

**OPERATOR'S MANUAL  
FRYMASTER BIELA14 SERIES LOV  
ELECTRIC FRYER**



This equipment chapter is to be installed in the Fryer Section of the *Equipment Manual*.

**FOR YOUR SAFETY**  
Do Not Store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.



**MANUFACTURED  
BY**



**Enodis**  
One Company. Countless Solutions

**P.O. BOX 51000  
SHREVEPORT, LOUISIANA 71135-1000  
PHONE: 1-318-865-1711  
TOLL FREE: 1-800-551-8633  
1-800-24 FRYER  
FAX: 1-318-219-7135**



**TABLE OF CONTENTS**

WARRANTY STATEMENT.....	Page i
INTRODUCTION.....	Page 1-1
INSTALLATION INSTRUCTIONS .....	Page 2-1
OPERATING INSTRUCTIONS.....	Page 3-1
M2007 COMPUTER INSTRUCTIONS .....	Page 4-1
OPERATING THE BUILT-IN FILTRATION SYSTEM.....	Page 5-1
PREVENTIVE MAINTENANCE .....	Page 6-1
OPERATOR TROUBLESHOOTING.....	Page 7-1

Frymaster L.L.C., 8700 Line Avenue 71106, 5489 Campus Drive 71129  
P.O. Box 51000, Shreveport, Louisiana 71135-1000  
PHONE 318-865-1711 FAX 318-219-7135

PRINTED IN THE UNITED STATES

SERVICE HOTLINE 1-800-24-FRYER

NOVEMBER 2007

\* 8196239 \*

**NOTICE**

IF, DURING THE WARRANTY PERIOD, THE CUSTOMER USES A PART FOR THIS ENODIS EQUIPMENT OTHER THAN AN **UNMODIFIED** NEW OR RECYCLED PART PURCHASED DIRECTLY FROM FRYMASTER DEAN, OR ANY OF ITS FACTORY 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 Dean Factory Authorized Service Center (FASC) or other qualified professional should perform installation, maintenance, and repairs. Installation, maintenance, or repairs by unqualified personnel may void the manufacturer's warranty. See Chapter 1 of this manual for definitions of qualified personnel.

**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. See **NATIONAL CODE REQUIREMENTS** in Chapter 2 of this manual for specifics.

**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**

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.

**NOTICE TO OWNERS OF UNITS EQUIPPED WITH COMPUTERS**

**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 numerique n'emet pas de bruits radioelectriques depassany les limites de classe A et B prescrites dans la norme NMB-003 edictee par le Ministre des Communcations du Canada.

**⚠ DANGER**

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.

**⚠ DANGER**

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

**⚠ DANGER**

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

**⚠ 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.

**⚠ DANGER**

Adequate means must be provided to limit the movement of this appliance without depending on or transmitting stress to the electrical conduit. A restraint kit is provided with the fryer. If the restraint kit is missing contact your local KES.

**⚠ DANGER**

This fryer has a power cord (three-phase) for each frypot and a single five-wire cord for the entire system. Prior to movement, testing, maintenance and any repair on your Frymaster fryer; disconnect ALL electrical power cords from the electrical power supply.

**⚠ DANGER**

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

## **LOV WARRANTY STATEMENT**

Frymaster, L.L.C. makes the following limited warranties to the original purchaser only for this equipment and replacement parts:

### ***A. WARRANTY PROVISIONS - FRYERS***

1. Frymaster L.L.C. warrants all components against defects in material and workmanship for a period of two years.
2. All parts, with the exception of the frypot, O-rings and fuses, are warranted for two years after installation date of fryer.
3. If any parts, except fuses and filter O-rings, become defective during the first two years after installation date, Frymaster will also pay straight-time labor costs up to two hours to replace the part, plus up to 100 miles/160 km of travel (50 miles/80 km each way).

### ***B. WARRANTY PROVISIONS - FRYPOTS***

If a frypot develops a leak within ten years after installation, Frymaster will, at its option, either replace the entire battery or replace the frypot, allowing up to the maximum time per the Frymaster time allowance chart hours of straight-time labor. Components attached to the frypot, such as the high-limit, probe, gaskets, seals, and related fasteners, are also covered by the ten-year warranty if replacement is necessitated by the frypot replacement. Leaks due to abuse or from threaded fittings such as probes, sensors, high-limits, drain valves or return piping are not included.

### ***C. PARTS RETURN***

All defective in-warranty parts must be returned to a Frymaster Authorized Factory Service Center within 60 days for credit. After 60 days, no credit will be allowed.

### ***D. WARRANTY EXCLUSIONS***

This warranty does not cover equipment that has been damaged due to misuse, abuse, alteration, or accident such as:

- improper or unauthorized repair (including any frypot which is welded in the field);
- failure to follow proper installation instructions and/or scheduled maintenance procedures as prescribed in your MRC cards. Proof of scheduled maintenance is required to maintain the warranty;
- improper maintenance;
- damage in shipment;
- abnormal use;
- removal, alteration, or obliteration of either the rating plate or the date code on the heating elements;

- operating the frypot without shortening or other liquid in the frypot;
- no fryer will be warranted under the ten-year program for which a proper start-up form has not been received.

This warranty also does not cover:

- transportation or travel over 100 miles/160 km (50 miles/80 km each way), or travel over two hours;
- overtime or holiday charges;
- consequential damages (the cost of repairing or replacing other property which is damaged), loss of time, profits, use or any other incidental damages of any kind.

There are no implied warranties of merchantability or fitness for any particular use or purpose.

This warranty is applicable at the time of this printing and is subject to change.

# BIELA14 SERIES LOV ELECTRIC FRYER

## CHAPTER 1: INTRODUCTION

---

### 1.1 General

Read the instructions in this manual thoroughly before attempting to operate this equipment. This manual covers all configurations of McDonald's BIELA14 LOV models. The fryers in this model family have most parts in common, and when discussed as a group, will be referred to as "LOV" fryers.


Although similar in appearance to the RE14 McDonald's electric fryers, the BIELA14 fryers feature a low oil volume frypot, automatic oil toff and an optional automatic intermittent filtration unit. The Euro-Look design incorporates a rounded topcap and a large round drain, which ensures that fries and other debris, will be washed into the filter pan. The BIELA14 LOV fryers are controlled with an M2007 computer. Fryers in this series come in full- or split-vat arrangements, and can be purchased in batteries of up to five fryers.


### 1.2 Safety Information


Before attempting to operate your unit, read the instructions in this manual thoroughly.

Throughout this manual, you will find notations enclosed in double-bordered boxes similar to the one below.

 <b>DANGER</b> <b>Hot oil causes severe burns. Never attempt to move a fryer containing hot oil or to transfer hot oil from one container to another.</b>
---

 **CAUTION** boxes contain information about actions or conditions that *may cause or result in a malfunction of your system.*

 **WARNING** boxes contain information about actions or conditions that *may cause or result in damage to your system*, and which may cause your system to malfunction.

 **DANGER** boxes contain information about actions or conditions that *may cause or result in injury to personnel*, and which may cause damage to your system and/or cause your system to malfunction.

**Fryers in this series are equipped with the following automatic safety features:**

1. Two high-temperature detection features shut off power to the elements should the temperature controls fail.
2. A safety circuit on units with filter systems prevents the elements from heating with the drain valve open.

### 1.3 Computer Information for the M2007 Computers

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. While this device is a verified Class A device, it has been shown to meet the Class B limits. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of the equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

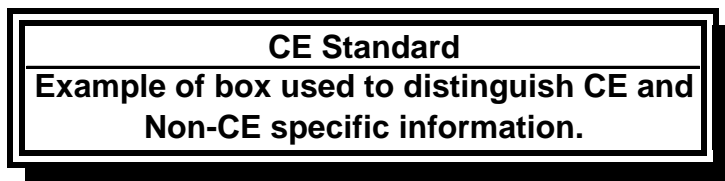
The user is cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

If necessary, the user should consult the dealer or an experienced radio and television technician for additional suggestions.

The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

### 1.4 European Community (CE) Specific Information

The European Community (CE) has established certain specific standards regarding equipment of this type. Whenever a difference exists between CE and non-CE standards, the information or instructions concerned are identified by means of shadowed boxes similar to the one below.



### 1.5 Installation, Operating, and Service Personnel

Operating information for Frymaster equipment has been prepared for use by qualified and/or authorized personnel only, as defined in Section 1.6. **All installation and service on Frymaster equipment must be performed by qualified, certified, licensed, and/or authorized installation or service personnel, as defined in Section 1.6.**

### 1.6 Definitions

#### QUALIFIED AND/OR AUTHORIZED OPERATING PERSONNEL

Qualified/authorized operating personnel are those who have carefully read the information in this manual and have familiarized themselves with the equipment functions, or who have had previous experience with the operation of the equipment covered in this manual.

## QUALIFIED INSTALLATION PERSONNEL

Qualified installation personnel are individuals, firms, corporations, and/or companies which, either in person or through a representative, are engaged in and are responsible for the installation of electrical appliances. Qualified personnel must be experienced in such work, be familiar with all electrical precautions involved, and have complied with all requirements of applicable national and local codes.

## QUALIFIED SERVICE PERSONNEL

Qualified service personnel are those who are familiar with Frymaster equipment and who have been authorized by Frymaster, L.L.C. to perform service on the equipment. All authorized service personnel are required to be equipped with a complete set of service and parts manuals, and to stock a minimum amount of parts for Frymaster equipment. A list of Frymaster Dean Factory Authorized Service Centers (FASC) is included with the fryer when shipped from the factory. *Failure to use qualified service personnel will void the Frymaster warranty on your equipment*

### 1.7 Shipping Damage Claim Procedure

#### ***What to do if your equipment arrives damaged:***

Please note that this equipment was carefully inspected and packed by skilled personnel before leaving the factory. The freight company assumes full responsibility for safe delivery upon acceptance of the equipment.

1. **File Claim for Damages Immediately** - regardless of extent of damage.
2. **Inspect For and Record All Visible Loss or Damage**, and ensure that this information is noted on the freight bill or express receipt and is signed by the person making the delivery.
3. **Concealed Loss or Damage**- If damage is unnoticed until equipment is unpacked, notify the freight company or carrier **immediately** upon discovery and file a concealed damage claim. This must be submitted within 15 days of date of delivery. Be sure to retain container for inspection.

<p><b><i>Frymaster</i> DOES NOT ASSUME RESPONSIBILITY FOR DAMAGE OR LOSS INCURRED IN TRANSIT.</b></p>
---



## 1.8 Service Information

For non-routine maintenance or repairs, or for service information, contact your local Frymaster Dean Authorized Service Center (FASC). In order to assist you quickly, the Frymaster Dean Factory Authorized Service Center (FASC) or Service Department representative requires certain information about your equipment. Most of this information is printed on a data plate affixed to the inside of the fryer door. Part numbers are found in the Service and Parts Manual. Parts orders may be placed directly with your local FASC or distributor. Included with fryers when shipped from the factory is a list of Frymaster Dean FASCs. If you do not have access to this list, contact the Frymaster Dean Service Department at 1-800-551-8633 or 1-318-865-1711 or by email at [service@frymaster.com](mailto:service@frymaster.com).

The following information will be needed in order to assist you efficiently:

Model Number \_\_\_\_\_

Serial Number \_\_\_\_\_

Voltage \_\_\_\_\_

Nature of the Problem \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**RETAIN AND STORE THIS MANUAL IN A SAFE PLACE FOR FUTURE USE.**

# BIELA14 SERIES LOV ELECTRIC FRYER

## CHAPTER 2: INSTALLATION INSTRUCTIONS

---

### 2.1 General Installation Requirements

Proper installation is essential for the safe, efficient, trouble-free operation of this appliance.

Qualified, licensed, and/or authorized installation or service personnel, as defined in Section 1.6 of this manual, should perform all installation and service on Frymaster Dean equipment.

**Failure to use qualified, licensed, and/or authorized installation or service personnel (as defined in Section 1.6 of this manual) to install or otherwise service this equipment will void the Frymaster warranty and may result in damage to the equipment or injury to personnel.**

Where conflicts exist between instructions and information in this manual and local or national codes or regulations, installation and operation shall comply with the codes or regulations in force in the country in which the equipment is installed.

Service may be obtained by contacting your local Frymaster Dean Factory Authorized Service Center.

#### NOTICE

All fryers shipped without factory supplied cords and plug assemblies must be hardwired using flexible conduit to the terminal block located on the rear of the fryer. These fryers should be wired to NEC specifications. Hardwired units must include installation of restraint devices.

#### DANGER

Adequate means must be provided to limit the movement of this appliance without depending on or transmitting stress to the electrical conduit. A restraint kit is provided with the fryer. If the restraint kit is missing contact your local Frymaster Dean Factory Authorized Service Center (FASC).

#### NOTICE

If this equipment is wired directly into the electrical power supply, a means for disconnection from the supply having a contact separation of at least 3-mm in all poles must be incorporated in the fixed wiring.

