

Frymaster®

We Fit the Way You Fry™

FilterQuick™ FQ4000 easyTouch®

FQ80/100/120 Chicken Controller

Operation Manual

This manual is updated as new information and models are released. Visit our website for the latest manual.



⚠ CAUTION

READ THE INSTRUCTIONS BEFORE USING.



Part Number: FRY_IOM_8197639 01/2024

Original Instructions



WELBILT®

NOTICE

IF, DURING THE WARRANTY PERIOD, THE CUSTOMER USES A PART FOR THIS FRYMASTER DEAN EQUIPMENT OTHER THAN AN UNMODIFIED NEW OR RECYCLED PART PURCHASED DIRECTLY FROM FRYMASTER DEAN, OR ANY OF ITS AUTHORIZED SERVICE CENTERS, AND/OR THE PART BEING USED IS MODIFIED FROM ITS ORIGINAL CONFIGURATION, THIS WARRANTY WILL BE VOID. FURTHER, FRYMASTER DEAN AND ITS AFFILIATES WILL NOT BE LIABLE FOR ANY CLAIMS, DAMAGES OR EXPENSES INCURRED BY THE CUSTOMER WHICH ARISE DIRECTLY OR INDIRECTLY, IN WHOLE OR IN PART, DUE TO THE INSTALLATION OF ANY MODIFIED PART AND/OR PART RECEIVED FROM AN UNAUTHORIZED SERVICE CENTER.

NOTICE

This appliance is intended for professional use only and is to be operated by qualified personnel only. A Frymaster Factory Authorized Servicer (FAS) or other qualified professional should perform installation, maintenance, and repairs. Installation, maintenance, or repairs by unqualified personnel may void the manufacturer's warranty.

NOTICE

This equipment must be installed in accordance with the appropriate national and local codes of the country and/or region in which the appliance is installed.

NOTICE TO OWNERS OF UNITS EQUIPPED WITH CONTROLLERS

U.S.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: 1) This device may not cause harmful interference, and 2) This device must accept any interference received, including interference that may cause undesired operation. While this device is a verified Class A device, it has been shown to meet the Class B limits.

CANADA

This digital apparatus does not exceed the Class A or B limits for radio noise emissions as set out by the ICES-003 standard of the Canadian Department of Communications.

Cet appareil numérique n'émet pas de bruits radioélectriques dépassant les limites de classe A et B prescrites dans la norme NMB-003 édictée par le Ministre des Communications du Canada.

 DANGER

Prior to movement, testing, maintenance and any repair on your Frymaster fryer, disconnect ALL electrical power from the fryer.

 DANGER

Keep all items out of drains. Closing actuators may cause damage or injury.

 DANGER

Remove all drops of water from the frypot before filling with oil. Failure to do so will cause spattering of hot liquid when the oil is heated to cooking temperature.

 WARNING

NEVER drain boil out or cleaning solution into a shortening disposal unit (SDU), a built-in filtration unit, a portable filter unit, or an OQS (Oil Quality Sensor). These units are not intended for this purpose and will be damaged by the solution and void the warranty.

 DANGER

Allow oil to cool to 100°F (38°C) before draining into an appropriate METAL container for disposal.

 DANGER

When draining oil into a disposal unit, do not fill above the maximum fill line located on the container.

 DANGER

When draining oil into an appropriate SDU or METAL container, ensure the container will hold at least 16 gallons (60 liters) or more for FQG120T-T fryers. Otherwise, oil could overflow and can cause injury.

 DANGER

When draining boil out solution oil into an appropriate METAL container, ensure the container will hold at least 16 gallons (60 liters) or more for FQG120T-T fryers. Otherwise boil out solution could overflow and can cause injury.

 DANGER

Open the filter pan slowly to avoid splashing of hot oil that may cause severe burns, slipping and falling.

 DANGER

Ensure that the frypot and filter pan are completely dry and free of water before filling with oil. Failure to do so will cause splattering of hot liquid when the oil is heated to cooking temperature.

 WARNING

The on-site supervisor is responsible for ensuring that operators are made aware of the inherent hazards of operating a hot oil filtering system, particularly the aspects of oil filtration, draining and cleaning procedures.

 DANGER

Do not drain more than one frypot at a time into the built-in filtration unit to avoid overflow and spillage of hot oil that may cause severe burns, slipping and falling.

 WARNING

Never drain water into the filter pan. Water will damage the filter pump

 WARNING

Ensure a filter is in place prior to filtering, draining or disposing of oil. Failure to insert a filter may result in clogged lines and/or pumps.

 DANGER

DO NOT drain more than one full frypot into the SDU at one time to avoid overflow and spillage of hot oil that may cause severe burns, slipping and falling.

 WARNING

Never operate the filter system without oil in the system.

 WARNING

Never use the filter pan to transport old oil to the disposal area.

 WARNING

Never leave the fryer unattended during the boil out process. If the solution overflows, press the ON/OFF switch to the OFF position immediately.

 WARNING

This appliance is not intended for use by children under the age of 16 or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision concerning use of the appliance by a person responsible for their safety. Do not allow children to play with this appliance.

 WARNING

Operation, installation, and servicing of this product may expose you to chemicals/products including [Bisphenol A (BPA), glass wool or ceramic fibers, and crystalline silica], which is [are] known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

 WARNING

Do not leave the fryer unattended during use.

 WARNING

Use caution when dropping wet food or water into the hot oil. It may cause spattering of the oil, which may cause severe burns

 WARNING

Do not overfill the frypot to avoid overflow of hot oil that may cause severe burns, slipping and falling.

 WARNING

Use caution and wear appropriate safety equipment when adding oil to the fryer, to prevent splashing of hot oil, which may cause severe burns.

 WARNING

The OQS (Oil Quality Sensor) may be damaged by the following:

1. Incorrect assembly of the filter pan allowing Magnesol or other filter powders under the filter paper.
2. Failure to use filter paper or pads.
3. Torn filter paper or pads.
4. Pumping water, boil out solution or other cleaners through the OQS sensor.
5. Using high pressure to clear the sensor.

Failure to follow these guidelines may result in high replacement costs and void the warranty.

 WARNING

Use caution and wear appropriate safety equipment to avoid contact with hot oil or surfaces that may cause severe burns or injury.

 DANGER

Do not spray aerosols in the vicinity of this appliance while it is in operation.

 DANGER

The front ledge of the fryer is not a step! Do not stand on the fryer. Serious injury can result from slips or contact with the hot oil.

 DANGER

No structural material on the fryer should be altered or removed to accommodate placement of the fryer under a hood. Questions? Call the Frymaster Dean Service Hotline at 1-800-551-8633.

 WARNING

Do not block the area around the base or under the fryers.

 WARNING

Do not use water jets to clean this equipment.

 WARNING

If the electrical power supply cord is damaged, it must be replaced by a Frymaster Factory Authorized Servicer or a similarly qualified person in order to avoid a hazard.

 WARNING

Use caution when dropping large amounts of food into the hot oil. It may cause large amounts of foaming, which can overflow and may cause burns.

 WARNING

Opening the drain valve will lead to the outflow of the hot contents of the fryer that can cause injury.

NOTICE TO U.S. CUSTOMERS

This equipment is to be installed in compliance with the basic plumbing code of the Building Officials and Code Administrators International, Inc. (BOCA) and the Food Service Sanitation Manual of the U.S. Food and Drug Administration.

NOTICE

This equipment must be installed in accordance with the appropriate national and local codes of the country and/or region in which the appliance is installed. For the United States and Canada these are the National Fuel Gas Code, ANSI Z233.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1. See NATIONAL CODE REQUIREMENTS in Chapter 2 of this manual for specifics.

The gas manifold of this appliance or of the battery of which it is a part must be connected to a gas appliance pressure regulator adjusted for the manifold pressure marked on the rating plate.

The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of ½ psi (3.5 kPa/13.84 inches W.C.).

The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than ½ psi (3.5 kPa/13.84 inches W.C.).

 DANGER

Instructions to be followed in the event the operator smells gas or otherwise detects a gas leak must be posted in a prominent location. This information can be obtained from the local gas company or gas supplier.

NOTICE

The Commonwealth of Massachusetts requires any and all gas products to be installed by a licensed plumber or pipe fitter.

⚠ WARNING

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

⚠ FOR YOUR SAFETY

Do not store or use gasoline or other flammable liquids or vapors in the vicinity of this or any other appliance.

⚠ WARNING

After installation of a gas fryer and after any maintenance to the gas system of a gas fryer-manifold, valve, burners, etc. – check for gas leaks at all connections. Apply a thick soapy solution to all connections and ensure there are no bubbles. There should be no smell of gas.

NOTICE

Drawings and photos used in this manual are intended to illustrate operational, cleaning and technical procedures and may not conform to onsite management operational procedures.

⚠ DANGER

Adequate means must be provided to limit the movement of the appliance without depending upon the gas line connector and the quick-disconnect device or its associated piping to limit the appliance movement.

All fryers equipped with casters must be stabilized by installing restraining chains. If a flexible gas line is used, an additional restraining cable must be connected at all times when the fryer is in use.

All fryers equipped with casters must be installed using a connector that complies with the Standard for Connectors for Moveable Gas Appliances, ANSI Z21.69 or CSA 6.16, and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use with Gas Fuel, ANSI Z21.41 or CSA 6.9.

⚠ DANGER

When installed, this appliance must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70, the Canadian Electrical Code, CSA C22.2 applicable, or the appropriate national code of the country in which installed.

⚠ DANGER

When installed, this appliance must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA54, or the Natural Gas and Propane Installation Code, CSA B149.1 as applicable or the appropriate national code of the country in which installed.

⚠ DANGER

The crumb tray in fryers equipped with a filter system must be emptied into a fireproof container at the end of frying operations each day. Some food particles can spontaneously combust if left soaking in certain shortening material.

⚠ WARNING

Do not bang fry baskets or other utensils on the fryer's joiner strip. The strip is present to seal the joint between the fry vessels. Banging fry baskets on the strip to dislodge shortening will distort the strip, adversely affecting its fit. It is designed for a tight fit and should only be removed for cleaning.

NOTICE

This appliance is intended to be used for commercial applications, for example in kitchens of restaurants, canteens, hospitals and in commercial enterprises such as bakeries, butcheries, etc., but not for continuous mass production of food.

NOTICE

The appliance must be installed and used in such a way that any water cannot contact the fat or oil.

** DANGER**

This appliance must be connected to a power supply having the same voltage and phase as specified on the rating plate located on the inside of the appliance door.



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Chicken Controller Manual
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CHAPTER 1: FILTERQUICK™ FQ4000 FQ80/100/120 CHICKEN CONTROLLER INSTRUCTIONS

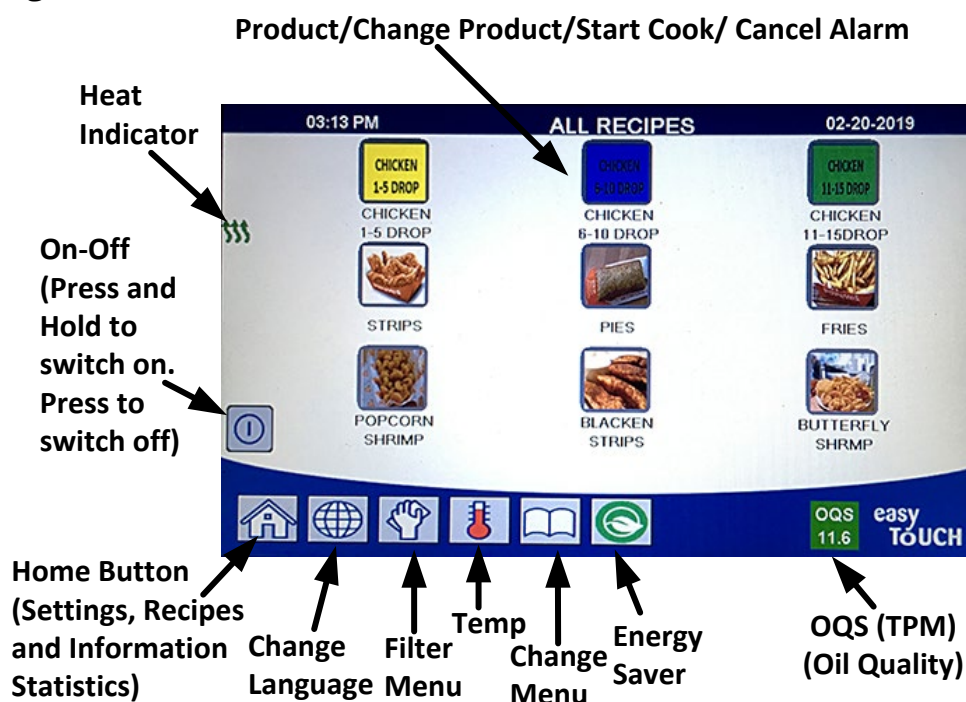
1.1 FQ4000 General Information

Welcome to the FQ4000, an easy-to-use touch screen controller with the utility of 40-product menu capability. One button push starts a cook cycle for a selected product. The controller can move seamlessly from one product to another.

The FQ4000 will operate with electric and gas fryers, both full- and split-vat.

1.2 FQ4000 Button Description and Functions

1.2.1 Navigation Buttons



1.2.1.1 Main Menu Button Bar

The main menu button bar at the bottom of the screen is used to navigate the various FQ4000 menus (see Figure 1).



Figure 1

1.2.1.2 Home Button

The home button is used to switch to the home screen (see Figures 1 & 2). The home screen has Crew Mode, Menus, Recipes, Settings, Service, Change Language, Filter and Information Statistics buttons.

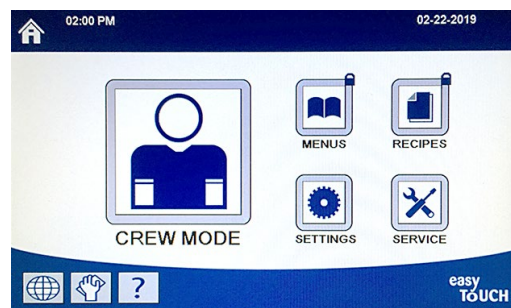


Figure 2

1.2.1.3 Crew Mode Button

The crew mode button switches from the home screen to the cooking mode (see Figures 2 and 3).



Figure 3

1.2.1.4 Menus Button

The menus button is used to set up multiple menus with specific products such as all recipes, fries, chicken, mild, spicy, seafood, etc. (See Figure 4).



Figure 4

1.2.1.5 Recipes Button

The recipes button allows editing or adding of products (see Figure 5).

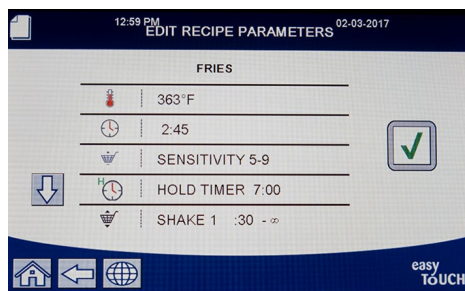


Figure 5

1.2.1.6 Settings Button

The settings button allows access to edit the settings of the fryer (see Figure 6).

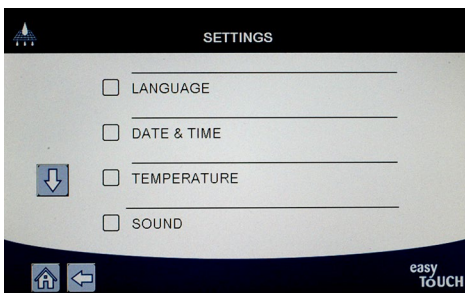


Figure 6

1.2.1.7 Service Button

The service button allows access to service functions in the fryer (see Figure 7).

During programming and other functions if no activity occurs within one minute, the controller returns to the previous operation mode.

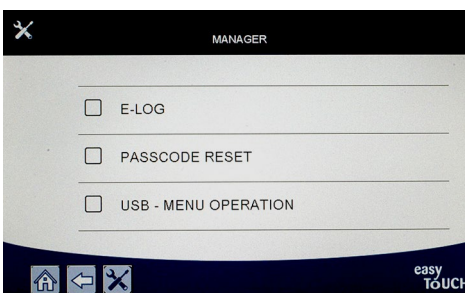


Figure 7

1.2.1.8 Power Button

Pressing and holding the power button soft powers up the user interface and fryer. Pressing the power button when the fryer is on turns the fryer off (see Figure 8).



Figure 8

1.2.1.9 Language Button

Pressing the language button switches between a primary language and a secondary language if the feature is configured in manager settings (see Figure 9).



Figure 9

1.2.1.10 Filter Menu Button

Pressing the filter menu button provides access to the functions associated with filtering, disposing, draining, filling as well as deep cleaning the vats (see Figure 10). When the hand is yellow, a filtration has been bypassed once. When it is red, a filtration has been bypassed more than once and requires filtration.



Figure 10

1.2.1.11 Temperature Button

Pressing the temperature button displays the actual vat temperature and the setpoint temperature (see Figure 11).



Figure 11

1.2.1.12 Menu Button

Pressing the menu button allows switching between different menus if configured (see Figure 12).



Figure 12

1.2.1.13 Energy Saver Button

Pressing the energy saver button switches the fryer from a standard setpoint to a lower temperature setpoint when the fryer is idle, to save energy costs (see Figure 13).



Figure 13

1.2.1.14 Information Statistics Button

Pressing the information statistics button provides information on filter statistics, oil statistics, life statistics, usage statistics, recovery time, last load statistics, and software versions (see Figure 14).



Figure 14

1.2.1.15 Escape Menu Items

To escape or back out of MENUS and SUB-MENUS, press the Home or Back arrow button (see Figure 15).



