Press  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  to continue to P-LOG.


2. P-LOG (power-up log)

Press  and “2A. (date & time) *NOW*” shows in display. This is the present date and time.


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


3-4. INFORMATION MODE DETAILS


Press  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  to continue onto the heat-up log.

3. HEAT-UP'S


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

Press  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  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  to continue onto the COOK DATA.

4. COOK DATA


Press  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  to continue onto TODAY'S DATA.

3-4. INFORMATION MODE DETAILS

5. **TODAY'S DATA** (automatically resets each day)

Press  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 generated	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





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

Press  to continue onto PREV-DAY-SUN log.

3-4. INFORMATION MODE DETAILS

6. PREV DAY - SUN

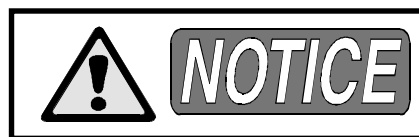
Press  to step through the following data. During each step, press

 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 generated	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




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

Press  to continue onto 7-DAY TOTALS log.

3-4. INFORMATION MODE DETAILS

7.7-DAY TOTALS

Press  to step through the following data:

DOWN


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 generated	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




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

Press  to continue onto OIL DATA log.

PROG

3-4. INFORMATION MODE DETAILS

8. OIL DATA (current batch; resets by Clean-out Mode)

Press  to step through the following data:

DOWN


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 generated	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




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

Press  to continue onto PREV OIL DATA log.

PROG

3-4. INFORMATION MODE DETAILS

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

Press  to step through the following data:

DOWN

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 generated	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



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

Press  to continue onto INP A_VHDSF_M check.

PROG

3-4. 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 COOK 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  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.



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  to continue onto OUTP H* P_ check.

3-4. INFORMATION MODE DETAILS

11. INP A_VHDSF_M


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, “H_” shows in display. If controls senses a problem with the pressure output, “H*” shows in display, with the “*” flashing.


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

Press  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  to continue onto the CPU TMP reading.

13. CPU TMP

This step shows the present PC board temperature.

Press  to continue onto the ANALOG reading.

3-4. 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




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  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 .

Press  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.



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

LIMITED WARRANTY FOR HENNY PENNY APPLIANCES

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 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. To validate this warranty, the registration card for the appliance must be mailed to Henny Penny within ten (10) days after installation.

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 and 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 represented 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.