#### NOTICE

This equipment must be positioned so that the plug is accessible unless other means for disconnection from the power supply (e.g., a circuit breaker) is provided.

#### NOTICE

If this appliance is permanently connected to fixed wiring, it must be connected by means of copper wires having a temperature rating of not less than 167°F (75°C).

### **NOTICE**

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

### **⚠ 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.

### **⚠ DANGER**

All wiring connections for this appliance must be made in accordance with the wiring diagram(s) furnished with the appliance. Refer to the wiring diagram(s) affixed to the inside of the appliance door when installing or servicing this equipment.

### **⚠ DANGER**

Frymaster Dean appliances equipped with legs are for stationary installations. Appliances fitted with legs must be lifted during movement to avoid damage to the appliance and bodily injury. For movable installations, optional equipment casters must be used. Questions? Call 1-800-551-8633.

### **⚠ DANGER**

Do not attach an apron drainboard to a single fryer. The fryer may become unstable, tip over, and cause injury. The appliance area must be kept free and clear of combustible material at all times.

### **⚠ DANGER**

Building codes prohibit a fryer with its open tank of hot oil being installed beside an open flame of any type, including those of broilers and ranges.

In the event of a power failure, the fryer(s) will automatically shut down. If this occurs, turn the power switch OFF. Do not attempt to start the fryer(s) until power is restored.

This appliance must be kept free and clear of combustible material, except that it may be installed on combustible floors.

A clearance of 6 inches (15cm) must be provided at both sides and back adjacent to combustible construction. A minimum of 24 inches (61cm) should be provided at the front of the equipment for servicing and proper operation.

### **⚠ WARNING**

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

## **2.1.2 Electrical Grounding Requirements**

All electrically operated appliances must be grounded in accordance with all applicable national and local codes, and, where applicable, CE codes. A wiring diagram is located on the inside of the fryer door. Refer to the rating plate on the inside of the fryer door for proper voltages.

**⚠ WARNING**

To ensure the safe and efficient operation of the fryer and hood, the electrical plug for the 120-volt line, which powers the hood, must be fully engaged and locked in its pin and sleeve socket.

### 2.1.3 Australian Requirements

To be installed in accordance with AS 5601 / AG 601, local authority, gas, electricity, and any other relevant statutory regulations.

## 2.2 Power Requirements

The three phase supply plug for the elements is rated at 60 amps, 250 VAC and is NEMA configuration L15-60P. The control and filter plug is rated at 20 amps, 120/208 VAC and is NEMA configuration L21-20P. Each fryer should have its cord for the element supply on an individual circuit as well as the control cord.

VOLTAGE	PHASE	WIRE SERVICE	MIN. SIZE	AWG (mm <sup>2</sup> )	AMPS PER LEG		
					L1	L2	L3
208	3	3	6	(16)	39	39	39
240	3	3	6	(16)	34	34	34
480	3	3	8	(10)	17	17	17
220/380	3	4	6	(16)	21	21	21
240/415	3	4	6	(16)	20	20	21
230/400	3	4	6	(16)	21	21	21
230/400 France Only	3	4	6	(16)	25	25	25

**NOTICE**

If this appliance is permanently connected to fixed wiring, it must be connected by means of copper wires having a temperature rating of not less than 167°F (75°C).

**⚠ 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.

**⚠ DANGER**

All wiring connections for this appliance must be made in accordance with the wiring diagram(s) furnished with the appliance. Refer to the wiring diagram(s) affixed to the inside of the appliance door when installing or servicing this equipment.

### 2.3 After Fryers Are Positioned At the Frying Station

**⚠ 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.

1. Once the fryer has been positioned at the frying station, use a carpenter's level placed across the top of the frypot to verify that the unit is level, both side-to-side and front-to-back.

To level fryers, adjust the casters being careful to ensure the fryer(s) are at the proper height in the frying station.

When the fryer is leveled in its final position, install the restraints provided by the KES to limit its movement so that it does not depend on or transmit stress to the electrical conduit or connection. Install the restraints in accordance with the provided instructions. If the restraints are disconnected for service or other reasons, they must be reconnected before the fryer is used.

** DANGER**

**Adequate means must be provided to limit the movement of this appliance without depending on or transmitting stress to the electrical conduit. A restraint kit is provided with the fryer. If the restraint kit is missing contact your local Frymaster Dean Factory Authorized Service Center (FASC).**

** DANGER**

**Hot oil can cause severe burns. Avoid contact. Under all circumstances, oil must be removed from the fryer before attempting to move it to avoid spills, falls, and severe burns. Fryers may tip and cause personal injury if not secured in a stationary position.**

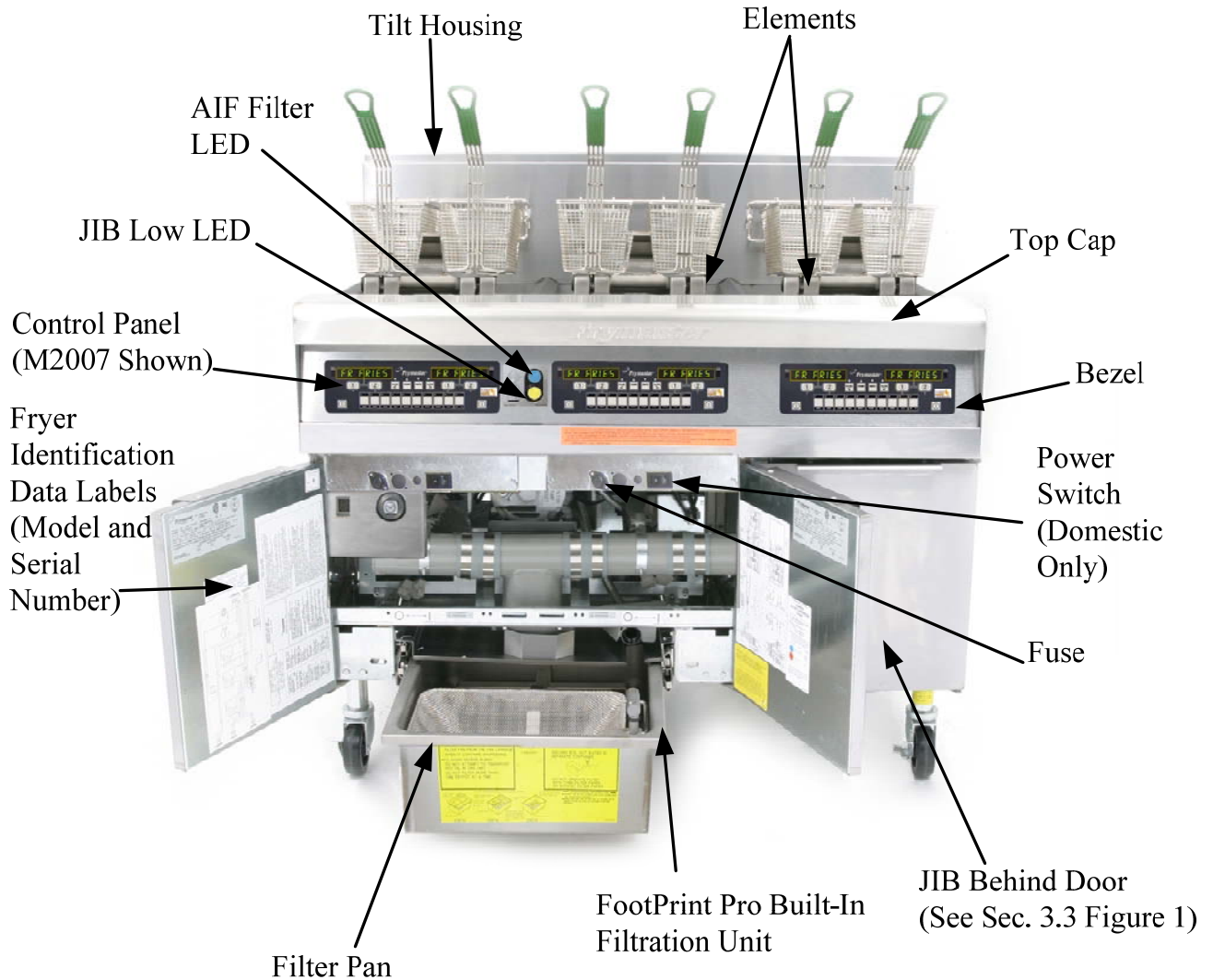
2. Close fryer drain-valve(s) and fill frypot with water to the bottom oil level line.
3. Boil out frypot(s) in accordance with the instructions on page 4-33 of this manual.
4. Drain, clean, and fill frypot(s) with cooking oil. (See *Equipment Setup and Shutdown Procedures* in Chapter 3.)

# BIELA14 SERIES LOV ELECTRIC FRYER

## CHAPTER 3: OPERATING INSTRUCTIONS

---

### FINDING YOUR WAY AROUND THE BIELA14 SERIES LOV ELECTRIC FRYER



#### TYPICAL CONFIGURATION (BIELA314 SHOWN)

**NOTE:** The appearance of your fryer may differ slightly from that shown depending upon configuration and date of manufacture.

## 3.1 Equipment Setup and Shutdown Procedures

### Setup

#### DANGER

Never operate the appliance with an empty frypot. The frypot must be filled to the fill line with water or oil before energizing the elements. Failure to do so will result in irreparable damage to the elements and may cause a fire.

#### 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

The BIELA14 is not intended to use solid shortening. Use only liquid shortening with this fryer. The use of solid shortening will clog the oil lines. The oil capacity of the BIELA14 fryer is 31 lbs. (3.7 gallons/14 liters) for a full-vat and 15.5 lbs. (2.5 gallons/7 liters) for a dual-vat at 70°F (21°C).

Prior to filling frypots with oil, press the reset button to ensure all drains are closed.

1. Fill the frypot with cooking oil to the bottom OIL LEVEL line located on the rear of the frypot. This will allow for oil expansion as heat is applied. Do not fill cold oil any higher than the bottom line; overflow may occur as heat expands the oil.
2. Ensure that the power cord(s) is/are plugged into the appropriate receptacle(s). Verify that the face of the plug is flush with the outlet plate, with no portion of the prongs visible.
3. Ensure that the power is switched on. Some models are equipped with a master switch located behind the fryer door cabinet on the front panel of the component box, next to the fuse. **OFF** is displayed on the computer.
4. Ensure that the computer is switched ON.
5. Ensure that the oil level is at the top OIL LEVEL line when the oil *is at its cooking temperature*.

### Shutdown

1. Turn the fryer off.
2. Filter the oil and clean the fryers (See Chapters 5 and 6).
3. Place the frypot covers on the frypots.

## 3.2 Operation

*If this is the first time the fryer is being used, refer to the frypot boil-out procedure on Page 4-37.*

This fryer is equipped with M2007 computers (illustrated below). Refer to the *M2007 Computer Operating Instructions in Chapter 4* for the computer programming and operating procedures.



### M2007 COMPUTER

Refer to Chapter 5 of this manual for operating instructions for the built-in filtration system.

### 3.3 Low Oil Volume Automatic Refill

When the optional Low Oil Volume (LOV) system is in place on the fryer, oil is continually topped off in the frypots from a reservoir in the cabinet. The reservoir holds a 35 pound box of oil. In a typical operation this will last approximately two days before changing. Components of the system are annotated at the right (see Figure 1).

**NOTE:** The system is intended to top off the frypots, not fill them. The frypots will require manual filling upon startup and after boil out.

**JIB (Jug In Box)  
Low Reset Switch:**  
Resets the yellow LED after oil change.

**Special Cap:** Has plumbing attached to draw oil from the reservoir to the fryer vats.

**Jug In Box (JIB):**  
The JIB is the reservoir for the oil.

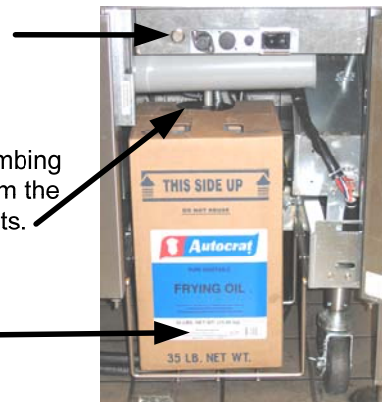


Figure 1

#### 3.3.1 Prepare the System for Use

To prepare the system for its initial operation, remove cross brace (see Figure 2). Do not replace the screws. Follow these instructions to prepare the cabinet for the installation of the first box of oil and subsequent boxes of oil.

Prior to installation of the JIB, ensure that the power switch for the JIB auto top off system is on. The switch is located inside the JIB cabinet, on the left side of the JIB auto top off box, located behind the JIB (see Figure 3).

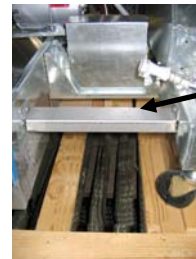
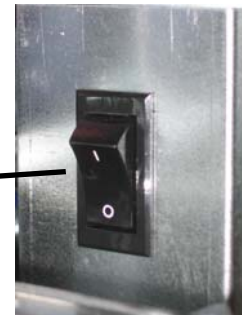


Figure 2



Figure 3



Close up of switch located on the left side of the JIB auto top off box.