Figure 15

1.2.1.16 OQS (Oil Quality Sensor) Button [TPM (Total Polar Materials)]

Pressing the OQS button when solid, displays the last 30 days of OQS (TPM) readings (see Figure 16). Pressing the OQS button when blinking, denotes it has been more than 24 hours since the last OQS filter and will prompt for an OQS filter.

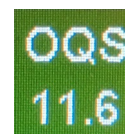
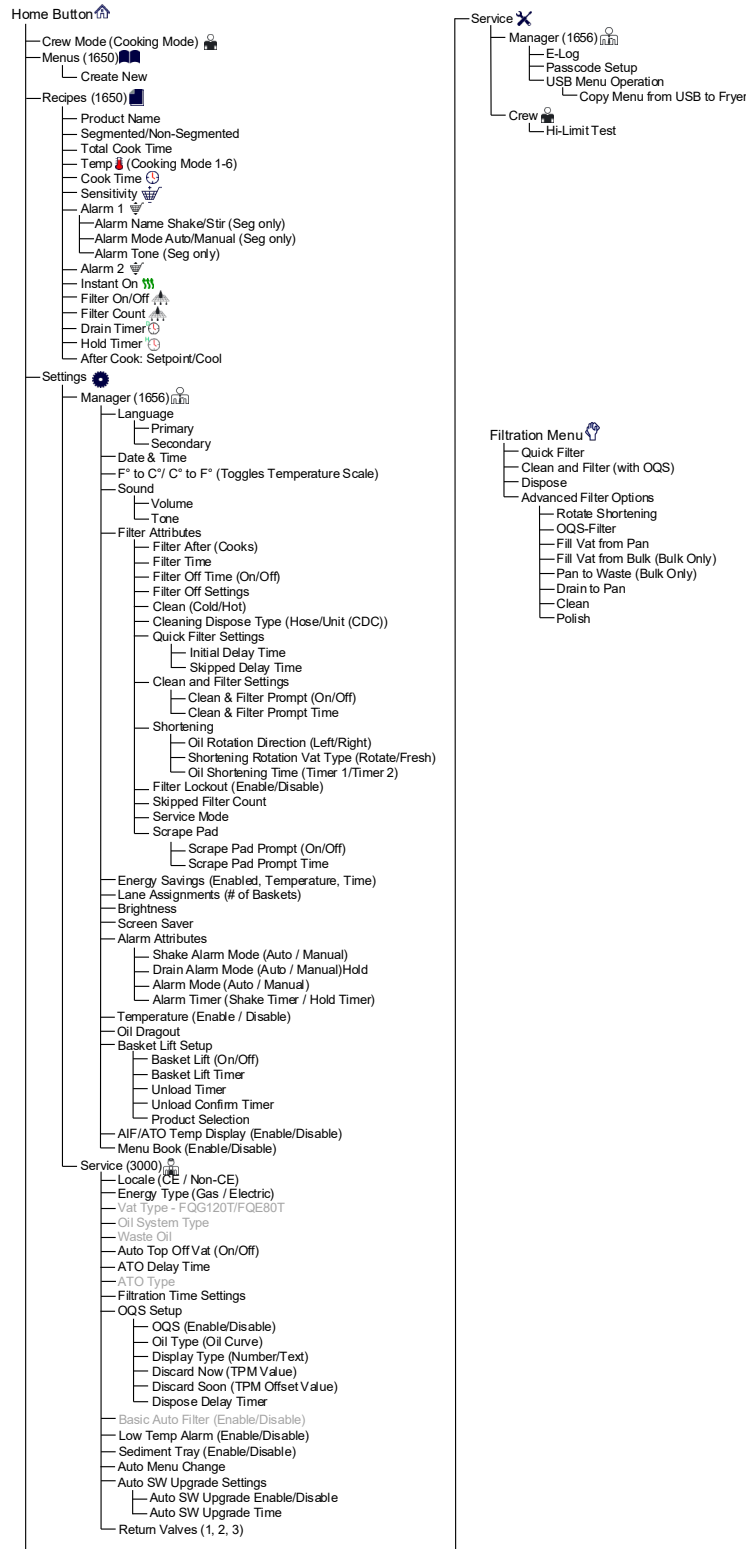


Figure 16

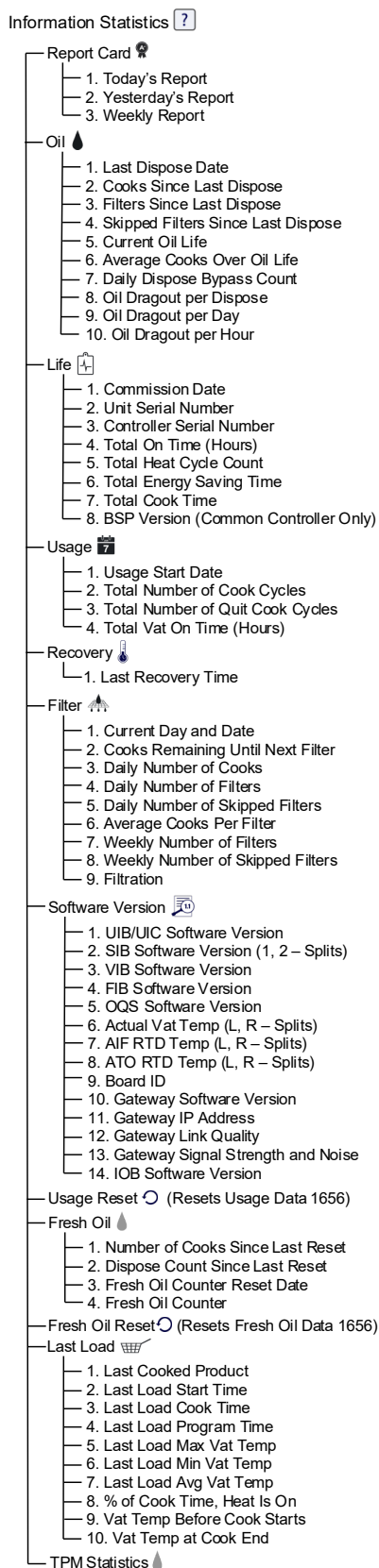
1.3 FQ4000 FQ80/100/120 Popeye's Menu Summary Tree

Reflected below are the major programming sections in the FQ4000 and the order in which submenu headings will be found under the sections in the Installation and Operation Manual.



1.4 FQ4000 FQ80/100/120 Popeye's Information Summary Tree

Reflected below are the information statistics in the FQ4000 and the order in which submenu headings will be found in the controller.



1.5 Basic Operation



Turn Fryer ON or OFF

Press and hold button 3 seconds to switch on.

Press button to switch off.



Changing a Product

Press and hold the product button to change. The outline of the button changes from gray to red and then to solid red. Select another product.

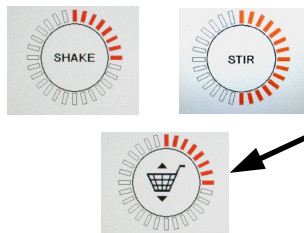
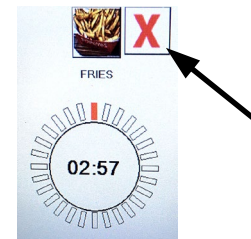


Start a Cook Cycle

Press the product button to start a cook. The timer will start counting down.

Cancel a Cook Cycle

Press the RED "X" button next to the desired product.

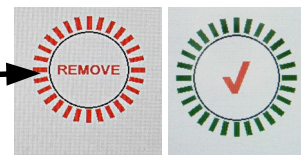


Cancel Shake/Stir Alarm

Shake or stir the product and press button under active display if not set to auto cancel.

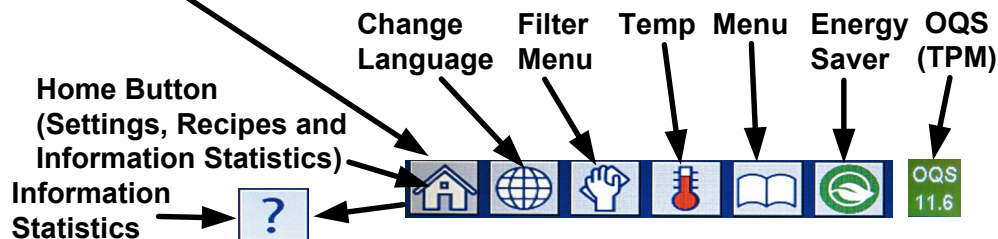
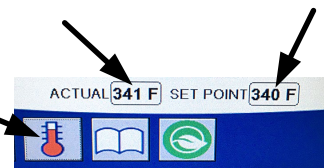
Cancel an end of Cook (REMOVE) Alarm

Press REMOVE or CHECK button under active display.



Check Temperature and Setpoint

Press temperature button. Displays actual temperature and setpoint temperature.



1.6 Cooking

Cooking with the FQ4000

- 1** A product is shown in display. Choose a different product press and hold the product button to change. The outline of the button changes from green to red and then to solid red. Select another product.



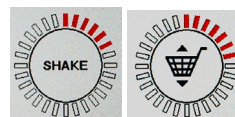
- 2** Press the product button to begin the cook cycle.



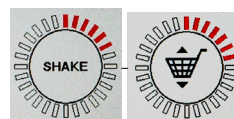
- 3** Display changes to timer with remaining cook time.



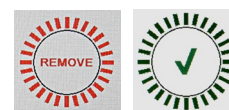
- 4** SHAKE alternating with basket is displayed when it is time to shake the fry basket.



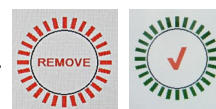
- 5** Press SHAKE/BASKET button to cancel SHAKE alarm.



- 6** REMOVE alternating with the CHECKMARK is displayed when the cook cycle is complete.



- 7** Press the REMOVE/CHECKMARK button to cancel alarm.



- 8** HOLD TIMERS run in the background and are not displayed until the hold timer expires.

- 9** A HOLD TIMER EXPIRED PRODUCTS screen displays products that have expired hold timers.



- 10** Pressing the PRODUCT button(s) selects the products and changes the border color. Pressing the CHECKMARK button cancels the hold timers and restores the display to normal operation and the unit is ready for cooking.



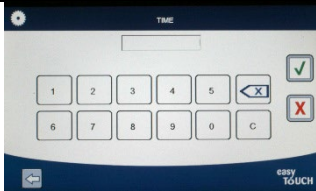
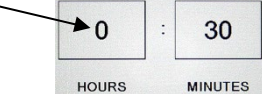
1.7 Fryer (Service) Setup Programming

The fryer is shipped fully programed. It may not be necessary to change any settings for operation. It is necessary when changing out a controller to configure the parameters for the fryer. The setup includes locale, energy type, vat type, fresh oil type, waste oil type and auto top off settings. **NOTE:** These settings should **ONLY** be changed by a technician.

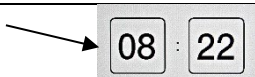
DISPLAY	ACTION
 	1. With the controller at the off/standby position, press the Home button.
	2. Press the Settings button.
	3. Press the Service button.
3 0 0 0	4. Enter 3000
	5. Press the √ (check) button.
☐ LOCALE	6. Press the Locale button.
CE NON-CE	7. Select CE or NON-CE . CE (European Conformity standards) or Non-CE (non-European standards)
SETUP COMPLETE RESTART THE SYSTEM	8. No action.
	9. Press the √ (check) button. The parameters shaded in gray cannot be changed.
☐ ENERGY TYPE	10. Press the Energy Type button.
GAS ELECTRIC	11. Select GAS or ELECTRIC
SETUP COMPLETE RESTART THE SYSTEM	12. No action.
	13. Press the √ (check) button.
☐ VAT TYPE	14. Press the Vat Type button.
FQG120T or FQE80T	15. Choose the vat type.
8 / 24	16. Select Basket Configuration. Set for 8 to have 4 products per side available or 24 to have 12 products per side available.
LANE 1/4  LANE 2/4  LANE 3/4  LANE 4/4 	17. Press the Product icon and choose the desired product. Repeat for other lanes.
	18. Press the Save button when complete.
SETUP COMPLETE RESTART THE SYSTEM	19. No action.
	20. Press the √ (check) button.

DISPLAY	ACTION
	21. Press the Down arrow button.
☐ OIL SYSTEM TYPE	22. Press the Oil System Type button.
JIB BULK	23. Select JIB or BULK . NOTE: A JIB (Jug in a Box) or BIB (Bag in a Box) is a disposable type oil container. A bulk system has large storage oil tanks that are connected to the fryer that fills an onboard reservoir.
SETUP COMPLETE RESTART THE SYSTEM	24. No action.
	25. Press the ✓ (check) button.
☐ WASTE OIL	26. Press the Waste Oil button.
DISPOSAL UNIT BULK WAND FRONT WAND EXTERNAL	27. Select DISPOSAL UNIT, BULK, WAND FRONT or WAND EXTERNAL . NOTE: Select DISPOSAL UNIT if disposing oil into an SDU or other METAL container. Select BULK if disposing oil into a bulk oil system, which has large storage oil tanks that are connected to the fryer. Select WAND FRONT if disposing using a wand connected to the fryer. Select WAND EXTERNAL if using an external dispose system using a wand with suction to extract the oil from the frypot.
SETUP COMPLETE RESTART THE SYSTEM	28. No action.
	29. Press the ✓ (check) button.
☐ AUTO TOP OFF VAT	30. Press the Auto Top Off Vat button.
ON OFF	31. Select ON unless top off is not desired for this vat. Default is ON .
	32. Press the Down arrow button.
☐ ATO DELAY TIME	33. Press the ATO Delay time button.
0 MINUTES 	34. Press the time to change the delay time after the top off oil reservoir has been changed before the system begins to top off. Press the ✓ (check) button. The default is 0 minutes for liquid shortening. Enter a value greater than 0 for solid shortening.
SETUP COMPLETE 	35. Press the smaller ✓ (check) button inside the SETUP COMPLETE box.
☐ ATO TYPE	36. Press the ATO Type button.
AUTO PUSH BUTTON BOTH	37. Select AUTO if auto top if auto top off is installed. Select PUSH BUTTON if only manual top off is installed. Select

DISPLAY	ACTION
	BOTH if both auto and manual top off are installed and desired.
SETUP COMPLETE 	38. Press the √ (check) button inside the SETUP COMPLETE box.
☐ FILTRATION TIME SETTINGS	39. Press the Filtration Time Settings button.
☐ POLISH TIME ☐ CLEAN TIME ☐ AUTO FILTER FLUSH TIME ☐ CLEAN & FILTER FLUSH TIME ☐ OQS FILTER FLUSH TIME ☐ CLEAN FILTER PAN COUNT ☐ CLEAN PAN COUNT 	40. These settings should only be adjusted if instructed by the factory. The default settings are: ☐ POLISH TIME -300 ☐ CLEAN TIME -3600 ☐ AUTO FILTER FLUSH TIME -210 ☐ CLEAN & FILTER FLUSH TIME -210 ☐ OQS FILTER FLUSH TIME -210 ☐ CLEAN FILTER PAN COUNT -3 ☐ CLEAN PAN COUNT -5 41. Press the back button when complete.
	42. Press the Down arrow button.
☐ OQS SETUP	43. Press the OQS Setup button if an OQS sensor is installed.
☐ OQS ENABLE/DISABLE	44. Press OQS ENABLE/DISABLE button to enable/disable the OQS sensor.
ENABLE DISABLE	45. Select ENABLE to enable the OQS sensor or DISABLE to disable the OQS sensor.
SETUP COMPLETE 	46. Press the √ (check) button inside the SETUP COMPLETE box.
☐ OIL TYPE	47. Press the Oil Type button.
OC01v01, OC02v02, etc. 	48. Select the correct oil type curve. Press the down arrow button to scroll to OC19v01 or OC19v02. Ensure the oil type matches what the store is using.
SETUP COMPLETE 	49. Press the √ (check) button inside the SETUP COMPLETE box.
☐ DISPLAY TYPE	50. Press the Display Type button.
NUMBER TEXT	51. Select NUMBER or TEXT . NOTE: If set to NUMBER the Total Polar Materials is shown as a number. If set to Text, only DISCARD SOON/CONFIRM, OIL IS GOOD or DISCARD NOW is shown.
SETUP COMPLETE 	52. Press the √ (check) button inside the SETUP COMPLETE box.
☐ DISCARD NOW	53. Press the Discard Now button.

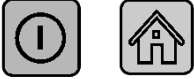
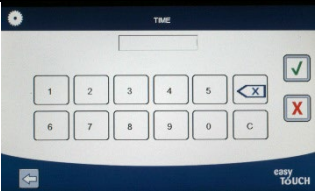
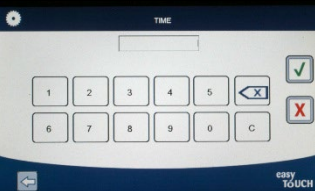
DISPLAY	ACTION
TPM VALUE	54. Press the number above TPM Value. Once the TPM (Total Polar Materials) value of the oil is attained, the fryer will prompt to discard the oil.
	55. Use the keypad to enter the TPM discard now value.
	56. Press the ✓ (check) button once the value is entered.
	57. Press the ✓ (check) button to save the value.
SETUP COMPLETE 	58. Press the ✓ (check) button inside the SETUP COMPLETE box.
	59. Press the down arrow button.
☐ DISCARD SOON	60. Press the Discard Soon button.
TPM VALUE	61. Press the number above Discard Soon TPM Value. This value is typically chosen as a number below the TPM Discard Now value. This value will display the Discard Soon message when the TPM Discard Soon value is attained. This serves as a notice to the staff that the oil will need to be discarded soon.
	62. Use the keypad to enter the TPM discard soon value.
	63. Press the ✓ (check) button once the value is entered.
	64. Press the ✓ (check) button to save the value.
SETUP COMPLETE 	65. Press the ✓ (check) button inside the SETUP COMPLETE box.
☐ DISPOSE DELAY TIMER	66. Press the Dispose Delay Timer button. This is the amount of time once the DISCARD NOW prompt is displayed and bypassed before the DISCARD NOW message returns. (Default is: 30 minutes. Minimum value is :00 = DISABLED, maximum value is 4:00 hours.)
	67. Press the hour's box to enter a delay time in hours.