#### 3.3.2 Install the Oil Reservoir

Remove the original lid from the oil container and foil liner. Replace with the provided cap, which has connected suction hardware. Ensure the feeder tube from the cap reaches to the bottom of the oil container.

Place the oil container inside the cabinet and slide it into place (as shown below). Avoid catching the suction hardware on the cabinet interior as the container is placed in the fryer.

The system is now ready for operation. As the fryer heats to preprogrammed temperatures, the system will energize and then slowly add oil to the frypot as needed, until the oil reaches an optimal level.



### 3.3.3 Routine Oil Changes

When the oil reservoir level is low, a yellow LED is activated (see Figure 4). Once the reservoir is refilled and/or replaced, pressing the reset button above the JIB turns the LED off.



Figure 4

1. Open the cabinet and slide the JIB from the cabinet (see Figure 5).



Figure 5

2. Remove the cap and pour any remaining oil in the container into all fry vats equally (see Figure 6).



Figure 6

3. With the jug upright remove the cap and foil seal (see Figure 7).



Figure 7

4. Put the tube in the new full container (see Figure 8).



Figure 8

5. Slide the JIB onto the shelf inside the fryer cabinet (as seen in Figure 5).

6. Press the JIB reset switch to turn the yellow JIB LED off (see Figure 9).



Figure 9

**WARNING:**  
Do not add HOT or USED oil to a JIB.

### 3.3.4 Bulk Oil Systems

Bulk oil systems have large oil storage tanks, typically located in the rear of the restaurant, that are connected to a rear manifold on the fryer. Waste oil is pumped from the fryer, via the fitting located on the right, to the disposal tanks and fresh oil is pumped from the tanks, thru the fitting located on the left, to the fryer (see Figure 11).



Figure 11

**WARNING:**  
Do not add HOT or USED oil to a JIB.

The LOV fryers, equipped for use with bulk oil systems, have an onboard fresh oil jug with two fittings. The rear one is for filling the jug and the front for topping off the frypot from the jug (see Figure 12).



Figure 12

A momentary switch, located inside the door adjacent to the jug, allows the operator to fill the jug from the bulk oil storage tank (see Figure 13).

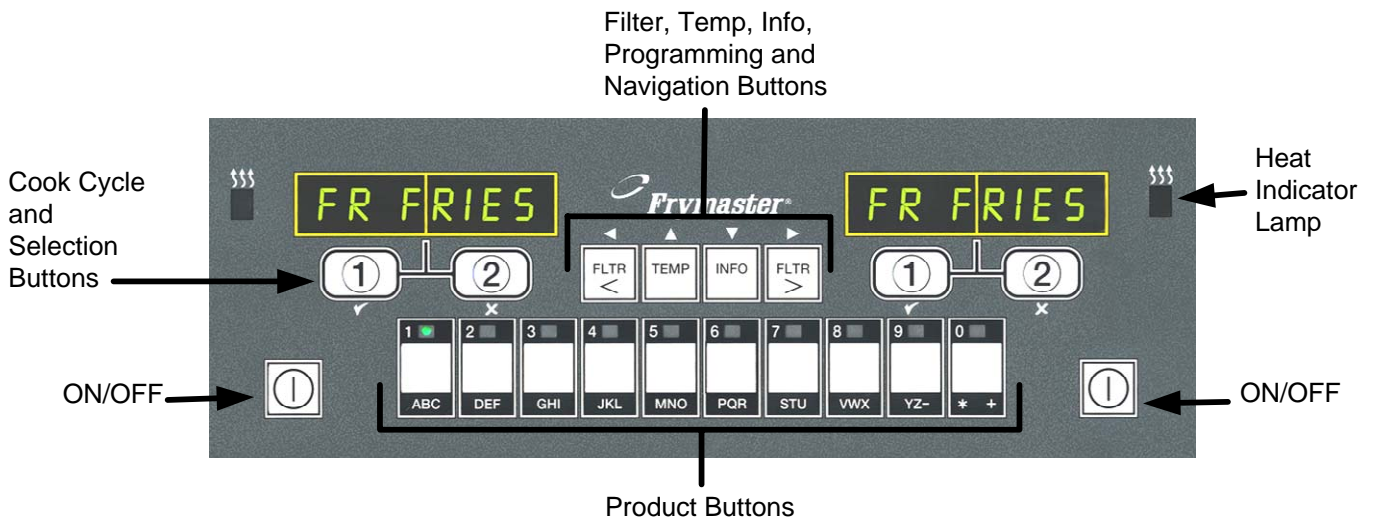
To fill the tank press and hold the **ADD** button until the jug is full then release.



Figure 13

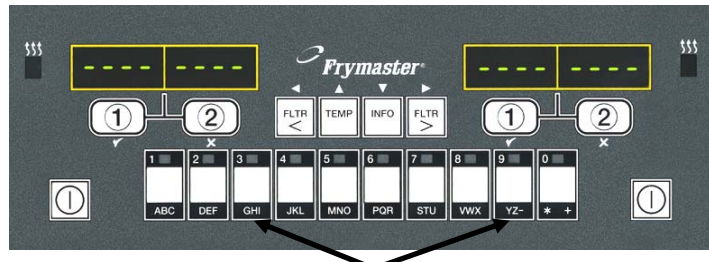
# BIELA14 SERIES LOV ELECTRIC FRYER

## CHAPTER 4: M2007 COMPUTER INSTRUCTIONS



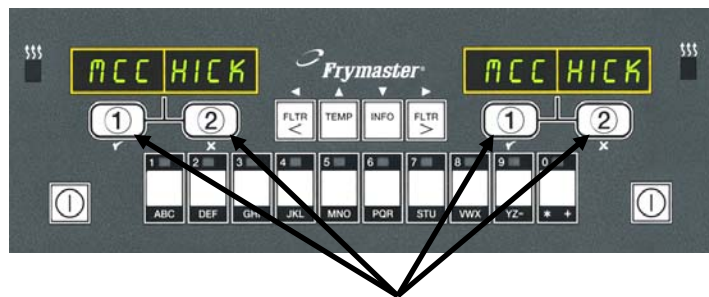
### 4.1 M2007 General Information

Welcome to the M2007, a computer that retains the one-button ease of the M2000 and 100B and the utility of 40-product menu capability. The computer is easy to use. One button push starts a cook cycle for an item cooked in a dedicated vat. The same flexible computer on a multi-product vat requires only two button pushes to launch a cook cycle. Just choose a menu item on a product buttons and press, and then press a cook cycle button under the display showing the desired item. The computer can move seamlessly from McNuggets to Crispy Chicken to any added menu item.



Pressing product buttons 3 or 9 displays McChick.

In a typical store setting, the M2007s on the three-vat fry station display FR FRIES (shown above) and will launch a cook cycle with one push of a cook channel button. On the chicken/filet station, the LED display shows dashed lines. To launch a cook cycle, press a product button and then press the cook cycle button that corresponds with the location of the dropped basket.



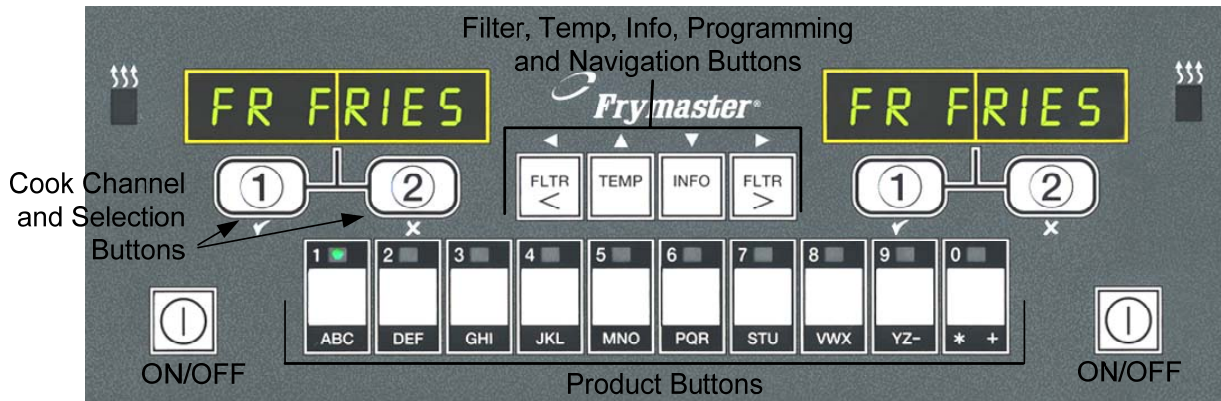
Pressing either cook cycle button under the McChick displays launches a cook cycle.

By pressing the product button for McChicken, McChick will appear in the display. Just press the cook cycle button corresponding to the location of the appropriate dropped basket.

The M2007 will operate with electric and gas fryers, both full- and split-vat.

## 4.2 Basic Operation

# Basic Operation



### Turn Fryer ON

Press right key for full pot; press key on desired side on a split pot.



### Turn Fryer OFF

Press right key for full pot; press key on desired side on a split pot.



### Check Frypot Temperature

Press Temp key once. Displays show frypot temperatures.



### Check Frypot Setpoint

Press Temp key twice. Displays show frypot setpoint temperatures.



### Cancel Duty or Remove Alarm

Press key under active display.



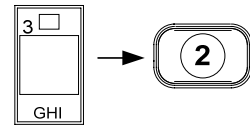
### Start One-Button Cook Cycle (Dedicated Mode)

Press key under display showing desired item.



### Start Two-Button Cook Cycle (Multi-Product Mode)

Press product key bearing icon for desired product. Press cook channel button to begin cook cycle.



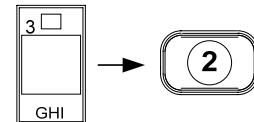
### Change From Dedicated to Multi-Product Mode

Press and hold Cook Channel button under displayed menu item for approximately 5 seconds until beep is heard. Display changes to dashed lines.



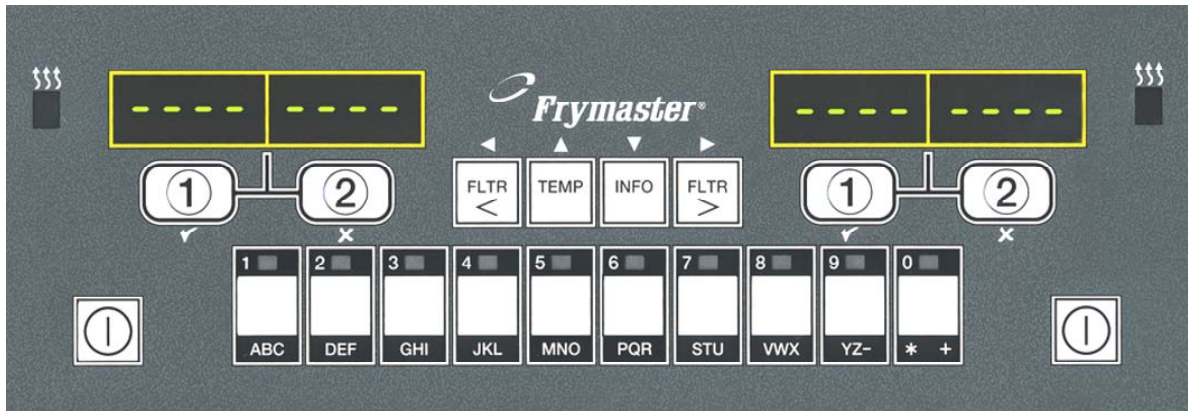
### Change From Multi-Product Mode to Dedicated Mode





Press product key bearing icon for desired product. Immediately press and hold cook channel button under display showing desired item until beep is heard (approx 5 seconds).






### 4.3 Cooking with Multi-Product Display







# Cooking With Multi-Product Display



- 1 Dashed lines appear in both displays. 
- 2 Press a product button. 
- 3 Vat with appropriate setpoint displays: skip to step 5. 
- 4 Vat with inappropriate setpoint displays: 

If this occurs, change setpoint by pressing the button assigned to the product. 