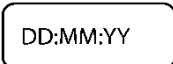
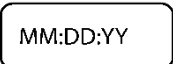
DISPLAY	ACTION
	68. Using the key pad, enter the time in hours.
	69. Press the minute's box to enter a delay time in minutes.
	70. Using the key pad enter the time in minutes.
	71. Press the √ (check) button to save the value.
SETUP COMPLETE 	72. Press the √ (check) button inside the SETUP COMPLETE box.
	73. Press the back button when complete.
☐ BASIC AUTO FILTER	74. Press the Basic Auto Filter button.
ENABLE DISABLE	75. Select ENABLE Basic Auto Filter (Auto Filtration for units <u>without</u> OIB sensors) or DISABLE Basic Auto Filtration (Auto Filtration for units <u>with</u> OIB sensors).
SETUP COMPLETE 	76. Press the √ (check) button inside the SETUP COMPLETE box.
☐ LOW TEMP ALARM	77. Press the Low Temp Alarm button.
ENABLE DISABLE	78. Select ENABLE to enable the low temperature alarm or DISABLE to disable the low temperature alarm.
SETUP COMPLETE 	79. Press the √ (check) button inside the SETUP COMPLETE box.
	80. Press the down arrow button.
☐ SEDIMENT TRAY	81. Press the Sediment Tray button.
ENABLE DISABLE	82. Select ENABLE if using sediment trays or DISABLE if sediment trays are NOT used.
SETUP COMPLETE 	83. Press the √ (check) button inside the SETUP COMPLETE box.
☐ AUTO MENU CHANGE	84. Press the Auto Menu Change button.
ALL RECIPE SEAFOOD FRIES	85. Select if the menus are to auto change at certain time periods of the day and the time to change.

DISPLAY	ACTION
SPICY MILD	
	86. Press the back button when complete.
□ AUTO SW UPGRADE SETTINGS	87. Press the Auto SW Upgrade Settings button.
□ AUTO SW UPGRADE ENABLE DISABLE	88. Select ENABLE if using auto upgrade is enabled or DISABLE if not enabled.
SETUP COMPLETE 	89. Press the ✓ (check) button inside the SETUP COMPLETE box.
□ AUTO SW UPGRADE TIME	90. Press the Auto SW Upgrade time button.
	91. Press the hour's box.
	92. Using the keypad, enter the time in 24 hour format.
	93. Press the minute's box.
	94. Using the key pad enter the time in minutes.
	95. Press the ✓ (check) button.
SETUP COMPLETE 	96. Press the smaller ✓ (check) button inside the SETUP COMPLETE box.
	97. Press the Home button.
 CREW MODE	98. Press the Crew Mode button.
	99. Press and hold the momentary reset switch. Ensure the switch is pressed and held for one (1) minute . In newer fryers the switch is located below the USB port.
	100. The system reboots in approximately 45 seconds and returns to off/standby mode.

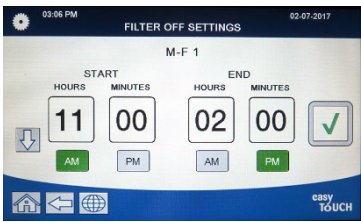
1.8 Fryer (Manager) Settings Programming

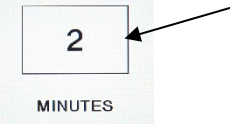
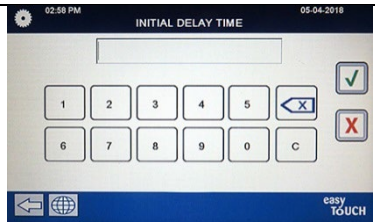
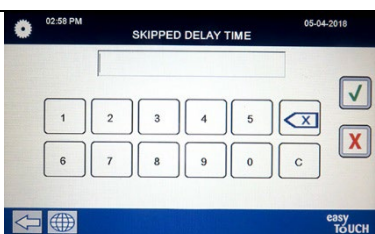
It may be necessary upon initial power up or when changing out a controller to configure these local manager settings for the fryer. The setup includes language, date and time, temperature scale, sound settings, filter settings, energy savings, lane assignments and screen brightness. These settings should **ONLY** be changed by a manager or technician.

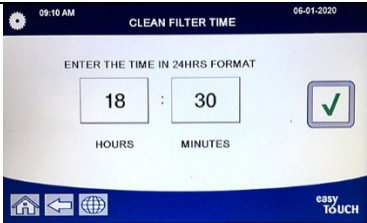
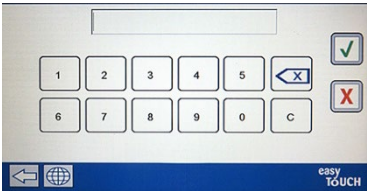
DISPLAY	ACTION
	1. With the controller at the off/standby position, press the Home button.
	2. Press the Settings button.
	3. Press the Manager button.
1 6 5 6	4. Enter 1656
	5. Press the ✓ (check) button.
☐ LANGUAGE	6. Press the Language button.
	7. Press the Primary Language button.
☐ ENGLISH	8. Select the language desired.
	9. Press the Secondary Language button.
☐ SPANISH	10. Select the language desired.
	11. Press the Back button.
☐ DATE & TIME	12. Press the Date & Time button.
	13. Press the Set Time button
	14. Press the hour's box.
	15. Using the key pad, enter the time in hours.
	16. Press the minute's box.
	17. Using the key pad enter the time in minutes.

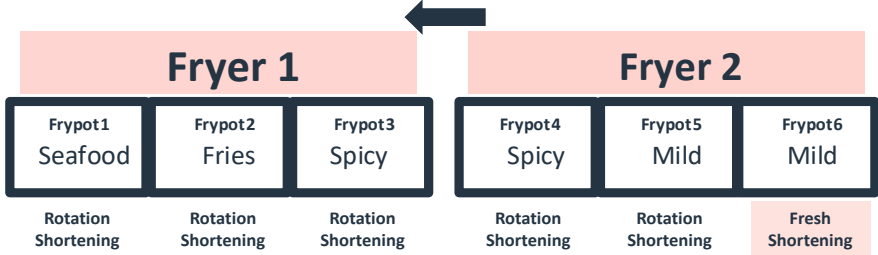
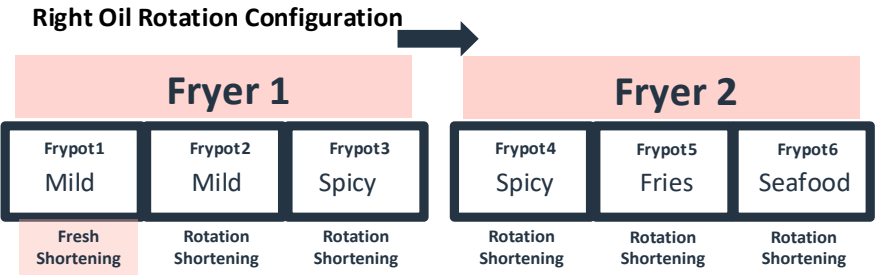
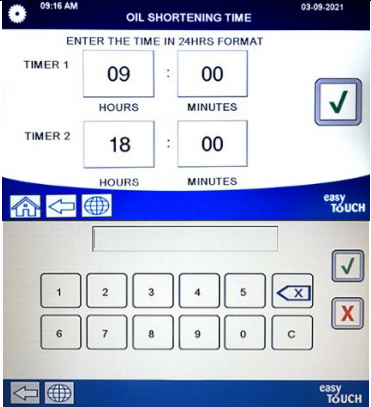
DISPLAY	ACTION
  	18. Press the AM, PM or 24HR button.
	19. Press the √ (check) button.
 	20. Press the smaller √ (check) button inside the SETUP COMPLETE box.
	21. Press the Set Date button
 	22. Press the Date Format box to toggle between MM-DD-YY or DD-MM-YY.
 2017 	23. At the top of the screen, the year is shown. Press the left or right arrow to select the year.
 MARCH 	24. Below the year is the month. Press the left or right arrow to select the month.
	25. Select the date using the numbered keys and press the √ (check) button.
 	26. Press the smaller √ (check) button inside the SETUP COMPLETE box.
	27. Press the DST (DAYLIGHT SAVINGS TIME) SETUP button.
☐ DST ON/OFF	28. Press the DST ON/OFF button.
 	29. Select ON to enable DST or OFF to disable DST.
 	30. Press the smaller √ (check) button inside the SETUP COMPLETE box.
☐ DST SETTINGS	31. Press the DST SETTINGS button.
☐ DST START MONTH ☐ DST START SUNDAY ☐ DST END MONTH ☐ DST END SUNDAY	32. Select any of these and use the keypad to modify. The default settings for the US are: DST START MONTH -3 DST START SUNDAY -2 DST END MONTH -11 DST END SUNDAY -1
	33. Press the √ (check) button when complete.
 	34. Press the smaller √ (check) button inside the SETUP COMPLETE box.
	35. Press the Back button three (3) times.
☐ F° TO C°	36. Press the F° TO C° or F° TO C° button. NOTE: F is used for Fahrenheit, C is used for Celsius

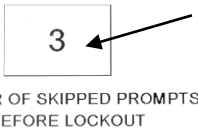
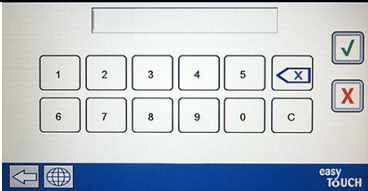
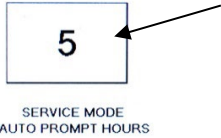
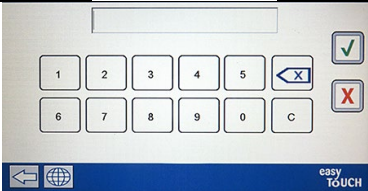
DISPLAY	ACTION
CONFIRM  	37. Select YES to toggle the temperature scale.
COMPLETED SUCCESSFULLY 	38. Press the √ (check) button when complete.
☐ SOUND	39. Press the Sound button.
 	40. Use the up down arrows to change the volume level and tone. Volume has nine levels with 1 being the softest and 9 the loudest. Tone has three frequencies from 1-3. Use different frequencies to customize the sound.
	41. Press the √ (check) button when complete.
SETUP COMPLETE 	42. Press the smaller √ (check) button inside the SETUP COMPLETE box.
	43. Press the Down button.
☐ FILTER ATTRIBUTES	44. Press the Filter Attributes button.
☐ FILTER AFTER	45. Press the FILTER AFTER button. The auto filtration mode uses two measures before prompting to filter. One checks for cook cycles which is adjusted in the FILTER AFTER setting and the other checks for time which is adjusted in the following section FILTER TIME setting. The prompt for filtration is initiated by whichever occurs first; either the number of cycles elapsed or time elapsed. The FILTER AFTER option is used to set the number of cooking cycles which occur before the filtration prompt is displayed. Default is 15. If no prompts are desired set to 0 to disable.
	46. Press the √ (check) button to continue or press the number button and enter the number of cooks between filter prompts. (ex. after every ten cooks it prompts to filter, enter as 10 and press the √ (check) button
	47. Press the √ (check) button.
SETUP COMPLETE 	48. Press the smaller √ (check) button inside the SETUP COMPLETE box.
☐ FILTER TIME	49. Press the FILTER TIME button. The Filter Time option is used to set the elapsed time in hours before a filtration prompt. This option is useful in lower volume stores, where filtration is desired more often than the amount the cook cycles would generate.

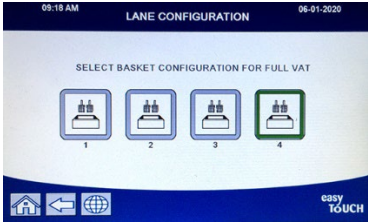
DISPLAY	ACTION
	50. Press the √ (check) button to continue or press the number button and enter the number of hours in between filter prompts. (ex. after every two hours, enter as 2) and press the √ (check) button. (By default, the time is set to 0 hours to disable)
	51. Press the √ (check) button.
SETUP COMPLETE 	52. Press the smaller √ (check) button inside the SETUP COMPLETE box.
☐ FILTER OFF TIME	53. Press the Filter Off Time button. The Filter Off Time option is used to set times in which the filter prompt is disabled (ex. noon rush).
 	54. Select ON to enable FILTER OFF TIME. Select OFF to disable FILTER OFF TIME.
SETUP COMPLETE 	55. Press the smaller √ (check) button inside the SETUP COMPLETE box.
☐ FILTER OFF SETTINGS	56. Press the Filter Off Settings button. The Filter Off Settings option is used to set the times in which the filter prompt is disabled (ex. noon rush). NOTE: If FILTER OFF TIME is disabled (OFF), this option is grayed out and not available.
	57. Use the up down arrows to scroll between M-F 1 thru SUN 4. There are a total of 12 periods which can be programmed for filter prompt lockout. Select the field to edit the start and stop times of when the filter prompt should be suspended. Select AM/PM. Once the times are selected press the check button to save the setting. (The example at the left shows on Monday – Friday no filtering is desired during a lunch rush from 11:00 AM until 2:00 PM.)
	58. Once the times are selected press the √ (check) button.
SETUP COMPLETE 	59. Press the smaller √ (check) button inside the SETUP COMPLETE box.
	60. Press the Down button.
☐ CLEAN	61. Press the Clean button. Choose HOT (Boil Out) or COLD (Cold Soak).
SETUP COMPLETE 	62. Press the smaller √ (check) button inside the SETUP COMPLETE box.

DISPLAY	ACTION
☐ CLEANING DISPOSAL TYPE	63. Press the Cleaning Disposal Type button. Choose HOSE if attaching a hose to dispose of boil out solution or UNIT (Cleaning Disposal Container (CDC)) or other waste disposal container.
SETUP COMPLETE 	64. Press the smaller √ (check) button inside the SETUP COMPLETE box.
☐ QUICK FILTER SETTINGS	65. Press the QUICK FILTER SETTINGS button.
☐ INITIAL DELAY TIME	66. Press the Initial Delay Time button.
	67. Press the minute's box to adjust the initial delay time. The initial delay time is the time the fryer sits idle, after filter after or filter cooks have been completed, before prompting for a filter. (Default is two (2) minutes.)
	68. Using the keypad to enter the time in minutes.
	69. Press the √ (check) button.
	70. Press the √ (check) button.
SETUP COMPLETE 	71. Press the smaller √ (check) button inside the SETUP COMPLETE box.
☐ SKIPPED DELAY TIME	72. Press the Skipped Delay Time button.
	73. Press the minute's box to adjust the skipped delay time. The skipped delay time is the time after the initial filter is skipped before it prompts again to filter. The first time the filter is skipped the filter button turns from white to yellow. The next time the filter is skipped, the filter button turns from yellow to red until the filter is performed. (Default is five (5) minutes.)
	74. Using the keypad enter the time in minutes.
	75. Press the √ (check) button.
	76. Press the √ (check) button.

DISPLAY	ACTION
SETUP COMPLETE 	77. Press the smaller √ (check) button inside the SETUP COMPLETE box.
	78. Press the Back button.
☐ CLEAN & FILTER SETTINGS	79. Press the CLEAN & FILTER SETTINGS button. These settings modify the daily Clean & Filter prompts.
☐ CLEAN & FILTER PROMPT ON/OFF	80. Press the CLEAN & FILTER PROMPT ON/OFF button. Select ON if the Clean & Filter daily function is to be enabled. Select OFF if the Clean & Filter daily function is to be disabled.
SETUP COMPLETE 	81. Press the √ (check) button inside the SETUP COMPLETE box.
☐ CLEAN & FILTER PROMPT TIME	82. Press the CLEAN & FILTER PROMPT TIME button.
 	83. Select the time and use the keypad to enter the time in hours and minutes in 24 hr format for the daily Clean & Filter prompt.
	84. Press the √ (check) button.
	85. Press the √ (check) button.
SETUP COMPLETE 	86. Press the smaller √ (check) button inside the SETUP COMPLETE box.
	87. Press the Back button.
☐ SHORTENING	88. Press the Shortening button. The Shortening option includes oil rotation direction, shortening rotation and shortening prompts.
☐ OIL ROTATION DIRECTION	89. Press the Oil Rotation Direction button.
LEFT RIGHT	90. Select LEFT if the shortening rotation starts at the far-right fryer and moves left. Select RIGHT if the shortening

DISPLAY	ACTION
	rotation starts at the far-left fryer and moves right. See illustration below.
Standard Left Oil Rotation Configuration  Right Oil Rotation Configuration 	
SETUP COMPLETE 	91. Press the smaller √ (check) button inside the SETUP COMPLETE box.
□ SHORTENING ROTATION VAT TYPE	92. Press the Shortening Rotation Vat Type button.
ROTATE FRESH	93. Select ROTATE if the vat is a rotating vat that move shortening. This is typically all vats that don't add fresh shortening daily. Select FRESH if the vat has fresh shortening added daily. This is typically the far-right vat or far left vat in a fryer series. See illustration above.
SETUP COMPLETE 	94. Press the smaller √ (check) button inside the SETUP COMPLETE box.
□ OIL SHORTENING TIME	95. Press the Oil Shortening Time button.
	96. Select the time and use the keypad to enter the time in hours and minutes in 24 hr format for the twice daily oil shortening prompts.
	97. Press the √ (check) button.