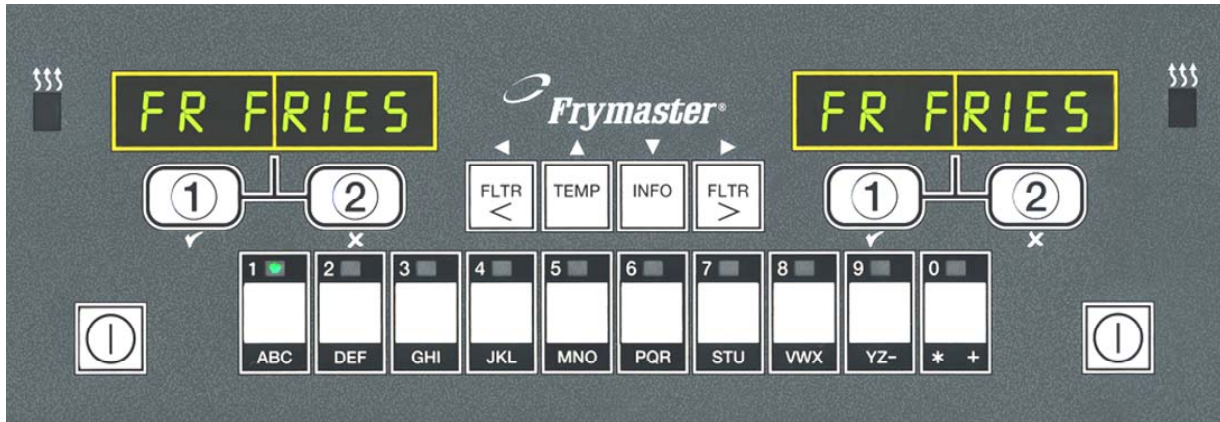
When the chevrons appear, immediately press and hold cook button until a beep is heard (approx five seconds). 
- 5 Press a cook channel button to begin cook cycle. 

- 6 Display alternates between MCCK and remaining cook time. 
- 7 If a duty is required for this menu item, duty is displayed when it is time to perform a duty, such as shake. 
- 8 Press cook channel button under duty display to cancel alarm. 
- 9 Pull is displayed when the cook time is complete; an alarm sounds. 
- 10 Press cook channel button under pull display to cancel alarm. 
- 11 Dashed lines reappear under active display at the end of the cook cycle. 

**NOTE:** If error *REMOVE DISCARD* appears, press and hold cook button under message to remove error message.

## 4.4 Cooking with Dedicated Display

# Cooking With Dedicated Display



**1** A menu item, such as FR FRIES shows in display **FR FRIES**

**2** Press a cook channel button to begin the cook cycle.



**3** Display alternates between abbreviated product name and remaining cook time. **FRIS ↔ 2:34**

**4** Duty is displayed when it is time to shake the fry basket. **DUTY**

**5** Press cook channel button to cancel alarm.



**6** Pull is displayed when the cook cycle is complete. **PULL**

**7** Press cook channel button to cancel alarm.



**8** Q7 is displayed and alternates with FRIS. As the quality time counts down.

**Q7 ↔ FRIS**

**Q1 ↔ FRIS**

**9** Pressing the cook channel button now will launch a cook cycle and end the quality countdown.



**10** QA is displayed when the quality time has elapsed. **QA**

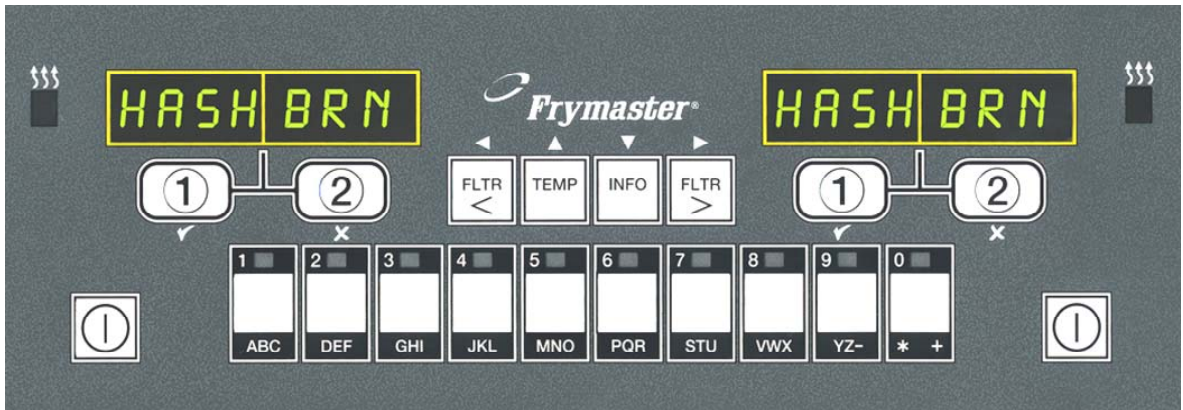
**11** Pressing the cook channel button restores the display to FR FRIES and the unit is ready for cooking.



**FR FRIES**

## 4.5 Changing from Breakfast Setup to Lunch

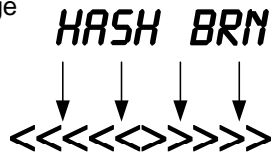
# Changing from Breakfast Setup to Lunch



- 1 Press and quickly release product button for french fries.



- 2 Computer will change from Hash Brn to <<<<<>>>>; an alarm will sound.



- 3 Press and hold the cook channel button under the display until a beep is heard.



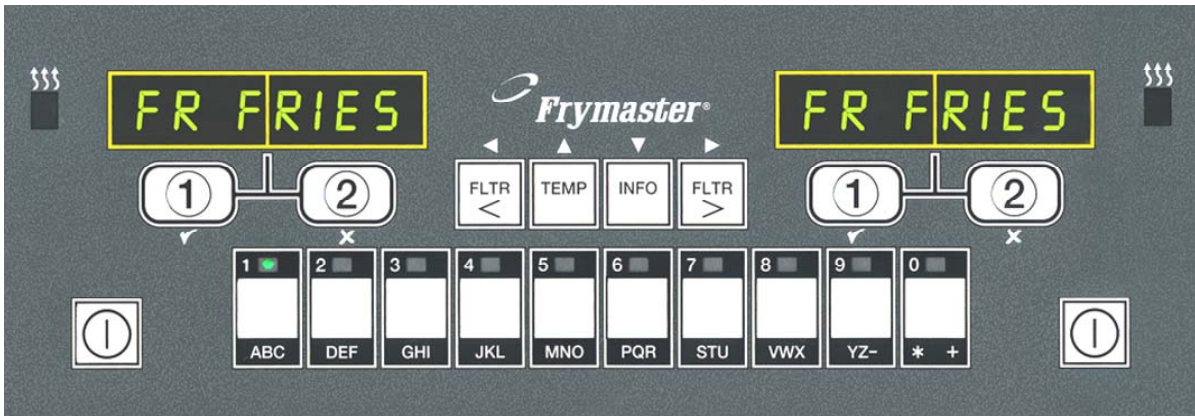
- 4 Display changes to FR Fries.

**FR FRIES**

Change both displays to FR FRIES

## 4.6 Changing from Lunch Setup to Breakfast

# Changing from Lunch Setup to Breakfast

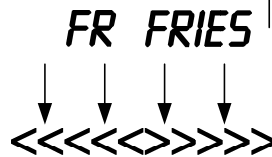


**1** Computer displays **FR FRIES**

**2** Press and quickly release product button for hash browns.



**3** Computer display will change from FR Fries to <<<<<>>>>>>; an alarm sounds.



**4** Press and hold the cook channel button under the display until a beep is heard.



**5** Display changes to Low Temp until setpoint is reached. **LOW TEMP**

**6** Display changes to Hash Brn. **HASH BRN**



## 4.7 M2007 Button Description and Functions

### 4.7.1 Navigation Buttons

The menu on the M2007 uses ◀ ▶ and ▲ ▼ buttons to navigate the various menus and submenus (see Figure 1).

The displays on some menu items scroll text too long to fit on a single screen. Some illustrations here show additional characters to display scrolling message (see example in Figure 2).

In other illustrations the displays (see Figure 3) are cropped for clarity (see Figure 4).

When programming, the left screen shows a menu or submenu item. The right screen is for data entry. Data is entered with alpha-numeric characters, scrolling through lists or by toggling between choices.

During programming if a button is not pushed within one minute, the computer returns to operation mode.

### 4.7.2 Filter, Temperature and Info Buttons

The < **FLTR** and **FLTR** > buttons (see Figure 1) are used to filter the left and right vats of a split vat fryer on demand, while the right **FLTR** > button is used to filter a full vat on demand. The **FLTR** buttons, if pressed once will display the amount of cook cycles remaining until a filtration prompt. When the **FLTR** button is pressed twice, the date and time of the last filter will be displayed. The **TEMP** button, if pressed once while the fryer is on, displays current vat temperature on both sides. If the fryer is off, the display shows the current versions of software. If the **TEMP** button is pressed twice while the fryer is on, it shows the setpoint temperatures of the vats. The **INFO** button (see Figure 1), if pressed once, shows the recovery time for each vat from the last test. Recovery displays 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). If the **INFO** button is pressed and held for three seconds it shows information such as usage, filter statistics and last cook cycles (see page 4-51 for more details on the **INFO** button).

### 4.7.3 Cook Cycle and Selection Buttons

The ✓ ✕ buttons are dual-function buttons shared with the number **1** and **2** buttons. They are located directly below the LED displays (see Figure 5). Use these buttons to select or cancel functions. The ✕ button is used to back out of and quit submenus.

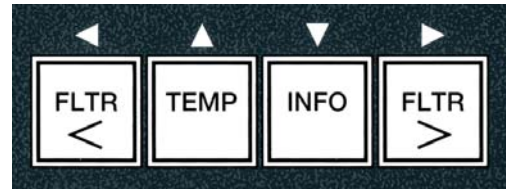


Figure 1



Figure 2



Figure 3



Left Display Right Display  
Figure 4

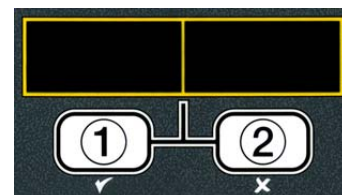


Figure 5

## 4.8 M2007 Menu Summary Tree

Reflected below are the major programming sections in the M2007 and the order in which submenu headings will be found under the sections in the Installation and Operation Manual.

<b>Adding New Product Menu Items</b>	See pg. 4-14
<b>Storing Product Menu Items in Product Buttons</b>	See pg. 4-18
<b>Draining, Refilling, and Disposing of Oil and Boil-out</b>	See pg. 4-19
<b>Filter Menu</b>	See pg. 4-24
1. Auto Filter	See pg. 5-2
2. Maint Filter	See pg. 5-8
3. Dispose	See pg. 4-19 thru 4-22
4. Drain to Pan	See pg. 4-23
5. Fill Pot from Drain Pan	See pg. 4-26
6. Fill Pot from Bulk	See pg. 4-27
<b>Programming</b>	
<b>Level 1 Program</b>	See pg. 4-29
1. Product Selection	See pg. 4-29
a. Name	
b. Cook Time	
c. Temp	
d. Cook ID	
e. Qual Tmr	
f. Duty Time 1	
g. Duty Time 2	
h. AIF Disable	
i. Assign Btn	
2. AIF Clock	See pg. 4-30
a. Disabled	
b. Enabled	
3. Boil Out Mode	See pg. 4-32
4. High-Limit Test	See pg. 4-35
a. Hi-Limit Test 1	
b. Hi-Limit Test 2	
5. Fryer Setup	See pg. 4-9
<b>Level 2 Program (Manager Level)</b>	See pg. 4-37
1. Prod Comp Sensitivity for product	See pg. 4-38
2. E-Log Log of last 10 error codes	See pg. 4-39
3. Passwords Change passwords	See pg. 4-39
a. Setup	
b. Usage	
c. Level 1	
d. Level 2	
e. Get Mgr	
4. Alert Tone Volume and Tone	See pg. 4-41
a. Volume 1-9	
b. Tone 1-3	
5. Filter After Sets number of cooks before filter prompt	See pg. 4-42
6. Filter Time Sets amount of time between filter cycles	See pg. 4-43
<b>Info Mode Menu</b>	See pg. 4-43
<b>Full/Split Vat Configuration</b>	
1. Filter Stats	See pg. 4-44
2. Review Usage	See pg. 4-45
3. Last Load	See pg. 4-47

## 4.9 Fryer Setup Mode Programming

The computer, upon initial power up, when changing out a computer or accessed from Level 1, enters setup mode. These parameters need to be set to allow the auto filtration, logs and other functions to operate correctly. The setup sets the time, date, date format, language, fryer type, vat type, oil system type and the temperature scale from F° to C°. These settings should only be changed by a technician.

On initial power up the computer displays **OFF** (see Figure 6).



Figure 6

1. Press either soft power button (see Figure 7) or with the computer **OFF** (see Figure 6), enter Level 1 programming mode by pressing the **TEMP** and **INFO** buttons (see Figure 8) simultaneously until **LEVEL 1** is displayed (see Figure 9).

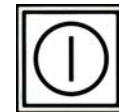


Figure 7

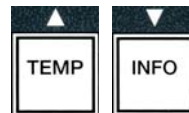


Figure 8



Figure 9

2. The computer displays **FRYER SETUP** if initially powering up the computer and/or **ENTER CODE** if programming through Level 1 (see Figure 10).



Figure 10

3. Enter **1234** (see Figure 11).

If initially powering up the computer skip to step 6, otherwise if programming through Level 1 continue to the next step.