DISPLAY	ACTION
	98. Press the √ (check) button.
SETUP COMPLETE 	99. Press the smaller √ (check) button inside the SETUP COMPLETE box.
	100. Press the Back button.
☐ FILTER LOCKOUT	101. Press the Filter Lockout button.
ENABLE DISABLE	102. Select ENABLE to enable the filter lockout or DISABLE to disable the filter lockout. This setting requires a filter when the prompt or time settings are satisfied.
SETUP COMPLETE 	103. Press the √ (check) button inside the SETUP COMPLETE box.
☐ SKIPPED FILTER COUNT	104. Press the Skipped Filter Count button.
	105. Press the NUMBER OF SKIPPED PROMPTS box to adjust the skipped cook counts before re-prompting for a filter and locking out the fryer. If set to 0, no skips or bypasses are allowed.
	106. Using the keypad to enter the number of skips or bypasses allowed.
	107. Press the √ (check) button.
	108. Press the √ (check) button.
SETUP COMPLETE 	109. Press the √ (check) button inside the SETUP COMPLETE box.
☐ SERVICE MODE	110. Press the Service Mode button.
	111. Press the SERVICE MODE AUTO PROMPT HOURS box to adjust the number of hours before re-prompting for an auto filter and locking out the fryer. Default = 5.
	112. Using the keypad to enter the number of hours the auto filter prompt is suppressed.
	113. Press the √ (check) button.
	114. Press the √ (check) button.

DISPLAY	ACTION
SETUP COMPLETE 	115. Press the √ (check) button inside the SETUP COMPLETE box.
	116. Press the Back button two (2) times.
☐ ENERGY SAVINGS	117. Press the Energy Savings button. The Energy Savings option is used during idle periods to lower the frypot temperature to save energy.
 	118. Press the Enable button to toggle the Energy Saving option on or off.
	119. Press the Set Back Temp button to change the setpoint of the Energy Saving option. Use the number pad to enter the Energy Saving setpoint temperature and press the √ (check) button.
	120. Press the Idle Time button to change the amount of time in minutes the vat sits idle before automatically entering the Energy Saving mode. Use the number pad to enter the Energy Saving setpoint temperature and press the √ (check) button.
	121. Press the √ (check) button.
SETUP COMPLETE 	122. Press the smaller √ (check) button inside the SETUP COMPLETE box.
☐ LANE ASSIGNMENTS	123. Press the Lane Assignments button. This is used to set the number of baskets per vat.
	124. Press the 1 button to have a single lane available (12 products per vat); or 2 button to have 2 lanes or 12 products per vat (6 per lane) available; or 3 button to have 3 lanes or 9 products per vat (3 per lane) available; or 4 button to have 4 lanes or 12 products per vat (3 per lane) available.
SETUP COMPLETE RESTART THE SYSTEM 	125. Press the √ (check) button.
☐ BRIGHTNESS	126. Press the Brightness button. This is used to set the brightness of the screen. Use the up down arrows to adjust. (Default is 100.)
	127. Press the √ (check) button.
SETUP COMPLETE 	128. Press the smaller √ (check) button inside the SETUP COMPLETE box.

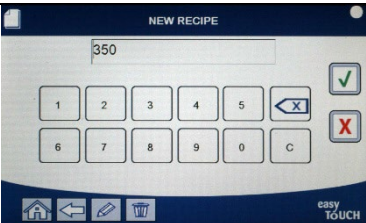
DISPLAY	ACTION
	129. Press the Down button.
▢ SCREEN SAVER	130. Press the Screen Saver button. This is used to set the amount of time, after the controller is turned off, before going into a screen saver mode. Use the up down arrows to adjust time. (Default is 15 minutes.)
 	131. Use the up down arrows to change the brightness of the screen. Brightness has nine levels with 100 being the brightest and 10 the darkest.
	132. Press the √ (check) button when complete.
SETUP COMPLETE 	133. Press the smaller √ (check) button inside the SETUP COMPLETE box.
▢ ALARM ATTRIBUTES	134. Press the Alarm Attributes button
▢ SHAKE ALARM MODE	135. Press the Shake Alarm Mode button. Select Auto or Manual. The Shake Alarm Mode allows the user to select between auto or manual shake alarm cancel.
SETUP COMPLETE RESTART THE SYSTEM 	136. Press the √ (check) button.
▢ HOLD ALARM MODE	137. Press the Hold Alarm Mode button. Select Auto or Manual. The Hold Alarm Mode allows the user to select between auto or manual hold alarm cancel.
SETUP COMPLETE RESTART THE SYSTEM 	138. Press the √ (check) button.
▢ ALARM TIMER	139. Press the Alarm Timer button. These settings allow the user to select the amount of time before auto cancelling the shake alarm timer or hold alarm. Default settings are 5 seconds.
SETUP COMPLETE RESTART THE SYSTEM 	140. Press the √ (check) button.
	141. Press the Back button two (2) times.
▢ TEMPERATURE	142. Press the Temperature button.

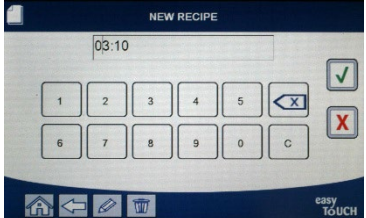
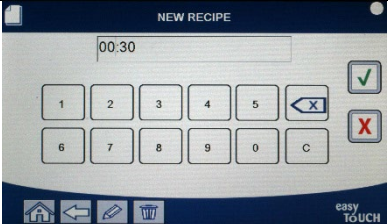
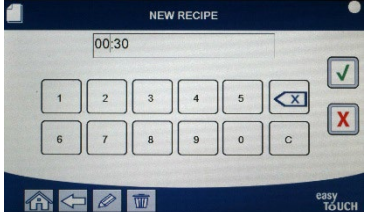
DISPLAY	ACTION
ENABLE DISABLE	143. Select enable to enable the temperature button. Select disable to disable the temperature button and display constant temperature display.
SETUP COMPLETE 	144. Press the √ (check) button.
☐ OIL DRAGOUT	145. The Oil Drag out function sets parameters that adjust flow and flow adjust. These parameters are used to calculate oil drag out usage for statistical information that is captured in the Information Statistics function under Oil statistics.
☐ FLOW	146. Enter the oil drag out flow rate of pounds per minute (Default is 2.211) and press the √ (check) button. (Note: Enter values from 0100-4000 for ranges 0.100-4.000lbs).
SETUP COMPLETE 	147. Press the √ (check) button when complete.
☐ FLOW ADJUST	148. Enter the configurable flow rate (Default is 1) and press the √ (check) button. (Note: Enter values from 10-200 for ranges 0.10-2.00lbs).
SETUP COMPLETE 	149. Press the √ (check) button when complete.
	150. Press the Down button.
☐ BASKET LIFT	151. Press the Basket Lift button.
 	152. Select ON to enable the basket lift or OFF to disable the basket lift.
SETUP COMPLETE RESTART THE SYSTEM 	153. Press the √ (check) button.
☐ AIF/ATO TEMP DISPLAY	154. Press the AIF/ATO Temp Display button.
ENABLE DISABLE	155. Select enable to enable the temperature button. Select disable to disable the temperature button and display constant temperature display.
SETUP COMPLETE 	156. Press the √ (check) button when complete.
☐ MENU BOOK	157. Press the Menu button.
ENABLE DISABLE	158. Select enable to enable the menu book button on the bottom of the screens.
SETUP COMPLETE 	159. Press the √ (check) button when complete.

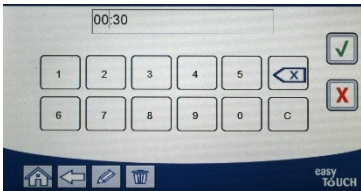
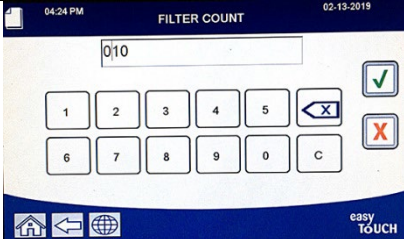
DISPLAY	ACTION
	160. Press the Back button.
	161. Press the Home button.
 CREW MODE	162. Press the Crew Mode button.
	163. Press and hold the momentary reset switch above the USB port. Ensure the switch is pressed and held for <u>one (1) minute.</u>
	164. The system reboots in approximately 45 seconds and returns to off/standby mode.

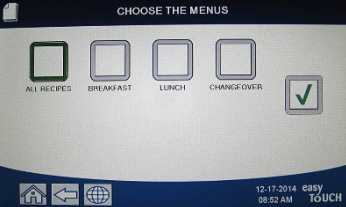
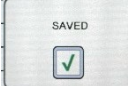
1.9 Adding or Editing Existing Products

This function is used to add additional products or edit existing products.

DISPLAY	ACTION
	1. Press the Home button.
	2. Press the Recipes button.
1 6 5 0	3. Enter 1650
	4. Press the √ (check) button.
	5. Choose the product icon to edit or press the + to add a new product.
	6. Press the pencil icon at the bottom of the screen to edit an existing product.
	7. Enter or change the name of the product using the keyboard.
	8. Press the √ (check) button.
	9. This screen displays the current setpoint, cook time, sensitivity, hold timer, shake timers and filter settings. To edit a parameter, press the item to edit.
	10. To edit temperature, press the temp button.
	11. Use the keypad to enter or edit the cook temperature for the product.
	12. Press the √ (check) button.
	13. Press the cook time button.

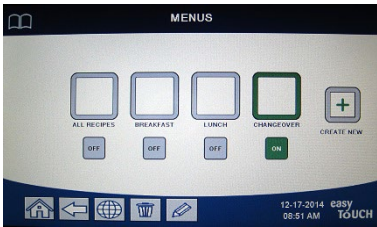
DISPLAY	ACTION
	14. Use the keypad to enter or edit the cook time in minutes and seconds.
	15. Press the √ (check) button.
	16. Press the load compensation or sensitivity button.
	17. Use the up and down arrows to change the load compensation or sensitivity setting recommended for this product. This setting allows the product compensation (sensitivity) to be changed. Some menu items may need an adjustment, depending on their cooking characteristics. NOTE: It is highly recommended to NOT adjust this setting, as it could have an adverse effect on the products cooking cycles. (The default setting for product compensation is set to four (4).)
	18. Press the √ (check) button.
	19. Press the Shake Timer 1 button.
	20. Enter the time in minutes and seconds for the first shake to be performed.
	21. Press the √ (check) button.
	22. Press the Shake Timer 2 button if an additional shake is needed, otherwise skip to step 26.
	23. Enter the time in minutes and seconds for the second shake to be performed.
	24. Press the √ (check) button.

DISPLAY	ACTION
	25. Press the down arrow to scroll to more settings.
	26. Press the Filter button. (NOTE: ON or OFF is displayed for current selection.)
	27. Ensure that the filter button is ON to enable auto filtration for this product. This setting is used to prevent co-mingling of product specific oils. For products such as FISH, select NO to prevent auto filtration if desired.
	28. Press the Hold Timer button.
	29. Enter the time in minutes and seconds for the product hold time.
	30. Press the √ (check) button.
	31. Press the Instant On button.
	32. This is the time, in seconds, the fryer heats at 100%, after the product button is pressed before the controller adjusts the temperature. Enter the time in minutes and seconds for the instant on time (ie. 00:30=30 seconds). (0=OFF). NOTE: Instant on time may need to be adjusted for light cooking loads.
	33. Press the √ (check) button.
	34. Press the Filter Count button.
	35. Enter the number of cooking cycles which occur for this product before the filtration prompt is displayed. This is for product only and is not to be confused with a global filter count. If no prompts are desired set to 0 to disable.
	36. Press the √ (check) button.

DISPLAY	ACTION
	37. Choose the icon to associate with the product recipe that is being entered or edited.
	38. Press the ✓ (check) button.
	39. Choose the menu(s) to associate with the product recipe that is being entered or edited.
	40. Press the ✓ (check) button.
	41. The controller displays SAVED.
	42. Press the ✓ (check) button.
	43. Select another product to edit or press the + key to add additional products. If finished press the home button.
 CREW MODE	44. Press the Crew Mode button to return to main screen.

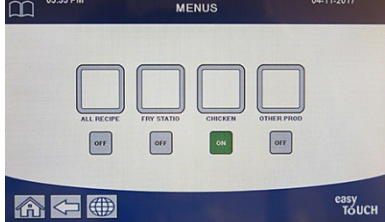
1.10 Adding or Editing Menus

This function is used to add or edit menus. Menus allow the operator to group certain products together. For example, setting up a breakfast menu allows grouping of breakfast only products. This is helpful when switching products by narrowing the number of products to choose from.

DISPLAY	ACTION
	1. Press the Home button.
	2. Press the Menu button.
1 6 5 0	3. Enter 1650
	4. Press the ✓ (check) button.
	5. Select a menu by pressing the button above the ON/OFF button to edit products (highlighted in green) or press the + button to add a new menu. If adding a new menu, enter name of menu on next screen and press the ✓ (check) button. If deleting a menu, highlight the menu and press the trash can at the bottom of the screen.
	6. Press the pencil icon at the bottom of the screen to edit an existing menu.
	7. Select the desired products by pressing their icons to be added to the chosen menu. The selected products will be highlighted in green. To unselect a product, press the icon and the highlight will change from green to gray.
	8. Press the ✓ (check) button when finished to save selected products to menu.
	9. Press the Back button to edit additional menus starting with step 5, otherwise advance to the next step
	10. Press the Home button.
 CREW MODE	11. Press the Crew Mode button.

1.11 Changing Menus

If separate menus are created for Fry Station, Chicken or Other Product, pressing the MENU button from the main screen shall display menu change options. Pressing the desired menu shall switch the menus.

DISPLAY	ACTION
	1. Press the Menu button.
	2. Press the ON/OFF button under the desired menu to switch menus. Once the desired menu is selected, "ON" it is highlighted under the menu. NOTE: Only one menu can be selected at a time.
	3. Press the back button to return to the main screen.
	4. Press the product icon to switch products.
	5. Display returns to main screen.

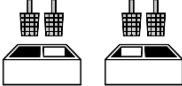
1.12 Service Tasks

Covered in this section are crew and manager service tasks used in stores such as High Limit Test, E-Log (error log), password setup, and functions to copy menus to and from the fryer from USB using menu connect.

1.12.1 High Limit Test

The high-limit test mode is used to test the high limit circuit. The high-limit test will destroy the oil. It should only be performed with old oil. Shut the fryer off and call for service immediately if the temperature reaches 460°F (238°C) without the second high-limit tripping and the controller displays HIGH LIMIT FAILURE DISCONNECT POWER with an alert tone during testing.

The test is cancelled at any time by turning the fryer off. When the fryer is turned back on, it returns to the operating mode and displays the product.

DISPLAY	ACTION
 	1. With the controller at the off/standby position, press the Home button.
	2. Press the Service button.
	3. Press the Crew button.
	4. Select LEFT VAT or RIGHT VAT for split vats.
PRESS AND HOLD	5. Press and hold the Press and Hold button to begin high limit test.
RELEASE	6. While pressing and holding the button the vat begins to heat. The controller displays the actual vat temperature during the test. When the temperature reaches 410°F ± 10° F (210°C ± 12°C)*, the controller displays HOT HI-1 (ex. 410F) and continues heating. *NOTE: In controllers used in the European Union (those with the CE mark), the temperature is 395°F (202°C) when the controller displays HOT HI-1.
HOT HI-1	7. While continuing to press and hold the button, the fryer continues heating until the high limit opens. Generally, this happens once the temperature reaches 423°F to 447°F (217°C to 231°C) for non-CE high limits and 405°F to 426°F (207°C to 219°C) for CE high limits.
HELP HI-2	8. Release the button. The vat stops heating and the controller displays the current temperature setting until the temperature cools below 400°F (204°C). Press the power button to cancel the alarm.
HIGH LIMIT FAILURE DISCONNECT POWER	9. If the controller displays this message, disconnect power to the fryer and immediately call for service.
	10. After a high limit test, once the vat cools below 400°F (204°C), dispose of the oil.

1.12.2 Manager Functions

1.12.2.1 E-Log

The E-LOG function is used to view the ten (10) most recent error codes encountered on the fryer. These codes are displayed with the most recent errors displayed first. The error code, time and date are displayed.

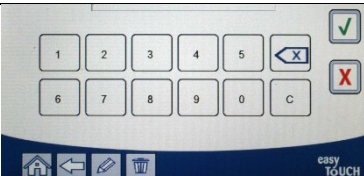
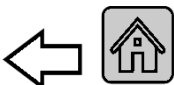
If no errors exist, the controller is blank in this function. Errors are displayed with the side of the error if a split vat, error code, time and date. An error code displaying an "L" indicates left side of a split vat while an "R" indicates right side of a split vat where the error occurred (R E19 06:34AM 04/22/2014). An error code displaying a "G" indicates this was a global error not specifically linked to a particular vat. Error codes are listed in section 3.2.5 of this manual.

DISPLAY	ACTION
	1. Press the Home button.
	2. Press the Service button.
	3. Press the Manager button.
1 6 5 6	4. Enter 1656
	5. Press the √ (check) button.
 E-LOG	6. Press the E-LOG button. The three most recent errors are shown.
	7. Press the Down button. The next three errors are shown. Continue pressing the down arrow to view additional errors.
 	8. Press the Back button to return to menu or press the Home button to exit.
 CREW MODE	9. Press the Crew Mode button.

1.12.2.2 Passcode Setup

The password mode allows a restaurant manager to change passwords for various modes.

DISPLAY	ACTION
	1. Press the Home button.
	2. Press the Service button.
	3. Press the Manager button.
1 6 5 6	4. Enter 1656
	5. Press the √ (check) button.