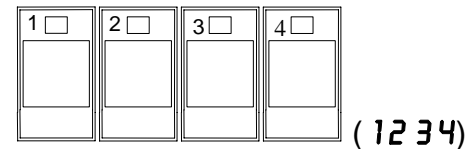


Figure 11

The computer displays **LEVEL 1 PROGRAM** for three seconds and sounds an alert (see Figure 12).



Figure 12

The computer then displays **PRODUCT SELECTION** (see Figure 13).



Figure 13

4. Press the ▼ button (see Figure 14) to scroll to **FRYER SETUP** (see Figure 15).



Figure 14



Figure 15

Computer displays **ENTER CODE** (see Figure 16).



Figure 16

5. Enter **1234** (see Figure 17).

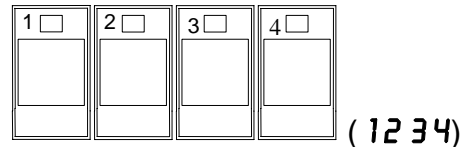


Figure 17

Computer displays **TIME FORMAT** (see Figure 18).



Figure 18

6. Use the ◀ and ▶ buttons (see Figure 19) to toggle between **24HR** and **12HR** (see Figure 20).



Figure 19



Figure 20

7. With the desired selection displayed, press the ✓ (1 YES) button (see Figure 21).



Figure 21

The computer displays **ENTER TIME** on the left and **HH:MM** on the right (see Figure 22).



Figure 22

Example: 7:30 AM is entered 0730 if using the 12 hour format. 2:30 is entered 1430 if using 24 hour format.

8. Enter time in hours and minutes using the number buttons 0-9 (see Figure 23).



Figure 23

9. With the desired selection displayed, press the ✓ (1 YES) button (see Figure 24).



Figure 24

The computer displays **ENTER TIME** on the left and **AM** on the right if 12 hours system is chosen. (see Figure 25).



Figure 25

- Use the ◀ and ▶ buttons (see Figure 26) to toggle between **AM** and **PM** if the 12 hour format was chosen (see Figure 27).



Figure 26



Figure 27

- With the desired selection displayed, press the (1 YES) button (see Figure 28).



Figure 28

The computer displays **DATE FORMAT** on the left and **US** on the right (see Figure 29).



Figure 29

- Use the ◀ and ▶ buttons (see Figure 30) to toggle between **US** and **INTERNL** (see Figure 31).



Figure 30



Figure 31

- With the desired selection displayed, press the (1 YES) button (see Figure 32).



Figure 32

The computer displays **ENTER DATE** on the left and **MM-DD-YY OR DD-MM-YY** on the right (see Figure 33).



Figure 33

Example:

US Format – Mar. 15, 2007 is entered as 031507.

International Format – 15 Mar. 2007 is entered as 150307)

- Enter the date using the number buttons 0-9 (see Figure 34).



Figure 34

- With the desired selection displayed, press the (1 YES) button (see Figure 35).



Figure 35

The computer displays **LANGUAGE** on the left and **ENGLISH** on the right (see Figure 36).



Figure 36

16. Use the ◀ and ▶ buttons to scroll through the language menu (see Figure 37).



Figure 37

Current languages supported by the M2007 are: English, French, French Canadian, Spanish, Portuguese, German and Swedish.

17. With the desired selection displayed, press the ✓ (1 YES) button (see Figure 38).



Figure 38

The computer displays **FRYER TYPE** on the left and **ELEC** on the right (see Figure 39).



Figure 39

18. Use the ◀ and ▶ buttons (see Figure 40) to toggle between **ELEC** and **GAS** (see Figure 41).



Figure 40



Figure 41

19. With the desired selection displayed, press the ✓ (1 YES) button (see Figure 42).



Figure 42

The computer displays **VAT TYPE** on the left and **SPLIT** on the right (see Figure 43).



Figure 43

20. Use the ◀ and ▶ buttons (see Figure 44) to toggle between **SPLIT** and **FULL** (see Figure 45).



Figure 44



Figure 45

21. With the desired selection displayed, press the ✓ (1 YES) button (see Figure 46).



Figure 46

The computer displays **OIL SYSTEM** on the left and **JIB** on the right (see Figure 47).



Figure 47

22. Use the ◀ and ▶ buttons (see Figure 48) to toggle between **JIB** and **BULK** (see Figure 49).



Figure 48

**NOTE:** A **JIB** system uses a disposable JIB (Jug in a Bottle). A **BULK** system has large storage oil tanks that are connected to the fryer that fills a reservoir.

23. With the desired selection displayed, press the ✓ (1 YES) button (see Figure 50).

The computer displays **TEMPERATURE** on the left and **F** on the right (see Figure 51).

24. Use the ◀ and ▶ buttons (see Figure 52) to toggle between **F** and **C** temperature scales (see Figure 53).

**NOTE:** **F** is used for Fahrenheit, **C** is used for Celsius.

25. With the desired selection displayed, press the ✓ (1 YES) button (see Figure 54).

The computer displays **FRYER SETUP** changing to **OFF** (see Figure 55).



Figure 49



Figure 50



Figure 51



Figure 52



Figure 53



Figure 54



Figure 55

## 4.10 M2007 Common Tasks

Covered in this section are common tasks used in stores:

1. Escaping out of a menu or sub-menu.
2. Adding new product items.
3. Storing menu items in product buttons.
4. Draining, disposing and refilling the vats.

### 4.10.1 Escape Menu Items

To escape or back out of **MENUS** and **SUB-MENUS**, press the ✕ (2) button (Figure 56).



Figure 56

## 4.10.2 Adding New Product Items to the Menu

This function is used to add additional products to the computer menu.

To add a new product to the menu:

1. With the computer **OFF** (see Figure 57), enter Level 1 programming mode by pressing the **TEMP** and **INFO** buttons simultaneously (see Figure 58) until **LEVEL 1** is displayed (see Figure 59).

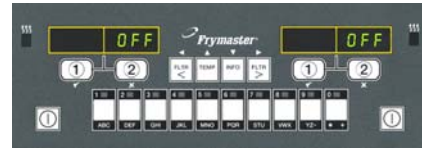


Figure 57

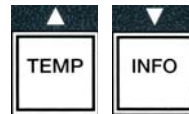


Figure 58



Figure 59

The computer displays **ENTER CODE** and sounds an audible alert (see Figure 60).



Figure 60

2. Enter **1234** (see Figure 61).

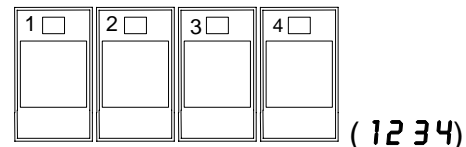


Figure 61

The computer displays **LEVEL 1 PROGRAM** for three seconds (see Figure 62).



Figure 62

The computer then displays **PRODUCT SELECTION** (see Figure 63).



Figure 63

3. With **PRODUCT SELECTION** displayed, press the **✓ (1 YES)** button to select a menu item (see Figure 64).



Figure 64

Computer displays **PRODUCT SELECTION** for three seconds then displays **SELECT PRODUCT** (see Figure 65).



Figure 65

4. With **SELECT PRODUCT** displayed on the left and **FR FRIES** displayed on the right (see Figure 66) use the **▶** button (see Figure 67) to advance through menu items until the right display reads the menu item to be modified or a numbered spot is displayed (see Figure 68).



Figure 66



Figure 67





Figure 68

5. Press the ✓ (1 YES) button to select the product to modify (see Figure 69).



Figure 69

The computer displays **MODIFY** alternating with **YES NO** (see Figure 70).

6. Press the ✓ (1 YES) button to modify selection (see Figure 71) or the ✕ (2 NO) button to return to **PRODUCT SELECTION**.



Figure 70



Figure 71

If yes is chosen, left display shows **NAME** and the right display shows product name (ex. **PROD 8**). The right display will show a blinking cursor alternating with a blinking letter under the first character (see Figure 72).



Figure 72

7. Using the number keys, enter the first letter of the new product (see Figure 73). When entering letters using the number keys use the following logic (ex. – To enter B, press the ABC key twice).



Figure 73

The full product name is limited to eight characters including spaces (ex. FR FRIES).

8. Press the ▶ button to advance the cursor to the next display space (see Figure 74). Use the #0 key to insert a space. The ◀ button can be used to move the cursor back.



Figure 74

For example, to enter “**WINGS**”, press the #8 key two times until **W** appears in the display. Then use the ▶ button to advance the cursor to the next display space. Press the #3 key until **I** appears. Continue on until **WINGS** is spelled out on the display (see Figure 75).



Figure 75

9. Once the name appears as it is to be saved, press the ▼ button (see Figure 76) to save the name and scroll to **COOK TIME**.



Figure 76

10. With **COOK TIME** displayed on the left and **:00** displayed on the right (see Figure 77) use the number keys (see Figure 78) to enter the product cook time in minutes and seconds (ex. 3:10 as 310) (see Figure 79).



Figure 77



Figure 78

11. With the cook time entered, press the ▼ button (see Figure 80) to save the **COOK TIME** and scroll to **TEMP** (cook temperature) (see Figure 81).



Figure 79



Figure 80

12. With **TEMP** displayed on the left and **32F** displayed on the right (see Figure 81) use the number keys to enter the cook temperature for the product (ex. 335° as 335) (see Figure 82).



Figure 81

13. With the cook temperature entered, press the ▼ button (see Figure 83) to save the cook temperature value and scroll to the **COOK ID** (see Figure 84).



Figure 82



Figure 83

14. With **COOK ID** displayed on the left and a blinking **P 8** displayed on the right (see Figure 84), use the instructions in step eight to enter a four-letter name for the menu item. This is the shortened name that alternates with the cook time during a cook cycle (see Figure 85).



Figure 84

15. With the correct cook ID abbreviation entered, press the ▼ button (see Figure 86) to save the cook ID abbreviation and scroll to the **QUAL TMR** (Quality Timer) which is used to set the hold time before the food is to be discarded (see Figure 87).



Figure 85



Figure 86

16. With **QUAL TMR** displayed on the left and **:00** displayed on the right (see Figure 87) use the number keys to enter the time in minutes and seconds for the product hold time (ex. 7:00 minutes as 700) (see Figure 88).



Figure 87

17. With **QUAL TMR** (hold time) entered, press the ▼ button (see Figure 89) to save the quality time and scroll to **DUTY TIME 1** (Shake Time), which is used to set the time in the cook cycle the product should be shaken (see Figure 90).



Figure 88



Figure 89

18. With **DUTY TIME 1** displayed on the left and **:00** displayed on the right (see Figure 90) use the number keys to enter the time in minutes and seconds for the first duty to be performed (ex. shake the product after 30 seconds is entered as 30) (see Figure 91).
19. With **DUTY TIME 1** (shake time) entered, press the ▼ button (see Figure 92) to save duty time one and scroll to **DUTY TIME 2** (see Figure 93). If a product called for a second duty to be performed after a certain amount of time, it can be entered here. Use the instructions above to enter duty time two, otherwise press the ▼ button (see Figure 94) to scroll to **AIF DISABLE** (see Figure 95).
20. With **AIF DISABLE** displayed on the left and **YES** displayed on the right (see Figure 95) use the ◀ and ▶ buttons (see Figure 96) to toggle between **YES** and **NO**. This feature, if set to yes, disables the AIF (auto intermittent filtration) for the programmed product. This is used to prevent comingling of product-specific oils.
21. If the **AIF DISABLE** selection is set to **NO** press the ▼ button (see Figure 97) to save the AIF disable selection and scroll to the **ASSIGN BTN** selection.



Figure 90



Figure 91



Figure 92



Figure 93



Figure 94



Figure 95



Figure 96



Figure 97

The computer displays **ASSIGN BTN** on the left and the chosen product on the right (see Figure 98).

To assign the entered product to a button, follow instructions below.

22. With the chosen product displayed on the right, and **ASSIGN BUTTON** on the left, press and hold for three seconds a button between 1-0 to assign the product. The LED in the chosen product button will illuminate (see Figure 98). To unassign a product from a button, press and hold the button assigned to that product for three seconds. The LED no longer illuminates.
23. Once the button is assigned, press the ▼ button (see Figure 99) to save the assigned button.



Figure 98



Figure 99



Figure 100



Figure 101



Figure 102

The computer displays **NAME** on the left with the product (ex. **WINGS**) on the right (see Figure 100).

\* Note: If additional programming, to add other products, is necessary press the **▶** button (see Figure 103) and return to step 4.



Figure 103

24. If no further programming is necessary, press the **\* (2)** button (see Figure 101). The computer displays the **SELECT PRODUCT** option with the product (ex. **FR FRIES**) on the right screen (see Figure 102). Press the **\* (2)** button again (see Figure 104). Computer displays **LEVEL 1 PROGRAM** changing to the **PRODUCT SELECTION** prompt (see Figure 105).



Figure 104



Figure 105

25. Press the **\* (2)** button (see Figure 106) to quit and to return to **OFF** (see Figure 107).



Figure 106



Figure 107

### 4.10.3 Storing Menu Items in Product Buttons

This function is used to store individual menu items to product buttons for one or two button cooking.

To store menu items to a specific button:

1. Perform steps 1-6 on pages 4-14 thru 4-15.
2. The computer displays **NAME** on the left and the selected product (ex. **WINGS**) on the right (see Figure 108).
3. Press the **▲** button (see Figure 109) to scroll to the **ASSIGN BTN** option used to assign a menu item to a specific product button (see Figure 111).
4. The computer displays **ASSIGN BTN** on the left and **WINGS** on the right (see Figure 110)
5. With **ASSIGN BTN** displayed on the left and the chosen product (ex. **WINGS**) displayed on the right, press and hold for three seconds a button between 1-0 to assign the product. The LED in the chosen product button will illuminate (see Figure 111). To unassign a product from a button, press and hold the button assigned to that product for three seconds. The LED no longer illuminates.



Figure 108



Figure 109



Figure 110



Figure 111

- Once the button is assigned, press the ▼ button (see Figure 112) to save the assigned button.

The computer displays **NAME** on the left with the product (ex. **WINGS**) on the right (see Figure 113).



Figure 112

- If no further programming is necessary, press the \* (2) button (see Figure 114) twice to return to **LEVEL 1 PROGRAM** changing to the **PRODUCT SELECTION** prompt (see Figure 115).



Figure 113



Figure 114



Figure 115

- Press the \* (2) button (see Figure 116) to quit and to return to **OFF** (see Figure 117).



Figure 116



Figure 117

#### 4.10.4 Draining and Refilling Vats, and Disposing of Oil and Boil-Out Solution

When cooking oil is exhausted, drain the oil into an appropriate container for transport to the disposal container. Frymaster recommends a McDonald's Shortening Disposal Unit (MSDU). **Do not drain boil out solution into an MSDU.** **NOTE:** If using an MSDU built before January 2004 the filter pan cover must be removed to allow the unit to be positioned beneath the drain. To remove the cover, lift up on the front edge and pull it straight out of the cabinet. 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 with a capacity of FOUR gallons (15 liters) or larger to prevent oil from spilling.

##### 4.10.4.1 Disposal

This option is used to dispose of old oil into either an MSDU or a **METAL** pot. This option is also used to drain the boil-out solution into a **METAL** pot after boil-out is preformed.

- Remove the filter pan and position the MSDU or **METAL** container with a capacity of **FOUR** gallons (15 liters) or larger under the fryer to drain the oil. If performing a boil-out process, only drain boil-out solution into a **METAL** container.

**NOTE:** Draining boil-out solution into an MSDU will cause damage.

- With the computer **OFF** (see Figure 118), press and hold the **FLTR** button (see Figure 119) of the corresponding vat for three seconds; a chirp sounds.



Figure 118



Figure 119

Computer displays **FILTER MENU** for three seconds, changing to **AUTO FILTER** (see Figure 120).



Figure 120

- With **AUTO FILTER** displayed, press the **▼ (INFO)** button (see Figure 121) to scroll to **DISPOSE** (see Figure 122).



Figure 121

Computer displays **DISPOSE** (see Figure 122).



Figure 122



Figure 123

- Press the **✓ (1 YES)** button to continue (see Figure 123).

The computer display alternates between **DISPOSE** and **YES NO** (see Figure 124).



Figure 124



Figure 125

- To dispose press the **✓ (1 YES)** button to continue (see Figure 125).

**⚠ WARNING**

**NEVER drain boil-out solution into an MSDU. Boil-out solution can cause damage to an MSDU.**

**⚠ DANGER**

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

**⚠ DANGER**

**Allow oil or boil-out solution to cool to 100°F (38°C) before draining into an appropriate METAL container for disposal.**

**⚠ DANGER**

**When draining oil or boil-out solution into an appropriate METAL container, make sure the container will hold at least FOUR gallons (15 liters) or more, otherwise hot liquid could overflow and cause injury.**

The computer display alternates between **IS DISPOSE UNIT IN PLACE** and **YES NO** (see Figure 126). If **NO** is selected, the computer displays **INSERT DISPOSAL UNIT** alternating with **IS DISPOSE UNIT IN PLACE** and **YES NO**.

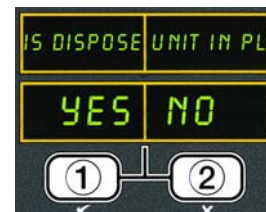


Figure 126

- With the MSDU or a **METAL** container with a capacity of **FOUR** gallons (15 liters) or larger is in place, press the ✓ (1 **YES**) button to continue (see Figure 127).



**NOTE:** If draining boil-out solution, only use a **METAL** container. Boil-out solution will damage an MSDU.

The heating source is disabled, the drain valve opens and the computer displays **DISPOSING** for 20 seconds (see Figure 128).



Figure 128

The drain valve remains open and the computer displays **VAT EMPTY** (see Figure 129) alternating with **YES NO**.



Figure 129

- With the vat empty, press the ✓ (1 **YES**) button to continue (see Figure 130).



Figure 130

The computer displays **CLN VAT COMPLETE** (see Figure 131).



Figure 131

- Clean the vat with a scrub brush and when complete press the ✓ (1 **YES**) button to continue (see Figure 132).



Figure 132

The drain valve closes and the vat is ready to be refilled with oil or if in boil-out process, fill with boil-out solution and water (see page 4-32 for boil-out process).

If the oil system was set to JIB during the initial setup, continue to the next Section 4.10.4.2 **Refilling JIB Oil Systems**. If the **OIL SYSTEM** was set to **BULK** during the initial setup, continue to Section 4.10.4.4 **Refilling Bulk Oil Systems** on page 4-24.

#### 4.10.4.2 Refilling JIB Oil Systems

JIB (Jug In Box) oil systems use oil stored in boxed jugs inside the fryer cabinet.

If the oil system was set to JIB during initial setup, the computer displays **MANUAL FILL POT** (see Figure 133).



Figure 133

- Carefully pour oil into the pot until it reaches the low fill line in the fryer.
- Press the ✓ (1 **YES**) button (see Figure 134) when vat is full.



Figure 134

The computer displays **OFF** (see Figure 135).



Figure 135

### 4.10.4.3 Draining and Disposing Oil using Bulk Oil Systems

Bulk oil systems use pumps to move the oil from the fryer to holding tanks for fresh and exhausted oil. Additional plumbing is used to connect the bulk oil systems to the fryers.

1. With the computer **OFF** (see Figure 136), press and hold the **FLTR** button of the corresponding vat for three seconds (see Figure 137).



Figure 136



Figure 137

Computer displays **FLTR MENU** for three seconds changing to **AUTO FILTER** (see Figure 138).



Figure 138

2. Press the **▼ (INFO)** button (see Figure 139) and scroll to **DISPOSE** (see Figure 140).



Figure 139



Figure 140

3. With **DISPOSE** displayed, press the **✓ (1 YES)** button to continue (see Figure 141).

The computer display alternates between **DISPOSE** and **YES NO** (see Figure 142).



Figure 141



Figure 142

If **CHK PAN** is displayed, remove and replace the filter pan, ensuring that the pan is seated firmly into the fryer.

4. To dispose press the **✓ (1 YES)** button to continue (see Figure 143).



Figure 143

The heating source is disabled. The drain valve opens and the computer displays **DISPOSING** (see Figure 144).



Figure 144

5. If disposing of boil-out solution, remove the filter pan and place a **METAL** container with a capacity of **FOUR** gallons (15 liters) or larger under the fryer to drain the solution.

The drain valve remains open and the computer displays **VAT EMPTY** (see Figure 145) alternating with **YES NO**.



Figure 145



Figure 146

6. When the vat is empty, press the **✓ (1 YES)** button to continue (see Figure 146).



The computer displays **CLN VAT COMPLETE** (see Figure 147).



Figure 147

7. Clean the vat with a scrub brush and when complete press the ✓ (1 YES) button to continue (see Figure 148) or if waste tank is full, the message clears and the computer displays **OFF**.



Figure 148

The computer displays **ENGAGE DISPOSE SWITCH** (see Figure 149).



Figure 149

8. Switch the bulk oil system switch to dispose.

If the bulk oil system waste tank is full, the computer displays **RTI TANK FULL** (see Figure 150). Call the bulk oil waste provider.



Figure 150

9. Press the ✓ (1) button to start disposal (see Figure 151).



Figure 151

The computer displays **PAN TO WASTE** (see Figure 152). The pump will operate for 60 seconds transferring the waste oil from the pan to the bulk oil waste tanks.



Figure 152

The computer displays **PAN EMPTY** at the end of 60 seconds (see Figure 153).



Figure 153

10. Press ✕ (2) button (see Figure 154) to run the pump an additional 60 seconds if the pan has oil remaining, otherwise continue to the next step.



Figure 154

11. Once the pan is empty, press the ✓ (1) button (see Figure 155) to continue to Section 4.10.4.4.



Figure 155

The vat is ready to be refilled with oil.

The computer displays **DISENGAGE DISPOSE SWITCH** (see Figure 156).



Figure 156

12. Switch off the bulk oil system.
13. Press the ✓ (1) button to disengage disposal switch (see Figure 157).



Figure 157

#### 4.10.4.4 Refilling the Vat from Bulk Oil Systems after Disposal

The computer displays **FILL POT FROM BULK** (see Figure 158).



Figure 158

The bulk oil refill pump uses a momentary switch. It only pumps as long as the switch is depressed.

14. Press and hold the ✓ (1 **YES**) button to refill the vat until the oil reaches the fill line (see Figure 159).



Figure 159



Figure 160

15. With the vat full, release the ✓ (1 **YES**) button.

16. Press the ✕ (2) button, when the vat is full, to close the fill valve (see Figure 160).

The computer displays **OFF** (see Figure 161).



Figure 161

### 4.11 Filter Menu

The filter menu selections are used for filtering, draining, filling and disposing.

#### 4.11.1 Accessing the Filter Menu

Computer displays product or dashed lines (see Figure 162).



Figure 162

1. Press and hold the filter button for the selected vat for three seconds (see Figure 163).



Figure 163

Computer displays **FILTER MENU** for three seconds, changing to **AUTO FILTER** (see Figure 164).



Figure 164

2. Press the ▲ and ▼ buttons (see Figure 165) to scroll between:

- |                                   |              |
|-----------------------------------|--------------|
| a. <b>AUTO FILTER</b>             | See pg. 5-2  |
| b. <b>MAINT FILTER</b>            | See pg. 5-8  |
| c. <b>DISPOSE</b>                 | See pg. 4-19 |
| d. <b>DRAIN TO PAN</b>            | See pg. 4-23 |
| e. <b>FILL POT FROM DRAIN PAN</b> | See pg. 4-26 |
| f. <b>FILL POT FROM BULK</b>      | See pg. 4-28 |

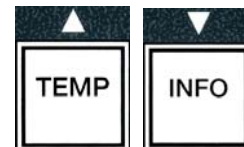


Figure 165

The first two menu items: **AUTO FILTER** and **MANTAINENCE (MANUAL) FILTER** are covered in Chapter 5. The other menu items are covered on the following pages.

The **DRAIN TO PAN** and **FILL POT FROM DRAIN PAN** functions are used primarily for diagnostic purposes. They are used when oil is to be drained to the pan or returned to the frypot.

### 4.11.2 Drain to Pan

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

With the computer **OFF** (see Figure 166).



Figure 166

1. Press and hold the filter button for the selected vat to drain for three seconds (see Figure 167).



Figure 167

Computer displays **FILTER MENU** for three seconds, changing to **AUTO FILTER** (see Figure 168).



Figure 168

2. Use the **▲** and **▼** buttons (see Figure 169) to scroll to **DRAIN TO PAN** (see Figure 170).

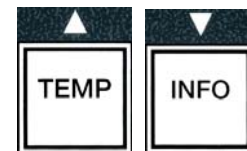


Figure 169

3. With **DRAIN TO PAN** displayed, press the **✓** (1) to continue (see Figure 171).



Figure 170



Figure 171

**⚠ 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.**

Computer displays **DRAIN TO PAN** alternating with **YES NO** (see Figure 171a).

4. Press the **✓** (1 **YES**) to continue drain to pan (see Figure 172).



Figure 171a



Figure 172

The heating source is disabled and the system checks that the pan is in place. If no pan is detected, the computer displays **CHK PAN** until the pan is detected.

With the pan detected, the drain valve opens. The computer displays **DRAINING** for 20 seconds (see Figure 173). The drain valve remains open.



Figure 173

The computer displays **VAT EMPTY**, alternating with **YES NO** (see Figure 174).



Figure 174

5. Press the ✓ (1 **YES**) button if the vat is empty to continue (see Figure 175).



Figure 175

The drain valve closes and the computer returns to the **FILTER MENU** prompt for three seconds, changing to **AUTO FILTER** (see Figure 176).



Figure 176

6. Press the \* (2) button (see Figure 177) to quit and to return to **OFF** (see Figure 178).



Figure 177

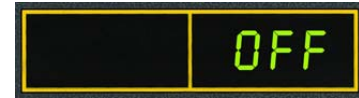


Figure 178

### 4.11.3 Fill Pot from Drain Pan

Fill pot from drain pan selection is used to refill the frypot from the filter pan.