DISPLAY	ACTION
☐ PASSCODE SETUP	6. Press the PASSCODE SETUP button.
☐ MENUS ☐ RECIPES ☐ SETTINGS MANAGER ☐ DIAGNOSTICS MANAGER	7. Select the desired passcode to modify. Use the down arrow to scroll to additional setting. Defaults are: MENUS 1650 RECIPES 1650 SETTINGS MANAGER 1656 DIAGNOSTICS MANAGER 1656
	8. Use the keypad to enter new passcode for the selected item.
	9. Press the ✓ (check) button.
RETYPE PASSWORD	10. Use the keypad to enter the new passcode again to verify.
	11. Press the ✓ (check) button.
PASSCODE SETUP SUCCESSFUL 	12. Press the ✓ (check) button.
☐ MENUS ☐ RECIPES ☐ SETTINGS MANAGER ☐ DIAGNOSTICS MANAGER 	13. Press the Back button to return to menu or press the Home button to exit.
 CREW MODE	14. Press the Crew Mode button.

1.12.2.3 USB - Menu Operation

This option allows the ability to upload menus to the controller. This allows products to be created in MenuSync to be saved to a USB drive and uploaded to the fryer.

DISPLAY	ACTION
	1. Press the Home button.
	2. Press the Service button.
	3. Press the Manager button.
1 6 5 6	4. Enter 1656

DISPLAY	ACTION
	5. Press the √ (check) button.
□ USB – MENU OPERATION	6. Press the USB – MENU OPERATION button.
□ COPY MENU FROM USB TO FRYER	7. Press the COPY MENU FROM USB TO FRYER button.
INSERT USB...	8. Insert the USB drive into the connector behind the far-left fryer door.
IS USB INSERTED? YES NO	9. Press YES once the USB drive is inserted.
READING FILE FROM USB PLEASE DO NOT REMOVE USB WHILE READING	10. No action required.
MENU.CBR or other *.cbr file	11. A list appears with a list of menu files ending in .cbr. Select the menu file to load.
SELECT THE VATS FOR MENU UPGRADE	12. Select ONLY the vats to be updated. If all vats are updating the same menu, select each vat.
UI-UI MENU DATA TRANSFER IN PROGRESS	13. No action required while the file is loading.
MENU UPGRADE IN PROGRESS	14. No action required while the upgrade is in progress.
UPGRADE COMPLETE? YES	15. Press YES.
MENU UPGRADE COMPLETED, REMOVE THE USB AND RESTART THE SYSTEM.	16. Remove the USB drive and power cycle the entire fryer battery using the reset switch behind the far-left fryer door below the USB connector. NOTE: Ensure the switch is pressed and held for at least <u>one (1) minute</u>.

1.13 Information Statistics

1.13.1 Report Card Statistics

The report card statistics function is used to view a quick report on filtering, OQS, oil quality and frypot utilization.

DISPLAY	ACTION
	1. Press the Information button.
	2. Press the Report Card button.
□ TODAY'S REPORT □ YESTERDAY'S REPORT □ WEEKLY REPORT	3. Select the desired report

DISPLAY	ACTION
	4. The report will display the grade based on if the crew is filtering when prompted; if OQS is being measured regularly; the current quality of the oil; and the fryer usage.
	5. Press the back button to return to menu or the home button to exit.

1.13.2 Oil Statistics

The oil statistics function is used to view the date of last dispose, the number of cooks since last dispose, filters since last dispose, skipped filters since last dispose, current oil life and average number of cooks over the oil life.

DISPLAY	ACTION
	1. Press the Home button and then the Information button.
	2. Press the Oil button.
1. LAST DISPOSE DATE 2. COOKS SINCE LAST DISPOSE 3. FILTERS SINCE LAST DISPOSE 4. SKIPPED FILTERS SINCE LAST DISPOSE 	3. Press the down arrow to scroll to more statistics.
5. CURRENT OIL LIFE 6. AVERAGE COOKS OVER OIL LIFE 7. DAILY DISPOSE BYPASS COUNT 8. OIL DRAGOUT PER DISPOSE 9. OIL DRAGOUT PER DAY 10. OIL DRAGOUT PER HOUR 	4. Press the up arrow to scroll up; the back button to return to menu or the home button to exit.

1.13.3 Life Statistics

The life statistics function is used to view the commission date of the fryer which is automatically set once the fryer has completed 25 cooks, the serial number of the controller, the total time the fryer has operated in hours and the total heat cycle count of the fryer (the amount of times the controller has turned the heat on/off).

DISPLAY	ACTION
 	1. Press the Home button and then the Information button.
	2. Press the Life Stats button.
1. COMMISSION DATE 2. UNIT SERIAL NUMBER 3. CONTROLLER SERIAL NUMBER 4. TOTAL ON TIME (HOURS) 5. TOTAL HEAT CYCLE COUNT 6. TOTAL ENERGY SAVING TIME 7. TOTAL COOK TIME  	3. Press the back button to return to menu or the home button to exit.

1.13.4 Usage Statistics

The usage statistics displays total cook cycles per vat, number of cook cycles per vat, number of cook cycles exited prior to completion, the number of hours the vat(s) have been on and the date of last usage reset.

DISPLAY	ACTION
 	1. Press the Home button and then the Information button.
	2. Press the Usage Stats button.
1. USAGE START DATE 2. TOTAL NUMBER OF COOK CYCLES 3. TOTAL NUMBER OF QUIT COOK CYCLES 4. TOTAL VAT ON TIME (HOURS)  	3. Press the back button to return to menu or the home button to exit.

1.13.5 Recovery Time

Recovery is used to determine if the fryer is operating correctly. Recovery is the time required for the fryer to raise the temperature of the oil 50°F (28°C) between 250°F (121°C) and 300°F (149°C). Maximum recovery time should not exceed 1:40 for electric or 3:15 for gas.

DISPLAY	ACTION
 	1. Press the Home button and then the Information button.
	2. Press the Recovery button. The time is displayed in minutes and seconds.
1. LAST RECOVERY TIME  	3. Press the back button to return to menu or the home button to exit.

1.13.6 Filter Statistics

The filter statistics function is used to view the number of cooks remaining until the next filter, the number of cooks per vat, the number of filters per vat, the number of skipped or bypassed filters per vat and the average number of cook cycles per filter per day.

DISPLAY	ACTION
 	1. Press the Home button and then the Information button.
	2. Press the Filter button.
☐ DAY 1 ☐ DAY 2 ☐ DAY 3 ☐ DAY 4 	3. Select and press the desired day. Press the down arrow to scroll back additional days.
1. DAY AND DATE (Day and date of filter statistics displayed) 2. COOKS REMAINING UNTIL NEXT FILTER (Number of times cooks that remain until the next filter prompt.) 3. DAILY NUMBER OF COOKS (Number of cooks that day) 4. DAILY NUMBER OF FILTERS (Number of times vat filtered that day.) 	4. Press the down arrow to scroll to more statistics.
5. DAILY NUMBER OF SKIPPED FILTERS (Number of times filter was bypassed that day.) 6. AVERAGE COOKS PER FILTER - (Average number of cook cycles per filter that day.)	5. Press the up arrow to scroll up or the back button to return to select another day.

DISPLAY	ACTION
7. WEEKLY NUMBER OF FILTERS - (Number of times vat filtered in the past week.) 8. WEEKLY NUMBER OF SKIPPED FILTERS (Number of times filters were bypassed in the past week.)  9. FILTRATION - (Displays if filtration is enabled or disabled. Diagnostic tool to determine status of FIB board.)  	
 	6. Press the back button to return to menu or the home button to exit.

1.13.7 Software Version

The software version function provides the software versions of the controller and circuit boards in the fryer system; the values of the temperature probe; the values of the AIF RTD probe and the ATO RTD probe and information on any attached gateway.

DISPLAY	ACTION
 	1. Press the Home button and then the Information button.
	2. Press the down arrow button.
	3. Press Software Version button.
INITIALIZING ...	4. No action needed.
1. UIB SOFTWARE VERSION 2. SIB SOFTWARE VERSION 3. VIB SOFTWARE VERSION 4. FIB SOFTWARE VERSION 	5. Press the down arrow to scroll to additional software versions and probe temperatures. NOTE: Split vats will have an SIB2 and left and right vat, AIF, and ATO temperatures.
5. OQS SOFTWARE VERSION 6. ACTUAL VAT TEMP 7. AIF RTD TEMP 8. ATO RTD TEMP 9. BOARD ID  10. GATEWAY SOFTWARE VERSION	6. Press the down arrow to scroll to additional software versions and information. 7. Press the up arrow to scroll up; the back button to return to menu or the home button to exit.

DISPLAY	ACTION
11. GATEWAY IP ADDRESS 12. GATEWAY LINK QUALITY 13. GATEWAY SIGNAL STRENGTH AND NOISE 	

1.13.8 Usage Reset Statistics

The reset function resets all usage data in the usage statistics.

DISPLAY	ACTION
	1. Press the Home button and then the Information button.
	2. Press the down arrow button.
	3. Press Usage Reset button.
1 6 5 6	4. Enter 1656
	5. Press the √ (check) button.
ALL USAGE DATA HAS BEEN RESET	6. Press the √ (check) button.
	7. Press the up arrow to scroll up; the back button to return to menu or the home button to exit.

1.13.9 Fresh Oil Statistics

The fresh oil statistics function is used to view information on the current fresh oil.

DISPLAY	ACTION
	1. Press the Home button and then the Information button.
	2. Press the down arrow button.
	3. Press the Fresh Oil button.
1. NUMBER OF COOKS SINCE LAST RESET 2. DISPOSE COUNT COOKS SINCE LAST RESET 3. FRESH OIL COUNTER RESET DATE 4. FRESH OIL COUNTER 	4. Press the back button to return to menu or the home button to exit.

1.13.10 Fresh Oil Reset Usage Statistics

The reset function resets all fresh oil data in the fresh oil statistics.

DISPLAY	ACTION
 	1. Press the Home button and then the Information button.
	2. Press the down arrow button.
	3. Press Fresh Oil Reset button.
1 6 5 6	4. Enter 1656
	5. Press the ✓ (check) button.
FRESH OIL DATA HAS BEEN RESET 	6. Press the ✓ (check) button.
 	7. Press the back button to return to menu or the home button to exit.

1.13.11 Last Load Statistics

The last load statistics provides data for the last cook cycle.

DISPLAY	ACTION
 	1. Press the Home button and then the Information button.
	2. Press the Last Load button.
1. LAST COOKED PRODUCT 2. LAST LOAD START TIME 3. LAST LOAD COOK TIME 4. LAST LOAD PROGRAM TIME 	3. Press the down arrow to scroll to more statistics.
5. LAST LOAD MAX VAT TEMP 6. LAST LOAD MIN VAT TEMP 7. LAST LOAD AVG VAT TEMP 8. % OF COOK TIME, HEAT IS ON  9. VAT TEMP BEFORE COOK STARTS 10. VAT TEMP AT COOK END	4. Press the down arrow to scroll to more statistics.

DISPLAY	ACTION
  	5. Press the up arrow to scroll up; the back button to return to menu or the home button to exit.

1.13.12 TPM (Total Polar Material) Statistics

The TPM statistics provides data from the OQS (Oil Quality Sensor). The same data can be accessed by pressing the TPM button on the front of the controller when the TPM button is solid.

DISPLAY	ACTION
	1. Press the Home button.
	2. Press the Information button.
	3. Press the down arrow.
	4. Press the TPM Statistics button. The TPM values for the previous valid thirty (30) days are listed.
  	5. Press the up arrow to scroll up; the back button to return to menu or the home button to exit.

CHAPTER 2: FILTERQUICK™ FQ4000 FQ80/100/120 CHICKEN FILTRATION MENU FUNCTIONS INSTRUCTIONS

2.1 Filtration Menu

The filtration menu selections are used for filtering, draining, filling, disposing and cleaning the vats.

2.1.1 Quick Filter – Filter Prompt

Quick Filter is a feature that, after a number of preset cook cycles or time, will automatically prompt to filter the frypots. This function can also be performed on demand as well and is covered in the next section. **Note:** Simultaneous filtering of multiple vats does not occur.

DISPLAY	ACTION
FILTRATION REQUIRED  FILTER NOW?	1. Press the ✓ (check - YES) button to start filtration. If the X (NO) button is selected, filtering is cancelled, and the fryer resumes normal operation. The filtration button changes to yellow on the first bypass and the QUICK FILTER is highlighted in yellow in the filter menu. On the second bypass, the filtration button changes to red. The controller will prompt again soon to filter the oil. This sequence repeats until a filter is completed. Pressing the filter button when the color has changed will allow a filter to be started. NOTE: If a filtration lockout is active and a mechanical issue prevents filtration, pressing the SERVICE NEEDED button and selecting YES and YES again disables filter prompts. This allows cooking to proceed.
OIL LEVEL TOO LOW	2. Displayed if the oil level is too low. Press the ✓ (check - YES) button to acknowledge issue and return to idle cook mode. Check to see if the JIB is low on oil. If JIB is not low and this continues to occur, contact your FAS.
START QUICK FILTER 	3. Press the BLUE button to start filtration.
DRAINING	4. No action required.
FLUSHING	5. No action required.
ALERT DRAIN CLOSING REMOVE TOOLS	6. Ensure that all tools are removed from the frypot prior to the drain closing to prevent damage to the drain.  DANGER Keep all items out of drains. Closing actuators may cause damage or injury.
FILLING	7. No action required.
PREHEAT	8. No action required. Displayed until the fryer reaches setpoint.
	9. Fryer is ready for use. Displayed once fryer reaches setpoint.

NOTE: If the filter pan is removed during filtration, the filtration process stops and resumes once pan is reseated into place.

Should the quick filtration procedure fail or if **ALL** the oil isn't completely returned during filtration, the system may proceed to an incomplete filtration function. In some cases, an error message may be generated. Follow the instructions on the controller to clear the error, complete the filter and return **ALL** the oil.

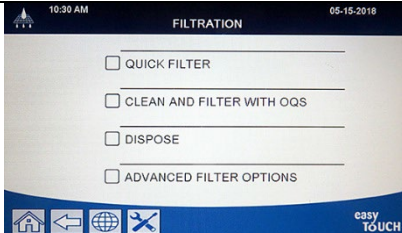


DANGER

Keep all items out of drains. Closing actuators may cause damage or injury.

2.1.2 Quick Filter on Demand

Quick Filter on demand filtration is used to manually start a quick filter. **Note:** Simultaneous filtering of multiple vats cannot occur.

DISPLAY	ACTION
	The fryer MUST be at setpoint temperature. Press the filtration menu button. The filtration button is yellow if a bypass has occurred. If the filtration button is red, more than one bypass has occurred.
	Select QUICK FILTER. QUICK FILTER is highlighted in yellow in the filter menu if a bypass has occurred.
QUICK FILTER NOW?	Press the √ (check - YES) button to start filtration. If the X (NO) button is selected, filtering is cancelled, and the fryer resumes normal operation. The filtration button changes to yellow on the first bypass and the QUICK FILTER is highlighted in yellow in the filter menu. On the second bypass, the filtration button changes to red. The controller will prompt again soon to filter the oil. This sequence repeats until a filter is completed. Pressing the filter button when the color has changed will allow a filter to be started.
OIL LEVEL TOO LOW	Displayed if the oil level is too low. Press the √ (check - YES) button to acknowledge issue and return to idle cook mode. Check to see if the JIB is low on oil. If JIB is not low and this continues to occur, contact your FAS.
START QUICK FILTER 	Press the BLUE button to start filtration.
DRAINING	No action required as oil drains into filter pan.
FLUSHING	No action required as debris is flushed from the vat.

DISPLAY	ACTION
ALERT DRAIN CLOSING REMOVE TOOLS	8. Ensure that all tools are removed from the frypot prior to the drain closing to prevent damage to the drain. ⚠ DANGER Keep all items out of drains. Closing actuators may cause damage or injury.
FILLING	9. No action required as the vat refills.
PREHEAT	10. No action required as the fryer heats to setpoint.
	11. Fryer is ready for use. Displayed once fryer reaches setpoint.

NOTE: If the filter pan is removed during filtration, the filtration process stops and resumes once pan is reseated into place.

Should the quick filtration procedure fail or if **ALL** the oil isn't completely returned during filtration, the system may proceed to an incomplete filtration function. In some cases, an error message may be generated. Follow the instructions on the controller to clear the error, complete the filter and return **ALL** the oil.

When FILTER BUSY is displayed, the system is waiting on another vat to be filtered or waiting on another issue to clear. Press the ✓ (check - YES) button and wait 15 minutes to see if problem is corrected. If not, call your local FAS.

⚠ DANGER

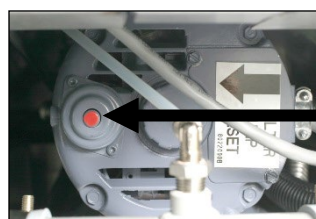
Do not drain more than one frypot at a time into the built-in filtration unit to avoid overflow and spillage of hot oil that may cause severe burns, slipping and falling.

⚠ WARNING

The filter motor is equipped with a manual reset switch in case the filter motor overheats, or an electrical fault occurs. If this switch trips, turn off power to the filter system and allow the pump motor to cool 20 minutes before attempting to reset the switch (see photo below).

⚠ WARNING

Use caution and wear appropriate safety equipment when resetting the filter motor reset switch. Resetting the switch must be accomplished with care to avoid the possibility of a serious burn from careless maneuvering around the drain tube and frypot.



**Filter Motor
Reset Switch**

2.1.3 Clean and Filter (with OQS [if installed]) (or End of Day Filter)

The clean and filter operation is an extended filtration with additional prompts to thoroughly clean the vat. This typically is done once a day or at the end of the day. Ensure that the filter pad or paper is replaced daily to keep the system operating correctly. For proper operation in high volume or 24-hour stores, the filter pad or paper must be changed twice a day.

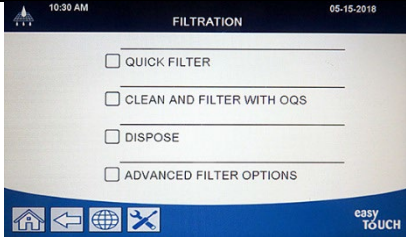
If CLOSE DISPOSE VALVE is displayed, close the dispose valve. Press the X (NO) button to exit.

NOTICE

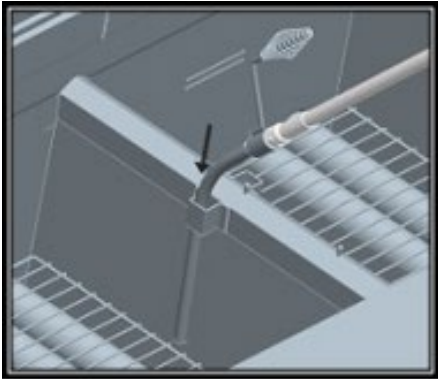
The filter pad or paper must be replaced daily.

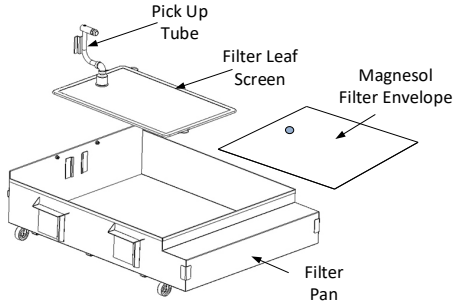
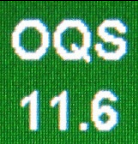
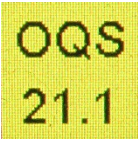
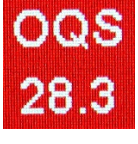
⚠ WARNING

Do not drain more than one frypot at a time into the built-in filtration unit to avoid overflow and spillage of hot oil that may cause severe burns, slipping and falling.

DISPLAY	ACTION
	1. The fryer MUST be at setpoint temperature. Press the filtration menu button.
	2. Select CLEAN AND FILTER (WITH OQS [Oil Quality Sensor] if installed).
CLEAN NOW?	3. Press the √ (check - YES) button to start filtration. If the X (NO) button is selected, filtering is cancelled, and the fryer resumes normal operation.
WEAR PROTECTIVE GLOVES	4. Press the √ (check - YES) button once all personal protection equipment including heat resistant gloves are in place.
START CLEAN AND FILTER	5. Press the BLUE button to start filtration.
DRAINING	6. No action required as oil drains into filter pan.
FLUSHING	7. No action required while the return valve opens, and the vat is flushed with oil from the filter pan.
ALERT DRAIN CLOSING REMOVE TOOLS	8. Ensure that all tools are removed from the frypot prior to the drain closing to prevent damage to the drain. Skip to step 11 for units without OQS. ⚠ DANGER Keep all items out of drains. Closing actuators may cause damage or injury.
FILLING	9. No action required while OQS sensor is filled.
MEASURING OIL QUALITY	10. No action required while the OQS sensor calculates the oil quality value of the oil.

DISPLAY	ACTION
CONNECT FRONT WASH DOWN HOSE	11. Connect the front wash down hose to the quick disconnect of the fryer, by pulling back on the female end collar and pushing firmly onto the male disconnect. Once in place, release the disconnect and ensure that the quick disconnect is fully locked into place. 
PULL BLUE HANDLE	12. Pull the handle completely forward to start rinsing. 
USE WASHDOWN HOSE TO CLEAN FRYPOT WASH COMPLETE  YES	13. Use the washdown hose to clean the frypot. Once clean press the √ (check - YES) button.
PUSH BLUE HANDLE/WAND VALVE	14. Press the wash down handle in towards the fryer to stop the flow of oil. 

POLISHING	15. Insert the wand in the wand holder when washing is complete. No action required while the drain and return valves are open and oil is pumped through the frypot for 15 minutes. 
ALERT DRAIN CLOSING REMOVE TOOLS	16. Ensure that all tools are removed from the frypot prior to the drain closing to prevent damage to the drain. ⚠ DANGER Keep all items out of drains. Closing actuators may cause damage or injury.
FILLING  YES	17. Once the frypot is full, press the ✓ (check - YES) button.
WEAR PROTECTIVE GLOVES	18. Press the ✓ (check - YES) button once all personal protection equipment including heat resistant gloves are in place.
REMOVE FILTER PAN	19. Carefully remove the filter pan from the fryer. ⚠ DANGER Remove the filter pan slowly to avoid splashing of hot oil that may cause severe burns, slipping and falling.
IS FILTER PAN EMPTY?	20. If the filter pan is empty press the ✓ (check - YES) button. If the pan is not empty, press the X (NO) button and return to step 17???.
PUSH WASH DOWN HANDLE IN. DISCONNECT AND STORE WASH DOWN HOSE.	21. Press the wash down handle in to stop the flow of oil. Disconnect the front wash down hose to the quick disconnect of the fryer. Press the ✓ (CHECK) (CONFIRM) button and Skip to step 27 for units without OQS.  

CLEAN FILTER PAN CONFIRM	22. Clean the filter pan. Reassemble the filter pan in order, using the diagram as a reference and press √ (check - CONFIRM) button when complete. Skip to step 27 for units without OQS. 
  	23. If OQS = Text and if TPM reading is below OQS SETUP – DISCARD NOW and DISCARD SOON limits, the TPM value is shown in the green TPM box in lower right corner. Proceed to step 27. If OQS = Text and if TPM reading is below OQS SETUP – DISCARD NOW but above DISCARD SOON limits, the TPM value is shown in the yellow TPM box in lower right corner. Proceed to DISCARD SOON in step 25. If OQS = Text and if TPM reading is above OQS SETUP – DISCARD NOW limits; the TPM value is shown in the red TPM box in lower right corner. Proceed to DISCARD NOW in step 26. If OQS = Number proceed to TPM - XX in step 24.
TPM - XX	24. Press the √ (check - YES) button to continue. If the TPM reading is above OQS SETUP – DISCARD limits, proceed to step 26, otherwise proceed to step 27.
DISCARD SOON 	25. Press the √ (check -YES) button to continue. Skip to step 27
DISCARD NOW? 	26. Press the √ (check -YES) button to continue. Proceed to DISPOSE in section 2.1.5. Press X (NO) to delay the DISPOSE.
	27. The controller switches off.

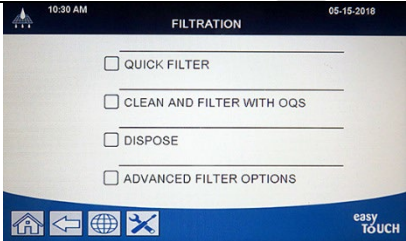
***NOTE: After a clean and filter it is normal to leave some oil in the pan and the level of oil may not return to the level prior to starting clean and filter.**

2.1.4 Dispose

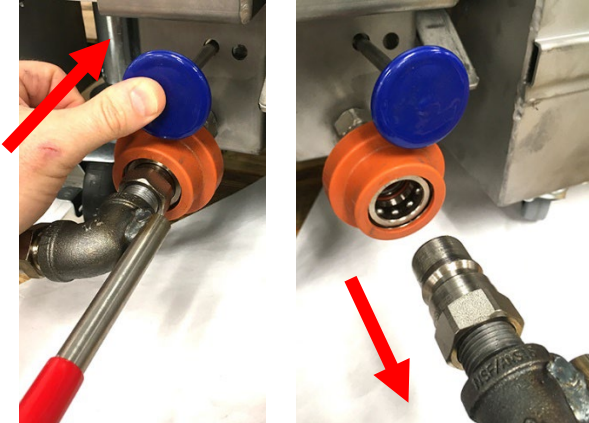
This option is used to dispose of exhausted oil using a wand, that is connected to the front of the fryer, to pump the oil into a disposal container. Frymaster recommends a Shortening Disposal Unit (SDU). Refer to the documentation furnished with your disposal unit for specific operating instructions. If a shortening disposal unit is not available, allow the oil to cool to 100°F (38°C), then drain the oil into a **METAL** container.

WARNING

Ensure filter paper or pad is in place prior to draining or disposing of oil. Failure to insert filter paper or pad may result in clogged lines and/or pumps.

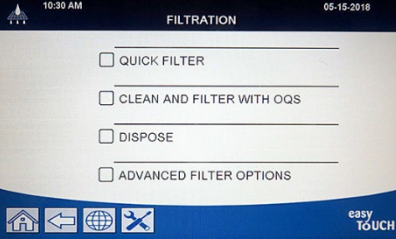
DISPLAY	ACTION
	1. Press the filtration menu button.
	2. Select DISPOSE. If the DISPOSE button is highlighted in yellow, a dispose is required.
DISPOSE NOW? or DISCARD NOW?	3. Press the √ (check - YES) button to continue. If the X (NO) button is selected, the user returns to the previous state.
REMOVE FILTER PAN	4. Remove the filter pan.
IS FILTER PAN EMPTY?	5. If the filter pan is empty press the √ (check - YES) button and proceed to the next step. If the pan is not empty, press the X (NO) button. The clean function is cancelled and returns to the previous state. Remove the oil from the pan and after inserting the filter pan, retry the function. If no pan is detected, the controller displays INSERT PAN until the pan is detected.
START DISPOSE 	6. Press the BLUE button to start filtration.
INSERT PAN	7. Push the filter pan fully into place and continue to next step. Displayed if the filter pan is not fully engaged.
DRAINING	8. No action required as oil drains into filter pan.
IS FRYPOT EMPTY?	9. Once the frypot is empty, press the √ (check - YES) button to continue.
SCRUB FRYPOT COMPLETE?	10. Clean the frypot with a scrub brush and when complete press the √ (check - YES) button to continue.

CONNECT DISPOSAL HOSE TO FRYER AND DISPOSAL SYSTEM	11. Connect the disposal hose to the fryer by pulling back on the female end collar and pushing firmly onto the male disconnect. Once in place, release the disconnect and ensure that the quick disconnect is fully locked into place. and the other end to the disposal system. Press the √ (check - COMPLETE) button once complete to continue. 
ALERT DRAIN CLOSING REMOVE TOOLS	12. Ensure that all tools are removed from the frypot prior to the drain closing to prevent damage to the drain. ⚠ DANGER Keep all items out of drains. Closing actuators may cause damage or injury.
PULL BLUE HANDLE	13. Pull the handle completely forward to start disposing. 
DISPOSING	14. No action is required while the pump transfers the waste oil from the pan to the waste container.
REMOVE FILTER PAN	15. Carefully pull the filter pan from the fryer. ⚠ DANGER Open the filter pan slowly to avoid splashing of hot oil that may cause severe burns, slipping and falling.
IS PAN EMPTY?	16. If the filter pan is empty press the √ (check - YES) button. If the pan is not empty, press the X (NO) button; return to step 14.
INSERT FILTER PAN	17. Insert the filter pan.

PUSH BLUE HANDLE	18. Close the dispose valve by pushing the blue valve handle toward the rear of the fryer until it stops. Disconnect the dispose hose from the fryer. 
ROTATE SHORTENING NOW? YES NO	19. If prompted, press the √ (check - YES) button to continue. Follow instructions in next section to rotate oil. If the X (NO) button is selected, the controller goes to OFF.
	20. The controller switches off.

2.1.5 Rotate Shortening

The rotate shortening function prompts the user to move shortening from one vat to another.

DISPLAY	ACTION
	1. The fryer <u>MUST</u> be OFF.
	2. Press the filtration menu button
	3. Select ADVANCED FILTER OPTIONS.
	4. Select ROTATE SHORTENING.
ROTATE SHORTENING NOW? YES NO	5. Press the √ (check - YES) button to continue. If the X (NO) button is selected, the controller goes to OFF.
DRAINING	6. No action required as oil drains into filter pan.

ALERT DRAIN CLOSING REMOVE TOOLS	7. Ensure that all tools are removed from the frypot prior to the drain closing to prevent damage to the drain. ⚠ DANGER KEEP ALL ITEMS OUT OF DRAINS. CLOSING ACTUATORS MAY CAUSE DAMAGE OR INJURY.
IS VAT EMPTY? YES NO	8. Once the vat is empty, press the √ (check - YES) button to continue.
ATTACH THE HOSE TO THE FRONT ORANGE PORT	9. Attach the disposal hose to the fryer by pulling back on the female end collar and pushing firmly onto the male disconnect. Once in place, release the disconnect and ensure that the quick disconnect is fully locked into place. and the other end to the disposal system. Press the √ (check - YES) button once attached to continue. 
PLACE THE WAND IN THE NEXT FRYPOT	10. Place the wand in the frypot following the direction of the arrow. Press the √ (check - YES) button once the wand is in the vat. ⚠ DANGER ENSURE THE WAND IS SECURED AT ALL TIMES TO AVOID HOT OIL SPLASHING THAT MAY CAUSE DAMAGE OR INJURY.
PULL THE BLUE HANDLE TO PUMP SHORTENING INTO THE NEXT FRYPOT	11. Pull the handle completely forward to start pumping the shortening into the adjoining frypot. 
FILLING	12. Hold the wand securely while the vat is filled.

REMOVE FILTER PAN	13. Carefully pull the filter pan from the fryer. ⚠ DANGER Open the filter pan slowly to avoid splashing of hot oil that may cause severe burns, slipping and falling.
IS PAN EMPTY?	14. If the filter pan is empty press the √ (check - YES) button. If the pan is not empty, press the X (NO) button and return to step 12.
INSERT FILTER PAN	15. Insert the filter pan.
PUSH BLUE HANDLE	16. Push the blue valve handle toward the rear of the fryer until it stops. Disconnect the dispose hose from the fryer.  
ROTATE SHORTENING FROM NEXT FRYPOT 1. ON THE NEXT FRYPOT, TOUCH THE CLEANING HAND BUTTON. 2. TOUCH ROTATE SHORTENING 3. FOLLOW THE PROMPTS YES NO	17. If rotating shortening, on the next frypot follow the instructions on the display and press the √ (check - YES) button to continue. Press the X (NO) button to cancel.
	18. The controller switches off.

2.1.6 OQS (Oil Quality Sensor) Filter

The OQS filter is a function that filters the vat that takes an oil reading to test the TPM (Total Polar Materials) in the oil using the built in OQS sensor. This function is used to determine when the oil has reached the end of its life and when to dispose. Ensure that the filter pad or paper is replaced daily to keep the system operating correctly. For proper operation in high volume or 24-hour stores, the filter pad or paper must be changed twice a day.

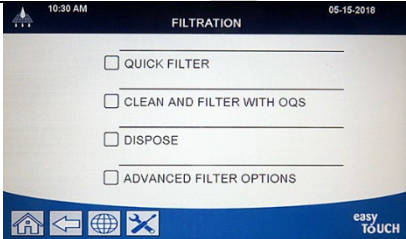
If CLOSE DISPOSE VALVE is displayed, close the dispose valve. Press the X (NO) button to exit.

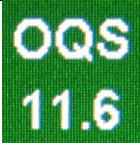
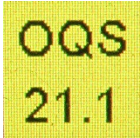
NOTICE

The filter pad or paper must be replaced daily.

⚠ WARNING

Do not drain more than one frypot at a time into the built-in filtration unit to avoid overflow and spillage of hot oil that may cause severe burns, slipping and falling.

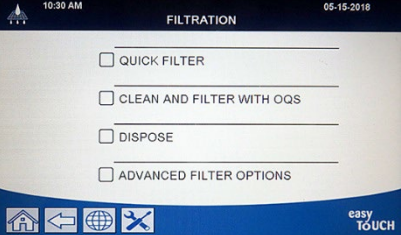
DISPLAY	ACTION
	The fryer MUST be at setpoint temperature. Press the filtration menu button or if the TPM button is blinking, press the TPM button.
	Select ADVANCED FILTER OPTIONS.
	Select OQS (Oil Quality Sensor) - FILTER.
OQS – FILTER NOW?	Press the ✓ (check - YES) button to start filtration. If the X (NO) button is selected, filtering is cancelled, and the fryer resumes normal operation.
OIL LEVEL TOO LOW	Displayed if the oil level is too low. Press the ✓ (check - YES) button to acknowledge issue and return to idle cook mode. Check to see if the JIB is low on oil. If JIB is not low and this continues to occur, contact your FAS.
START FILTRATION 	Press the BLUE button to start filtration or the X button to cancel the filter.
DRAINING	No action required as oil drains into filter pan.
FLUSHING	No action required while the return valve opens, and the vat is flushed with oil from the filter pan.