With the computer **OFF** (see Figure 179).



Figure 179

1. Press and hold the filter button for the vat to be refilled for three seconds (see Figure 180).



Figure 180

Computer displays **FILTER MENU** for three seconds, changing to **AUTO FILTER** (see Figure 181).



Figure 181

2. Use the ▲ and ▼ buttons to scroll to **FILL POT FROM DRAIN PAN** (see Figure 182).



Figure 182

3. With **FILL POT FROM DRAIN PAN** displayed, press the ✓ (1 **YES**) to continue (see Figure 183).



Figure 183

Computer displays **FILL POT FROM DRAIN PAN** alternating with **YES NO** (see Figure 184).



Figure 184

4. Press the ✓ (1 **YES**) button to continue (see Figure 185).



Figure 185 Figure 186

System checks that the drain valve is closed. The return valve opens and the filter pump refills the vat.

Computer displays **FILL VAT** while refilling (see Figure 186).

When the vat is full, the return valve is closed. The pump shuts off. The system checks the oil level, topping off if necessary.

If the oil temperature is below setpoint the computer displays **LOW TEMP** (see Figure 187).



Figure 187

Once fryer reaches setpoint and the computer display changes to the product or dashed lines, the fryer is ready for use (see Figure 188).



Figure 188

#### 4.11.4 Fill Pot from Bulk

Fill pot from bulk selection is used when filling the frypot from a bulk oil system.

Computer displays **OFF** (see Figure 189).



Figure 189

1. Press and hold the filter button for the vat to be refilled for three seconds (see Figure 190).



Figure 190

Computer displays **FILTER MENU** for three seconds, changing to **AUTO FILTER** (see Figure 191).



Figure 191

2. Use the ▲ and ▼ buttons to scroll to **FILL POT FROM BULK** (see Figure 192).



Figure 192

3. With **FILL POT FROM BULK** displayed, press the ✓ (1 **YES**) button to continue (see Figure 193).



Figure 193

Computer displays **FILL POT FROM BULK**, alternating with **YES NO** (see Figure 194).



Figure 194

4. Press the ✓ {**YES**} button to continue (see Figure 195).



Figure 195

The system verifies the drain is closed. The bulk oil inlet valve opens and the bulk pump is energized. The bulk oil refill pump uses a momentary switch. It only pumps as long as the switch is depressed.



Figure 196

Computer displays **FILL POT FROM BULK** (see Figure 196).

5. Press and hold the ✓ {**YES**} button (see Figure 197) to refill using the bulk oil refill. When the vat is filled to the lower fill line, release the ✓ (1 **YES**) button.



Figure 197



Figure 198

6. Press the ✕ (2) button to exit (see Figure 198).

The computer displays **OFF** (see Figure 199).



Figure 199



Figure 200

7. Press the soft power button to begin heating the oil (see Figure 200).

If the oil temperature is below setpoint, the computer displays **LOW TEMP** (see Figure 201).

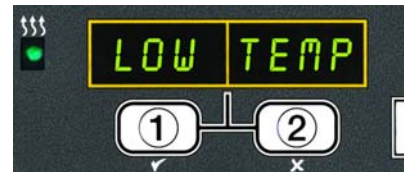


Figure 201

The system then checks the oil level, topping off if necessary.

When the fryer reaches setpoint and the computer display changes to the product or dashed lines, the fryer is ready for use (see Figure 202).



Figure 202

## 4.12 Programming Level One

Level one programming is used to enter new products, control when AIF (auto intermittent filtration) is disallowed, and perform boil out and high-limit tests.

To enter Level 1 programming mode:

1. With the computer **OFF**, press the **TEMP** and **INFO** buttons simultaneously (see Figure 203) for **THREE** seconds until **LEVEL 1** is displayed; a chirp sounds (see Figure 204).

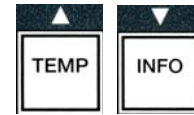


Figure 203



Figure 204

The computer displays **ENTER CODE** and sounds an alert (see Figure 205).



Figure 205

2. Enter **1234** (see Figure 206).

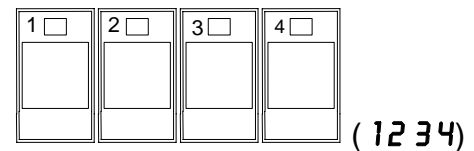


Figure 206

The computer displays **LEVEL 1 PROGRAM** for three seconds (see Figure 207).



Figure 207

The computer then displays **PRODUCT SELECTION** (see Figure 208).



Figure 208

3. Press the **▲** and **▼** buttons (see Figure 209) to scroll between:
  - a. **PRODUCT SELECTION** See pg. 4-29
  - b. **AIF CLOCK** See pg. 4-30
  - c. **BOIL OUT MODE** See pg. 4-32
  - d. **HIGH LIMIT TEST** See pg. 4-35
  - e. **FRYER SETUP** See pg. 4-9
4. With the desired selection displayed, press the **✓ (1 YES)** button to select chosen menu item (see Figure 210).

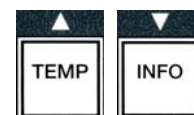


Figure 209



Figure 210

### 4.12.1 PRODUCT SELECTION

1. To add or edit products in the product selection mode see pg. 4-14 **ADDING A NEW PRODUCT ITEM TO THE MENU** Steps 4-30.

The submenus under product selection are:

- a. **NAME** – Enter full product name limit eight characters (FR FRIES).
- b. **COOK TIME** – Enter cook time (ex. 3:30 as 0330).
- c. **TEMP** – Enter cook temperature. (ex. 335° as 335).
- d. **COOK ID** – Enter four (4) letter product ID (ex. CPSY).
- e. **QUAL TMR** – Enter quality time for hold time (ex. 7:00).
- f. **DUTY TIME 1** – Enter the seconds into the cook cycle that the first duty alarm sounds. (ex. 30 seconds- to shake fries).
- g. **DUTY TIME 2** – Enter the seconds into the cook cycle that a second duty alarm sounds.
- h. **AIF DISABLE** – Enter **YES** if AIF is to be disabled for specific products.
- i. **ASSIGN BTN** – Assigns menu items to a specific button for simplified cooking.

**NOTE:**

Press the ▲ and ▼ buttons to scroll.

Press the ◀ and ▶ buttons to move between positions within the selections.

When entering letters using the number keys use the following logic (ex. – To enter B, press the ABC key twice).

When entering numbers, press the corresponding button using the 0-9 keys.

Press the ▲ and ▼ buttons to accept input and move to the next or previous menu item.

2. Press the \* (2) button once to return to **PRODUCT SELECTION** prompt (see Figure 211).



Figure 211

3. Press the \* (2) button (see Figure 212) to quit and to return to **OFF** (see Figure 213).



Figure 212



Figure 213

#### 4.12.2 AIF CLOCK

The AIF Clock mode allows programming of times to lock out the AIF (auto intermittent filtration) prompt. This is useful for busy times of the day, like the noon rush.

1. Perform steps 1-3 on page 4-29.
2. Use the ▼ button to scroll **AIF CLOCK**(see Figure 214).
3. Press the ✓ (1 YES) button to continue (see Figure 215).



Figure 214



Figure 215

The computer displays **AIF CLOCK** on the left and **DISABLED** on the right (see Figure 216).



Figure 216



4. Use the ◀ and ▶ buttons to toggle between: (see Figure 217).

- a. **DISABLED**
- b. **ENABLED**



Figure 217

Set this function to **ENABLED** if there are times in which the AIF (auto intermittent filtration) feature is disallowed (ex. noon rush).

5. With **ENABLED** displayed, press the ✓ (1 YES) button (see Figure 218).



Figure 218

\*Skip to step 12 if **DISABLED** is chosen.

6. Use the ▲ and ▼ buttons (see Figure 219) to scroll between **M-F 1** thru **SUN 4**. (ex. On Monday – Friday no filtering is desired during a lunch rush from 12:00 AM until 1:30 PM. On the computer scroll to **M-F 1 12:00 AM** (see Figure 220).

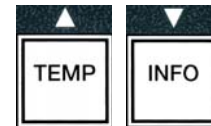


Figure 219

7. Using the number keys enter the start time when AIF should be suspended.



Figure 220

8. Press the ▶ button to toggle from AM to PM (see Figure 221).



Figure 221

9. Press the ▼ button (see Figure 222). The computer displays **000 DUR** (see Figure 223). This is the amount of time the AIF is to remain suspended.



Figure 222

10. Use the number keys to enter a time between 0 and 999 minutes (ex. 1½ hours is entered as 90 minutes). Enter **90** for this example. The computer displays **090 DUR** (see Figure 224). Four different time periods to suspend filtration are available M-F 1-4, Sat 1-4 and Sun 1-4.



Figure 223



Figure 224

11. Press the ▼ button to accept time and move to the next time period (see Figure 225).



Figure 225

12. When finished, press the ✖ button (see Figure 226) once to exit and return to **PRODUCT SELECTION** display (see Figure 227). Skip to step 14.



Figure 226



Figure 227

13. If **DISABLED** is chosen in step three, the computer displays **DISABLED** and sounds an alert for three seconds (see Figure 228).



Figure 228

14. Press the ✓ (1 **YES**) button to accept **DISABLED** selection (see Figure 229).



Figure 229

Computer displays **PRODUCT SELECTION** (see Figure 230).



Figure 230

15. Press the ✖ (2) **button** (see Figure 231) to quit and to return to **OFF** (see Figure 232).



Figure 231



Figure 232

### 4.12.3 BOIL OUT MODE

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

**Note: BOIL OUT MODE ON A SPLIT VAT BOILS OUT BOTH SIDES AT THE SAME TIME.**

1. Remove the filter pan and position the MSDU or **METAL** container with a capacity of **FOUR** gallons (15 liters) or larger under the fryer to drain the oil.
2. Perform steps 1-10 on pages 4-19 thru 4-21 to dispose of the oil.
3. Perform steps 1-3 on page 4-29.

The computer displays **BOIL OUT** (see Figure 233).



Figure 233

4. With **BOIL OUT** displayed press the ✓ (1 **YES**) button to continue (see Figure 234).



Figure 234

The computer displays **BOIL OUT**, alternating with **YES NO** (see Figure 235).



Figure 235

5. Press the ✓ (1 **YES**) button to continue the boil out process (see Figure 236).



Figure 236

The computer displays **OIL RMD**, alternating with **YES NO** (see Figure 237).

6. If frypot is empty press the ✓ (1 **YES**) button (see Figure 238) to continue the boil out process and skip to step 16. If the frypot contains oil, continue to step seven.



Figure 237



Figure 238

7. If the frypot contains oil press the ✕ (2 **NO**) button (see Figure 239) and computer displays **DRAIN OIL** (see Figure 240).



Figure 239



Figure 240

The computer displays **FILTER MENU** for three seconds changing to **AUTO FILTER** (see Figure 241).

8. With **AUTO FILTER** displayed press the ▼ (**INFO**) button (see Figure 242) to scroll to **DISPOSE** (see Figure 243).



Figure 241

9. With **DISPOSE** displayed press the ✓ (1 **YES**) button to continue (see Figure 244).



Figure 242



Figure 243

The computer display alternates between **DISPOSE** and **YES NO** (see Figure 245).

10. Press the ✓ (1 **YES**) button to dispose of oil (see Figure 246).



Figure 244



Figure 245

The computer display alternates between **SDU IN-PLACE** and **YES NO** (see Figure 247).

**WARNING:** Make sure that an MSDU or a METAL container with the capacity of FOUR gallons or larger is used when draining the oil. Otherwise oil could overflow and could cause injury.



Figure 246



Figure 247

**⚠ DANGER**

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

**⚠ DANGER**

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

**⚠ DANGER**

**When draining oil into an appropriate METAL container, make sure the container will hold at least FOUR gallons (15 liters) or more.**

11. When the **MSDU** or **METAL** container with a capacity of **FOUR gallons (15 liters)** or larger is in place, press the ✓ (**1 YES**) button to continue (see Figure 248).



Figure 248



Figure 249

The drain valve opens and the oil is drained into the MSDU or METAL container.

The computer displays **DISPOSING** for 20 seconds (see Figure 249).

The drain valve remains open and the computer displays **VAT EMPTY** (see Figure 250) alternating with **YES NO**.



Figure 250



Figure 251

12. When the vat is empty, press the ✓ (**1 YES**) button to continue (see Figure 251).

The computer displays **CLN VAT COMPLETE** (see Figure 252).



Figure 252



Figure 253

13. Clean the vat with a scrub brush and when complete press the ✓ (**1 YES**) button to continue (see Figure 253). The drain valve closes.

If the oil system was set to JIB during initial setup, the computer displays **MANUAL FILL POT** (see Figure 254).



Figure 254



Figure 255

14. Press the ✓ (**1 YES**) button (see Figure 255) to continue.

The computer displays **OFF** (see Figure 256).