DISPLAY	ACTION
ALERT DRAIN CLOSING REMOVE TOOLS	9. Ensure that all tools are removed from the frypot prior to the drain closing to prevent damage to the drain. ⚠ DANGER Keep all items out of drains. Closing actuators may cause damage or injury.
FILLING	10. No action required while the OQS sensor is filled.
MEASURING OIL QUALITY	11. No action required while the OQS sensor calculates the oil quality value of the oil.
FILLING	12. No action required while the vat is filled.
  	13. If OQS = Text and if TPM reading is below OQS SETUP – DISCARD NOW and DISCARD SOON limits, the TPM value is shown in the green TPM box in lower right corner. Proceed to step 17. If OQS = Text and if TPM reading is below OQS SETUP – DISCARD NOW but above DISCARD SOON limits, the TPM value is shown in the yellow TPM box in lower right corner. Proceed to DISCARD SOON in step 15. If OQS = Text and if TPM reading is above OQS SETUP – DISCARD NOW limits; the TPM value is shown in the red TPM box in lower right corner. Proceed to DISCARD NOW in step 16. If OQS = Number proceed to TPM - XX in step 14.
TPM - XX	14. Press the ✓ (check - YES) button to continue. If the TPM reading is above OQS SETUP – DISCARD limits, proceed to step 16, otherwise proceed to step 17.
DISCARD SOON 	15. Press the ✓ (check -YES) button to continue. Skip to step 17
DISCARD NOW? 	16. Press the ✓ (check -YES) button to continue. Proceed to DISPOSE in section 2.1.5. Press X (NO) to delay the DISPOSE.
PREHEAT	17. No action required as the fryer heats to setpoint.
	18. Fryer is ready for use. Displayed once fryer reaches setpoint.

NOTE: If the oil isn't completely returned during filtration, the system may proceed to an incomplete filtration function.

2.1.7 Fill Vat from (Filter) Pan

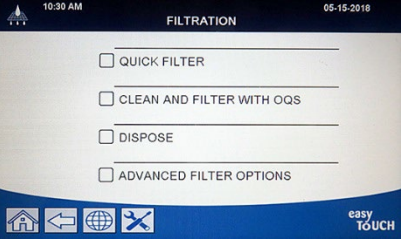
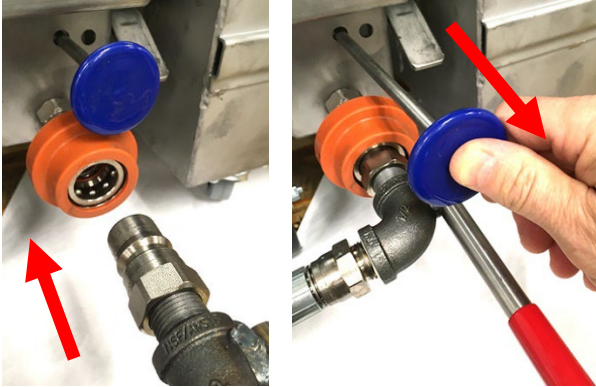
The fill vat from pan function fills the vat from the filter pan.

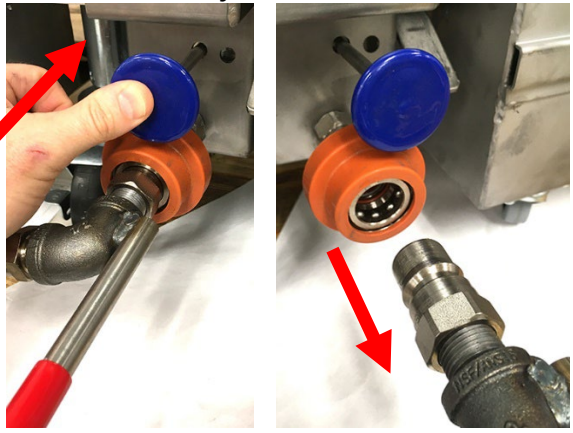
DISPLAY	ACTION
	1. The fryer MUST be OFF.
	2. Press the filtration menu button
	3. Select ADVANCED FILTER OPTIONS.
	4. Select FILL VAT FROM PAN. If no pan is detected, the controller displays INSERT PAN until the pan is detected.
FILL FROM PAN?	5. Press the √ (check - YES) button to continue. If the X (NO) button is selected, the controller goes to OFF.
FILLING	6. No action is required while the vat is filling.
IS FRYPOT FULL OF OIL?	7. Press the X (NO) button to run the pump again if the oil level is below the top oil level full line. Press the √ (check - YES) button once the oil level is at the top oil level full line. If the vat oil level is not completely filled, check the filter pan to see if most of the oil has returned. The pan may have a small amount of oil.
	8. The controller switches off.

2.1.8 Pan to Waste (Bulk Only)

The pan to waste function is an option that allows bulk oil systems to pump excess oil in the pan, to the bulk oil waste tanks, without draining the existing oil in the vat.

DISPLAY	ACTION
	1. Press the filtration menu button

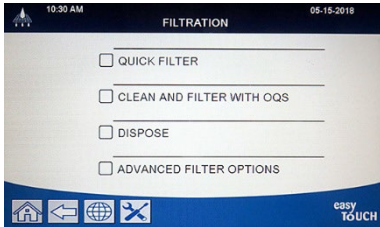
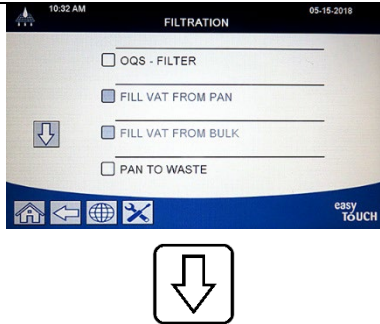
DISPLAY	ACTION
	2. Select ADVANCED FILTER OPTIONS.
	3. Select PAN TO WASTE.
PAN TO WASTE?	4. Press the ✓ (check - YES) button to continue. If the X (NO) button is selected, the user returns to the previous state. If no pan is detected, the controller displays INSERT PAN until the pan is detected.
PULL BLUE HANDLE	5. Connect the disposal hose to the fryer by pulling back on the female end collar and pushing firmly onto the male disconnect. Once in place, release the disconnect and ensure that the quick disconnect is fully locked into place. and the other end to the disposal system.  Pull the blue handle completely forward to start disposing.
DISPOSING	6. No action is required while the pump transfers the waste oil from the pan into the disposal unit.
REMOVE PAN	7. Carefully pull the filter pan from the fryer. ⚠ DANGER Open the filter pan slowly to avoid splashing of hot oil that may cause severe burns, slipping and falling.
IS PAN EMPTY?	8. If the filter pan is empty press the ✓ (check - YES) button. If the pan is not empty, press the X (NO) button and return to step 6.
INSERT PAN	9. Insert the filter pan.

DISPLAY	ACTION
PUSH BLUE HANDLE	10. Close the dispose valve by pushing the blue handle toward the rear of the fryer until it stops. Disconnect the dispose hose from the fryer. 
	11. The controller returns to the starting state.



2.1.9 Drain to Pan

The drain to pan function drains the oil from the vat to the filter pan.

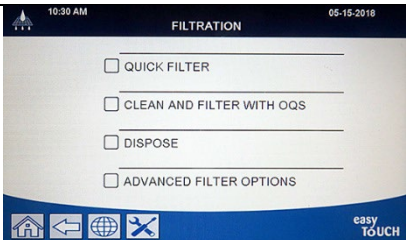
DISPLAY	ACTION
	1. Press the filtration menu button.
	2. Select ADVANCED FILTER OPTIONS.
	3. Press the down arrow.
	4. Select DRAIN TO PAN.
DRAIN NOW?	5. Press the ✓ (check - YES) button to continue. If the X (NO) button is selected, the controller goes to OFF.
START DRAINING 	6. Press the BLUE button to start draining or the X button to cancel the function.
DRAINING	7. No action is required while the vat drains the oil into the filter pan.
VAT EMPTY?	8. Once the vat is empty, press the ✓ (check - YES) button to continue.
ALERT DRAIN CLOSING REMOVE TOOLS	9. Ensure that all tools are removed from the frypot prior to the drain closing to prevent damage to the drain. ⚠ DANGER Keep all items out of drains. Closing actuators may cause damage or injury.

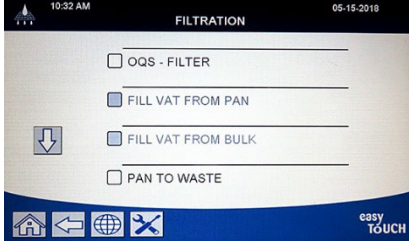
DISPLAY	ACTION
FILL FROM PAN?	10. Press the ✓ (check - YES) button to refill the vat, otherwise skip to step 14.
FILLING	11. No action is required while the vat is filling.
IS FRYPOT FULL OF OIL?	12. Press the X (NO) button to run the pump again if the oil level is below the top oil level full line. Press the ✓ (check - YES) button once the oil level is at the top oil level full line and skip to step 16. If the vat oil level is not completely filled, check the filter pan to see if most of the oil has returned. The pan may have a small amount of oil.
REMOVE PAN	13. Carefully pull the filter pan from the fryer. ⚠ DANGER Open the filter pan slowly to avoid splashing of hot oil that may cause severe burns, slipping and falling.
IS PAN EMPTY?	14. If the filter pan is empty press the ✓ (check - YES) button. If the pan is not empty, press the X (NO) button and return to step 11.
INSERT PAN	15. Insert the filter pan.
	16. The controller switches off.

2.1.10 Clean (Cold Clean or Boil Out)

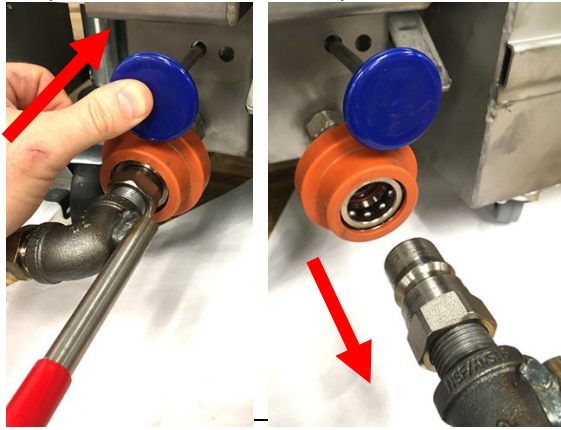
The clean mode is used to remove carbonized oil from the frypot.

⚠ WARNING
Ensure the filter is in place prior to draining or disposing of oil. Failure to insert the filter may result in clogged lines and/or pumps.

DISPLAY	ACTION
	1. Press the filtration menu button. This function can be started when the fryer is on or off. If disposing, it is recommended to dispose of warm oil, to ease pumping of oil.
	2. Select ADVANCED FILTER OPTIONS.

DISPLAY	ACTION
 	3. Press the down arrow.
	4. Select CLEAN.
COLD CLEAN or BOIL OUT NOW?	5. Press the √ (check - YES) button to continue. If the X (NO) button is selected, the user returns to the filtration menu. If no pan is detected, the controller displays INSERT PAN until the pan is detected.
SAVING OIL?	6. Press the √ (check - YES) button if saving the oil and the oil is to be reused skip to step 8. If the X (NO) button is selected, continue to next step.
IS OIL DISPOSED?	7. If the oil HAS already been disposed and the frypot is empty, press the √ (check - YES) button and skip to step 8. If the oil HAS NOT been disposed, press the X (NO) button and skip to step 13.
REMOVE FILTER PAN	8. Carefully pull the filter pan from the fryer.  DANGER Remove the filter pan slowly to avoid splashing of hot oil that may cause severe burns, slipping and falling.
IS FILTER PAN EMPTY?	9. If the oil IS NOT being saved, and the filter pan is empty, press the √ (check - YES) button and skip to step 23. If the oil IS being saved and the filter pan is empty, press the √ (check - YES) button and continue to next step. Press the X (NO) button if oil is in the filter pan and continue to step 11.
INSERT FILTER PAN	10. Push the filter pan fully into place and continue to step 12.
DISPOSE OIL IN FILTER PAN AND RESTART CLEAN	11. Press the √ (check - YES) button and skip to step 48. Dispose of the oil in the filter pan by using the fill vat from pan option and then the dispose option. Once finished start the clean function again.
DRAIN TO FILTER PAN?	12. Press the √ (check - YES) button to drain the oil to the filter pan.
DRAINING	13. No action required as oil drains into filter pan.

DISPLAY	ACTION
IS FRYPOT EMPTY?	14. Press the √ (check - YES) button when the frypot is empty to continue. If the oil IS NOT being saved, proceed to step 16. If the oil IS being saved, proceed to next step.
ALERT DRAIN CLOSING REMOVE TOOLS	15. Ensure that all tools are removed from the frypot prior to the drain closing to prevent damage to the drain. If the oil IS being saved, proceed to step 18. ⚠ DANGER Keep all items out of drains. Closing actuators may cause damage or injury.
PULL THE BLUE HANDLE	16. Attach the dispose wand by pulling back on the female end collar and pushing firmly onto the male disconnect. Once in place, release the disconnect and ensure that the quick disconnect is fully locked into place. Ensure the disposal unit is in place, in front of the fryer.   Pull the blue handle on the dispose valve completely forward to start disposal. ⚠ DANGER When draining oil into an appropriate METAL container. Use caution when disposing, otherwise hot liquid could overflow and cause injury.
DISPOSING	17. No action is required while the pump transfers the waste oil from the pan into the disposal unit.
REMOVE FILTER PAN	18. Carefully pull the filter pan from the fryer. If oil IS NOT being saved proceed to next step. If the oil IS being saved and the filter pan is full of oil, remove the filter pan from the fryer and skip to step 23. ⚠ DANGER Open the filter pan slowly to avoid splashing of hot oil that may cause severe burns, slipping and falling.
IS FILTER PAN EMPTY?	19. If the filter pan IS empty press the √ (check - YES) button. and continue to step 21. If the filter pan IS NOT empty, press the X (NO) button; step 17.

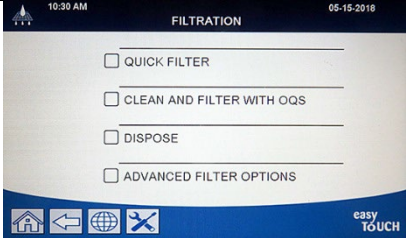
DISPLAY	ACTION
INSERT FILTER PAN	20. Insert the filter pan.
PUSH THE BLUE VALVE	21. Close the dispose valve by pushing the blue handle on the dispose valve handle toward the rear of the fryer until it stops. Disconnect the dispose hose from the fryer. 
ALERT DRAIN CLOSING REMOVE TOOLS	22. Ensure that all tools are removed from the frypot prior to the drain closing to prevent damage to the drain. ⚠ DANGER Keep all items out of drains. Closing actuators may cause damage or injury.
SOLUTION ADDED?	23. Fill the vat to be cleaned with water and cleaning solution mix. Press the √ (check – YES) button to start the cleaning procedure.
CLEANING or BOIL OUT	24. Scrub the vat and then let the solution soak while the cold clean or boil out timer counts down.
CLEAN or BOIL OUT DONE	25. Press the √ (check - YES) button to silence the alarm. If using a boil out dispose hose go to next step. If not, go to step 28.
ATTACH CLEANING DISPOSE HOSE	26. Connect the dispose hose to the drain.
IS THE CLEANING DISPOSAL HOSE ATTACHED? YES	27. Once the cleaning dispose hose it attached press the √ (check – YES) button. Skip to step 29.
INSERT CLEANING DISPOSAL UNIT changing to IS CLEANING DISPOSAL UNIT IN PLACE?	28. Insert the cleaning disposal unit or disposal pan large enough to contain 16 gallons (61 liters) or more under the drain and press √ (check-YES).
DRAINING	29. No action is required while the vat drains.
RINSE COMPLETE?	30. Rinse excess solution from vat. Press the √ (check - YES) button when the vat is completely rinsed.
IS SOLUTION REMOVED?	31. Ensure the solution is removed and press the √ (check - YES) button when the vat is completely rinsed.
ALERT DRAIN CLOSING REMOVE TOOLS	32. Ensure that all tools are removed from the frypot prior to the drain closing to prevent damage to the drain. ⚠ DANGER Keep all items out of drains. Closing actuators may cause damage or injury.

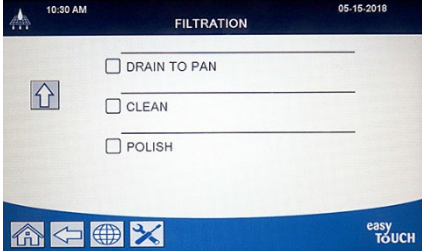
DISPLAY	ACTION
REMOVE THE CLEANING SOLUTION UNIT or DISPOSAL HOSE	33. Remove cleaning solution unit, disposal pan or disposal hose and press the √ (check - YES) button when finished. If oil was saved, skip to step 37.
IS FILTER PAN CLEAN?	34. Ensure the filter pan and components are clean. Press the √ (check - YES) button when complete. Pressing the X (NO) button if the filter pan is not clean prompts to Clean Filter Pan. Press once filter pan is clean and continue to next step.
IS FRYPOT AND FILTER PAN DRY?	35. Ensure the frypot, filter pan and components are completely dry. Press the √ (check - YES) button when finished.  DANGER Ensure that the frypot and filter pan are completely dry and free of water before filling with oil. Failure to do so will cause splattering of hot liquid when the oil is heated to cooking temperature.
INSERT FILTER PAN	36. Reinstall filter leaf assembly. Insert the filter pan and skip to step 47.
IS FRYPOT DRY?	37. Dry the frypot, ensuring it is completely dry. Press the √ (check - YES) button when finished.  DANGER Ensure that the frypot is completely dry and free of water before filling with oil. Failure to do so will cause splattering of hot liquid when the oil is heated to cooking temperature.
RETURNING SAVED OIL?	38. Press the √ (check - YES) button to continue returning the saved oil.
INSERT FILTER PAN	39. Insert the filter pan with the saved oil removed in step 20.
FILL FRYPOT FROM FILTER PAN?	40. Press the √ (check - YES) button to fill the frypot.
FILLING	41. No action is required while the vat is filling.
IS FRYPOT FULL OF OIL?	42. Press the X (NO) button to return to previous step and run the pump again, if the oil level is below the bottom oil level line. Press the √ (check - YES) button once the oil level is at or above the bottom oil level line. If the frypot oil level is not at or above the bottom oil level line, check the filter pan to see if most of the oil has returned. The filter pan may have a small amount of remaining oil.
REMOVE FILTER PAN	43. Carefully pull the filter pan from the fryer.  DANGER Remove the filter pan slowly to avoid splashing of hot oil that may cause severe burns, slipping and falling.
CLEAN FILTER PAN	44. Remove the filter leaf assembly. Remove the filter envelope. Clean all the filter components and filter pan. Press the √ (check - YES) button when finished.

IS FILTER PAN DRY?	45. Ensure the filter pan and components are completely dry. Press the ✓ (check - YES) button when finished. ⚠ DANGER Ensure that the filter pan is completely dry and free of water before filling with oil. Failure to do so will cause splattering of hot liquid when the oil is heated to cooking temperature.
INSERT FILTER PAN	46. Reinstall filter leaf and envelope removed in step 44 and insert the filter pan.
MANUALLY FILL VAT	47. Carefully add oil into the vat until it reaches the low-level fill line in the fryer. Press the ✓ (check - YES) button once the vat is full.
	48. Add fresh shortening, ensuring the shortening is packed down between the tubes. Press the ✓ (check - YES) button once the vat is full.
	49. The controller switches off.

2.1.11 Polish

The polish mode is used as an extended filtration to remove impurities from the oil.

DISPLAY	ACTION
	1. The fryer MUST be at setpoint temperature. Press the filtration menu button.
	2. Select ADVANCED FILTER OPTIONS.

DISPLAY	ACTION
 	3. Press the down arrow.
	4. Select POLISH.
POLISH?	5. Press the ✓ (check - YES) button to continue. If the X (NO) button is selected, the user returns to the previous state.
SKIM DEBRIS FROM VAT	6. Skim the crumbs from the oil with the skimmer using a front to back motion, removing as many crumbs as possible from each vat. This is critical to optimizing usable oil life and quality of the oil. Press the ✓ (check - YES) button when complete. Press the X button to cancel the filter.
START POLISH 	7. Press the BLUE button to start a polish or the X button to cancel the function. If no pan is detected, the controller displays INSERT PAN until the pan is detected.
DRAINING	8. No action required as oil drains into filter pan.
POLISHING	9. No action required while the drain and return valves are open and oil is pumped through the frypot for an extended period of time.
ALERT DRAIN CLOSING REMOVE TOOLS	10. Ensure that all tools are removed from the frypot prior to the drain closing to prevent damage to the drain.  DANGER Keep all items out of drains. Closing actuators may cause damage or injury.
FILLING	11. No action required as the vat refills.
PREHEAT	12. No action required as the fryer heats to setpoint.
START	13. Fryer is ready for use. Displayed once fryer reaches setpoint.

CHAPTER 3: FILTERQUICK™ FQ4000 FQ80/100/120 CHICKEN OPERATOR TROUBLESHOOTING

3.1 Introduction

This chapter provides an easy reference guide to some of the common problems that may occur during the operation of your equipment. The troubleshooting guides that follow are intended to help you correct, or at least accurately diagnose, problems with your equipment. Although the chapter covers the most common problems reported, you may encounter problems that are not covered. In such instances, the Frymaster Technical Services staff will make every effort to help you identify and resolve the problem.

When troubleshooting a problem, always use a process of elimination starting with the simplest solution and working through to the most complex. Most importantly, always try to establish a clear idea of why a problem has occurred. Part of your corrective action involves taking steps to ensure that it doesn't happen again. If a controller malfunctions because of a poor connection, check all other connections. If a fuse continues to blow, find out why. Always keep in mind that failure of a small component may often be indicative of potential failure or incorrect functioning of a more important component or system.

If you are in doubt as to the proper action to take, do not hesitate to call the Frymaster Technical Service Department or your local Frymaster Factory Authorized Servicer for assistance.

Before calling a servicer or the Frymaster HOTLINE (1-800-551-8633):

- **Verify that electrical cords are plugged in and that circuit breakers are on.**
- **Verify that gas line quick-disconnects are properly connected.**
- **Verify that any gas line cutoff valves are open.**
- **Verify that frypot drain valves are fully closed.**
- **Have your fryer's model and serial numbers ready to give the technician assisting you.**

 DANGER

Hot oil will cause severe burns. Never attempt to move this appliance when filled with hot oil or to transfer hot oil from one container to another.

 DANGER

This equipment should be unplugged when servicing, except when electrical circuit tests are required. Use extreme care when performing such tests.

This appliance may have more than one electrical power supply connection point. Disconnect all power cords before servicing.

Inspection, testing, and repair of electrical components should be performed by an authorized service agent only.

3.2 Troubleshooting

3.2.1 Error Messages and Display Problems

PROBLEM	PROBABLE CAUSES	CORRECTIVE ACTION
No display on the controller.	A. No power to fryer. B. Failed controller or another component	A. Verify that the fryer is plugged in and that the circuit breaker is not tripped. B. Call your FAS for assistance.
FQ4000 displays IS VAT FULL? YES NO after a filtration.	A. Normal operation during most at the beginning or end of most filtration functions. B. If the display appears many times during a filter it could be an indication of slow oil return.	A. Ensure the vat is full of oil and press the ✓ button. B. See section 2.3 troubleshooting in the FQx30-T IO Manual –Filter Pump runs, but oil return is very slow.
FQ4000 displays IS DRAIN CLEAR?	Drain is clogged, and oil failed to drain.	Clear drain with Fryers Friend and press ✓ button. Filtration will resume.
FQ4000 displays CHANGE FILTER?	Filter error has occurred, filter clogged, 25-hour filter change prompt has occurred or change filter was ignored on a prior prompt.	Change the filter and ensure the filter pan has been removed from the fryer for a minimum of 30 seconds. Do NOT ignore CHANGE FILTER prompts.
Controller locks up.	Controller error.	Remove and restore power to the controller. If problem persists, call your FAS for assistance.
FQ4000 displays MISCONFIGURED ENERGY TYPE	Energy type in fryer setup is incorrect.	Ensure that the fryer is configured properly for the correct energy type.
FQ4000 displays VAT ID CONNECTOR NOT CONNECTED	Controller locator missing or disconnected.	Ensure the 6-pin locator is connected to rear of controller and it properly grounded in control box.
FQ4000 displays E19 or E28 HEATING FAILURE.	Gas valve off, failed controller, failed transformer, contactor or open high-limit thermostat.	It is normal for this message to appear during startup if the lines have air in them. Check that the gas valve is on. If the gas is on and it continues shut the fryer down and call your FAS for assistance.
FQ4000 display shows HOT-HI-1.	Frypot temperature is more than 410°F (210°C) or, in CE countries, 395°F (202°C).	Shut the fryer down immediately and call your FAS for assistance.
FQ4000 displays RECOVERY FAULT and alarm sounds.	Recovery time exceeded maximum time limit.	Clear error and silence the alarm by pressing the check ✓ button. Maximum recovery time for gas is 3:15, electric is 1:40. If the error continues call your FAS for assistance.

PROBLEM	PROBABLE CAUSES	CORRECTIVE ACTION
FQ4000 display is in wrong temperature scale (Fahrenheit or Celsius).	Incorrect display option programmed.	Toggle between F° to C° by entering Manager settings, temperature and toggling the temperature scale. Turn the controller on to check temperature. If the desired scale is not displayed, repeat.
FQ4000 displays HELP HI-2 or HIGH LIMIT FAILURE DISCONNECT POWER.	Failed high limit	Shut the fryer down immediately and call your FAS for assistance.
FQ4000 displays TEMPRATURE PROBE FAILURE.	Problem with the temperature measuring circuitry including the probe or damaged controller wiring harness or connector.	Shut the fryer down and call your FAS for assistance.
FQ4000 displays SERVICE REQUIRED followed by an error message.	An error has occurred which requires a service technician.	Press X to continue cooking and call your FAS for assistance. In some cases, cooking may not be allowed.
FQ4000 displays NO MENU GROUP AVAILABLE FOR SELECTION	All menu groups have been deleted. NOTE: ALL RECIPES is not a group that can be used to cook recipes.	Create a new MENU group. Once a new menu is created, add recipes to the group (see section 1.10).

3.2.2 Troubleshooting the Auto Filtration

PROBLEM	PROBABLE CAUSES	CORRECTIVE ACTION
Fryer filters after each cook cycle.	Filter after setting incorrect.	Change or overwrite the filter after setting by re-entering the filter after value in Manager Settings, Filter Attributes in section 1.8.
CLEAN AND FILTER won't start.	Temperature too low.	Ensure fryer is at setpoint before starting Clean and Filter.
FQ4000 display shows FILTER BUSY.	A. Another filtration cycle or filter pad change is still in process. B. Filter interface board has not cleared checking system.	A. Wait until the previous filtration cycle ends to start another filtration cycle. Change filter if prompted. B. Wait 15 minutes and try again.

PROBLEM	PROBABLE CAUSES	CORRECTIVE ACTION
FQ4000 displays INSERT PAN.	A. Filter pan is not fully set into fryer. B. Missing filter pan magnet. C. Defective filter pan switch.	A. Pull filter pan out and fully reinsert into fryer. Ensure controller does not display P. B. Ensure the filter pan magnets (2) are in place and replace if missing. C. If the filter pan magnets are fully against the switch and controller continues to display INSERT PAN, switch is possibly defective.
Auto filtration won't start.	A. Oil level too low. B. Oil temperature is too low. C. Filter Pan out. D. Filtration in recipe settings is set to OFF. E. Filter relay has failed.	A. Ensure oil level is at the top oil fill line (at the top oil level sensor). B. Ensure the oil temperature is at setpoint. C. Ensure controller does not display P. Ensure the filter pan is fully seated into fryer. Power cycle the fryer. D. Set filtration in recipes to ON. E. Call your FAS for assistance.

3.2.3 Filter Busy

When **FILTER BUSY** is displayed the filter interface board is waiting on another vat to be filtered or waiting on another function to finish. Wait 15 minutes to see if problem is corrected. If not, call your local FAS.

3.2.4 OQS (Oil Quality Sensor) Troubleshooting

Problem	Corrective Action
No TPM results displayed.	Check the following items and perform another OQS filter. • Ensure the vat is at setpoint temperature. • Inspect the pre-screen filter and ensure it is screwed in tightly with the wrench. • Inspect the O-rings on the filter pan and ensure they are both present and that they are not missing, cracked or worn. If so replace them. • Ensure the filter is not clogged and a clean filter is used. Did the vat refill the first time for the previous filter? If not change the filter.

3.2.5 Error Log Codes

See section 1.12.2.1 for instructions to access the Error Log.

Code	ERROR MESSAGE	EXPLANATION
E13	TEMPERATURE PROBE FAILURE	TEMP Probe reading out of range. Call service.
E16	HIGH LIMIT 1 EXCEEDED	High limit temperature is past more than 410°F (210°C), or in CE countries, 395°F (202°C)
E17	HIGH LIMIT 2 EXCEEDED	High limit switch has opened.
E18	HIGH LIMIT PROBLEM DISCONNECT POWER	Vat temperature exceeds 460°F (238°C) and the high limit has failed to open. Immediately disconnect power to the fryer and call service.
E19	HEATING FAILURE – XXX F or XXX C	Heating Control latch circuit failed. Heat Contactor failed to latch.
E25	HEATING FAILURE - BLOWER	The air pressure switch(s) failed to close.
E27	HEATING FAILURE - PRESSURE SWITCH - CALL SERVICE	The air pressure switch has failed closed.
E28	HEATING FAILURE – XXX F or XXX C	The fryer has failed to ignite and has locked out the ignition module.
E29	TOP OFF PROBE FAILURE - CALL SERVICE	ATO RTD reading out of range. Call service
E32	DRAIN VALVE NOT OPEN - FILTRATION AND TOP OFF DISABLED - CALL SERVICE	Drain valve was trying to open and confirmation is missing
E33	DRAIN VALVE NOT CLOSED - FILTRATION AND TOP OFF DISABLED - CALL SERVICE	Drain valve was trying to close and confirmation is missing
E34	RETURN VALVE NOT OPEN - FILTRATION AND TOP OFF DISABLED - CALL SERVICE or RIGHT VALVE NOT OPEN for multi- return valve systems.	Return valve or Right valve (multi-return valve systems) was trying to open and confirmation is missing
E35	RETURN VALVE NOT CLOSED - FILTRATION AND TOP OFF DISABLED - CALL SERVICE or RIGHT VALVE NOT CLOSED for multi- return valve systems.	Return valve or Right valve (multi-return valve systems) was trying to close and confirmation is missing
E36	VALVE INTERFACE BOARD FAILURE - FILTRATION AND TOP OFF DISABLED - CALL SERVICE	Valve Interface Board connections lost or board failure. Call service.
E37	AUTOMATIC INTERMITTENT FILTRATION PROBE FAILURE - FILTRATION DISABLED - CALL SERVICE	AIF RTD reading out of range. Call service.
E39	CHANGE FILTER PAD	25-hour timer has expired, or dirty filter logic has activated. Change the filter paper or pad.
E41	OIL IN PAN ERROR	The system detects that oil may be present in the filter pan.

Code	ERROR MESSAGE	EXPLANATION
E42	CLOGGED DRAIN (Gas)	Vat did not empty during filtration. Ensure the drain is not clogged and follow prompts.
E43	OIL SENSOR FAILURE - CALL SERVICE	Oil level sensor may have failed. Call service.
E44	RECOVERY FAULT	Recovery time exceeded maximum time limit.
E45	RECOVERY FAULT – CALL SERVICE	Recovery time exceeded maximum time limit for two or more cycles. Call service.
E46	SYSTEM INTERFACE BOARD 1 MISSING - CALL SERVICE	SIB board 1 connection lost or board failure. Call service.
E51	DUPLICATE BOARD ID - CALL SERVICE	Two or more controllers have the same location ID. Call service.
E52	USER INTERFACE CONTROLLER ERROR - CALL SERVICE	The controller has an unknown error. Call service.
E53	CAN BUS ERROR - CALL SERVICE	Communications are lost between boards. Call service.
E54	USB ERROR	USB connection lost during an update.
E55	SYSTEM INTERFACE BOARD 2 MISSING - CALL SERVICE	SIB board 2 connection lost or board failure. Call service.
E61	MISCONFIGURED ENERGY TYPE	The fryer is configured for the incorrect energy type. Call service.
E62	VAT NOT HEATING – CHECK ENERGY SOURCE – XXXF OR XXXC	The vat is not heating properly.
E63	RATE OF RISE	Rate of rise error occurred during a recovery test. Ensure the oil level is at the bottom oil level when cold and at the top oil level line when at setpoint. On electric fryers ensure the probe is not touching the elements.
E64	FILTRATION INTERFACE BOARD FAILURE - FILTRATION AND TOP OFF DISABLED - CALL SERVICE	Filtration Interface Board connections lost or board failure. Call service.
E65	OIL LEVEL NOT DETECTED CLEAN FLOAT SWITCH – XXX F OR XXX C	The float switch does not detect oil. 1. Ensure the frypot is full of oil. 2. Float switch may be stuck up or down. 3. Clean the float switch. Ensure the float switch moves freely up and down.
E66	DRAIN VALVE OPEN – XXXF OR XXXC	Drain valve is opened during cooking.
E67	SYSTEM INTERFACE BOARD NOT CONFIGURED - CALL SERVICE	Controller is turned on when the SIB board is not configured. Call service.

Code	ERROR MESSAGE	EXPLANATION
E68	OIB FUSE TRIPPED – CALL SERVICE	The VIB board OIB fuse has tripped and didn't reset. Call service.
E69	RECIPES NOT AVAILABLE – CALL SERVICE	The controller has not been programmed with product recipes. Replace controller with factory programmed controller.
E70	OQS TEMP HIGH	Oil temperature is too high for a valid OQS reading. Filter at a temperature between 300°F (149°C) and 375°F (191°C).
E71	OQS TEMP LOW	Oil temperature is too low for a valid OQS reading. Filter at a temperature between 300°F (149°C) and 375°F (191°C).
E72	TPM RANGE LOW	The TPM is too low for a valid OQS reading. This may also be seen with fresh new oil. The incorrect oil type may be selected in the setup menu. The sensor may not be calibrated for the oil type. See oil type chart in instruction document 8197316. If issue continues contact a FAS.
E73	TPM RANGE HIGH	The TPM reading is too high for a valid OQS reading. Dispose the oil.
E74	OQS ERROR	The OQS has an internal error. If issue continues contact a FAS.
E75	OQS AIR ERROR	The OQS is detecting air in the oil. Check the O-rings and check/tighten prescreen filter to ensure no air is entering the OQS sensor. If issue continues contact a FAS.
E76	OQS ERROR	The OQS sensor has a communication error. Check connections to the OQS sensor. Power cycle the entire fryer battery. If issue continues contact a FAS.
E85	LEFT RETURN VALVE or LEFT VALVE NOT OPEN VALVE NOT OPE - FILTRATION AND TOP OFF DISABLED - CALL SERVICE	Left return valve was trying to open, and confirmation is missing.
E86	LEFT RETURN VALVE or LEFT VALVE NOT CLOSED - FILTRATION AND TOP OFF DISABLED - CALL SERVICE	Left Return valve was trying to close, and confirmation is missing.
E87	RIGHT RETURN VALVE or CENTRAL VALVE NOT OPEN - FILTRATION AND TOP OFF DISABLED - CALL SERVICE	Right return valve or Central Valve was trying to open, and confirmation is missing.
E88	RIGHT RETURN VALVE or CENTRAL VALVE NOT CLOSED - FILTRATION AND TOP OFF DISABLED - CALL SERVICE	Right return valve or Central Valve was trying to close, and confirmation is missing.



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