Figure 256

15. Follow the procedures starting with Step 3 on page 4-32.

16. Fill frypot to be cleaned with water and boil-out solution. Referring to maintenance requirement card (MRC14A) for McDonald's boil-out procedure.

The computer displays **STRT BOIL**, alternating with **YES NO** (see Figure 257).



Figure 257

17. After the boil out solution and water has been added to the frypot, press the ✓ (**1 YES**) button to start boil out (see Figure 258).



Figure 258

The computer displays **BOIL** with the countdown timer on the left display and **BOILOUT** on the right display (see Figure 259).



Figure 259

The fryer heats to 195°F (91°C) for one hour. After one hour the heat shuts off.

The computer displays **BOIL DONE** (see Figure 260) for three seconds when the boil out is complete and shuts off (see Figure 261).



Figure 260

Instructions for draining boil-out solution are covered on page 4-19.



Figure 261

#### 4.12.4 HIGH-LIMIT TEST MODE

The high-limit test mode is used to test high-limit test one at 410°F (210°C) and high-limit test two at 436°F (224°C). 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 computer displays **HI-2 HELP** with an alert tone during testing. The high-limit test will destroy the oil. It should only be performed with old oil.

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.

1. Perform steps 1-3 on page 4-29.

Computer displays **HIGH LIMIT TEST** (see Figure 262).



Figure 262



Figure 263

2. Press the ✓ (1 **YES**) button to continue the high-limit test (see Figure 263).

The computer displays **HI-LIMIT** alternating with **YES NO** (see Figure 264).



Figure 264



Figure 265

3. Press the ✓ (1 **YES**) button to continue the test (see Figure 265).

The computer displays **START** alternating with **HI-1** (see Figure 266).



Figure 266



Figure 267

4. Press and hold the ✓ (1 **YES**) button to initiate the first high-limit test [410°F (210°C)] (see Figure 267).

The vat begins to heat. The computer displays the actual vat temperature during the test. When the temperature reaches 410°F ± 10° F (210°C ± 12°C), the high-limit should trip. **NOTE:** In computers used in the European Union (those with the CE mark), the temperature is 395°F (202°C).

The computer displays **HOT HI-1** alternating with the actual temperature (ex. **410F**) (see Figure 268).

5. Release the ✓ (1) button. The **HI-1** test is complete.

The vat stops heating and the computer displays the **HOT HI-1** alternating with the actual temperature (ex. **410F**) until the temperature cools below 400°F (204°C).

When the temperature cools below 400°F (204°C), the display changes to **START** alternating with **HI-1** (see Figure 269).

6. Press the ▼ (INFO) button (see Figure 270).

The computer displays **START** alternating with **HI-2** (see Figure 271).

7. Press and hold the ✓ (1 YES) button to initiate the second high-limit test [436°F (224°C)] (see Figure 272).

The vat begins to heat. The computer displays the actual vat temperature during the test. Once the temperature reaches 420°F to 450°F (216°C to 232°C) the second high-limit should trip. If the high-limit fails, the computer displays **HI 2 BAD**. If this happens, turn the fryer off and call for service immediately.

The computer displays **HI-2** alternating with the actual temperature (ex. **430F**) (see Figure 273).

8. Release the ✓ (1 YES) button.

The vat stops heating and the computer displays the **HI-2** alternating with the actual temperature (ex. **430F**) until the temperature cools below 400°F (204°C).

Once the temperature cools below 400°F (204°C) the display changes to **START** alternating with **HI-2** (see Figure 274).

9. Press the ✖ (2) button once to exit the high-limit test (see Figure 275).



Figure 268



Figure 269



Figure 270



Figure 271



Figure 272



Figure 273



Figure 274



Figure 275

The computer displays **OFF** (see Figure 276).

10. Follow the procedures on page 4-19 to dispose of the oil.



Figure 276

### 4.13 Programming Level Two

To enter Level two programming mode:

1. With the computer **OFF** press the **TEMP** and **INFO** buttons (see Figure 277) simultaneously for 10 seconds until **LEVEL 2** is displayed; a third chirp sounds (see Figure 278).

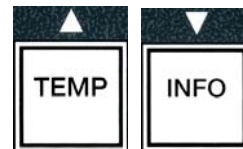


Figure 277



Figure 278

The computer displays **ENTER CODE** and sounds an alert (see Figure 279).



Figure 279

2. Enter **1234** (see Figure 280).

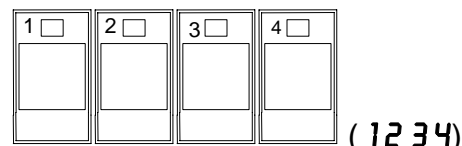


Figure 280

The computer displays **LEVEL 2 PROGRAM** for three seconds and sounds an alert (see Figure 281).



Figure 281

3. Press the **▲** and **▼** buttons to scroll between:
  - a. **PROD COMP** See pg. 4-38
  - b. **E-LOG** See pg. 4-39
  - c. **PASSWORD** See pg. 4-39
  - d. **ALERT TONE** See pg. 4-41
  - e. **FLTR AFTR** See pg. 4-42
  - f. **FLTR TIME** See pg. 4-43

**NOTE:**

Use the **◀** and **▶** buttons to move between positions within the selections. When entering numbers, press the corresponding button using the 0-9 keys.

Press the **▲** and **▼** buttons to accept input and move to the next or previous menu item.

4. With the desired selection displayed press the **✓** (**1 YES**) button (see Figure 282).



Figure 282

### 4.13.1 PRODUCT COMP MODE

The product comp mode allows the product compensation (sensitivity) to be changed. Some menu items may need an adjustment, depending on their cooking characteristics. **Use caution when changing the product compensation, as it could have an adverse affect on the products cooking cycles.** By default the product compensation is set to four.

1. Perform steps 1-3 on page 4-37.

Computer displays **PROD COMP** (see Figure 283).



Figure 283



Figure 284

2. With **PROD COMP** displayed press the ✓ (1 **YES**) button (see Figure 284).

Computer displays **SELECT PRODUCT** (see Figure 285).



Figure 285

3. Use the ◀ and ▶ to scroll through the product list (see Figure 286).



Figure 286

The computer displays the product selected (see Figure 287).



Figure 287



Figure 288

4. With a product selected (see Figure 287), press the ✓ (1 **YES**) button to select a product (see Figure 288).

The computer displays **MODIFY** alternating with **YES NO** (see Figure 289).



Figure 289



Figure 290

5. Press the ✓ (1 **YES**) button to continue or the ✕ (2) button to return to **PRODUCT SELECTION** (see Figure 290).

Computer displays **LOAD COMP** on left side with 4 or some numeral on the right (see Figure 291). This is the sensitivity setting recommended for this product. **It is highly recommended not to adjust this setting, as it could have an adverse affect on the product.**



Figure 291

6. If changing this setting, enter a number between 0-9.
7. Press the ▼ (**INFO**) button to accept selection (see Figure 292).



Figure 292

8. Press the ✕ (2) button (see Figure 293) three times to exit.



Figure 293



Figure 294

The computer displays **OFF** (see Figure 294).



### 4.13.2 E-LOG MODE

The E-LOG mode is used to view the ten most recent error codes encountered on the fryer. These codes are displayed from 1-10 with the most recent displayed first. The time, date and error code are displayed.

1. Perform steps 1-3 on page 4-37.

Computer displays **E-LOG** (see Figure 295).



Figure 295

2. Press the ✓ (1 **YES**) button to accept selection (see Figure 296).



Figure 296

3. Use the ▲ and ▼ buttons to scroll through the ten most recent error codes.

If no errors exist, the computer displays **NO ERRORS** (see Figure 297). Errors are displayed by error code, time and date (see Figure 298).



Figure 297

#### Error Codes:

- E01 - Right Remove Discard**
- E02 - Left Remove Discard**
- E03 - Probe Failure - Call Technician**
- E04 - Hi Limit 2 - Call Technician**
- E05 - Hot Hi 1 - Call Technician**
- E06 - Ignition Failure - Call Technician**



Figure 298

4. Press the ✖ (2) button (see Figure 299) two times to exit.



Figure 299



Figure 300

The computer displays **OFF** (see Figure 300).

### 4.13.3 PASSWORDS

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

1. Perform steps 1-3 on page 4-37.

Computer displays **PASSWORD** (see Figure 301).



Figure 301

2. Press the ✓ (1 **YES**) button to accept selection (see Figure 302).



Figure 302

Computer displays **PASSWORD SETUP** (see Figure 303).



Figure 303

3. Press the ✓ (1 **YES**) button to accept selection (see Figure 304).



Figure 304

Computer displays **FRYER SETUP** (see Figure 305).



Figure 305

4. Press the **▲** and **▼** buttons (see Figure 306) to scroll between:

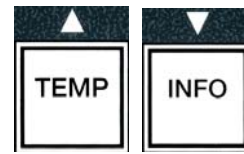


Figure 306

- a. **FRYER SETUP** – Selects password to enter **FRYER SETUP** mode. (Default is 1234)
- b. **USAGE** – Selects password to enter **USAGE** mode to reset usage statistics. (Default is 4321)
- c. **LEVEL 1** – Selects password to enter **LEVEL 1** mode. (Default is 1234)
- d. **LEVEL 2** – Selects password to enter **LEVEL 2** mode. (Default is 1234)
- e. **GET MGR** – Selects password to enter **GET MGR** mode. (Default is 1234)

5. Press the **✓ (1 YES)** button to accept selection (see Figure 307).



Figure 307

The computer displays **FRYER SETUP** on the left and **1234** on the right or the current password (see Figure 308).



Figure 308

6. Using the 0-9 keys enter a new password or reenter the existing password to confirm (see Figure 309).



Figure 309

The computer displays **FRYER SETUP** on the left. The right side is blank (see Figure 310).



Figure 310

7. Repeat steps 4-6 to change or confirm fryer setup, usage, level one, level two and get mgr. passwords.

8. Press the **\* (2)** button (see Figure 311) once to return to product **LEVEL 2 PROGRAM** prompt (see Figure 312).



Figure 311



Figure 312

9. Press the **\* (2)** button again (see Figure 313) to exit.



Figure 313



Figure 314

The computer displays **OFF** (see Figure 314).

#### 4.13.4 ALERT TONE MODE

The alert tone mode allows a manager to adjust the volume to nine levels and the tone is adjustable to three frequencies. One of three audio frequencies may be chosen to distinguish fryers in kitchens with multiple fryers.

1. Perform steps 1-3 on page 4-37.

Computer displays **ALERT TONE** (see Figure 315).



Figure 315



Figure 316

2. With the desired selection displayed, press the ✓ (1 **YES**) button (see Figure 316).

Computer displays **VOLUME 1-9** (see Figure 317).



Figure 317



Figure 318

3. With the desired selection displayed, press the ✓ (1 **YES**) button (see Figure 318).

The computer displays **VOLUME 1-9** on the left and **9** on the right (see Figure 319).



Figure 319

4. Use the number keys to set volume level (see Figure 320). Select from nine levels of volume with 0 being off, 1 the softest and 9 the loudest.



Figure 320

5. Use the ▲ and ▼ buttons (see Figure 321) to scroll to **TONE 1-3**.

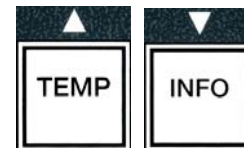


Figure 321

Computer displays **TONE 1-3** (see Figure 322).



Figure 322

6. With the desired selection displayed, press the ✓ (1 **YES**) button (see Figure 323).



Figure 323

The computer displays **TONE 1-3** on the left and **1** on the right (see Figure 324).



Figure 324

7. Use the number keys, to set the tone frequency (see Figure 325). Select from three different frequencies.



Figure 325

8. Press the \* (2) button (see Figure 326) to return to product **LEVEL 2 PROGRAM** prompt (see Figure 327).



Figure 326



Figure 327

9. Press the **\* (2)** button again (see Figure 328) to exit.

The computer displays **OFF** (see Figure 329).



Figure 328



Figure 329

**Note:** The AIF filtration mode uses two measures before prompting to filter. One checks for cook cycles and the other checks for time.

### 4.13.5 FILTER AFTER

The **FLTR AFTR** option is used to set the amount of cooking cycles which passes before the filtration prompt is displayed.

1. Perform steps 1-3 on page 4-37

Scroll to **FLTR AFTR** (see Figure 330).



Figure 330



Figure 331

2. With **FLTR AFTR** displayed, press the **✓ (1 YES)** button (see Figure 331).

The computer displays **FLTR AFTR** on the left and **0** on the right (see Figure 332).



Figure 332

3. Use the number keys (see Figure 333) from 0 to 9 to enter the number of cook cycles before prompting to filter (ex. after every 12 cycles enter as 12).



Figure 333

The computer displays **FLTR AFTR** on the left and **12** on the right (see Figure 334).



Figure 334

4. With the desired selection displayed, press the **INFO ▼** button (see Figure 335).



Figure 335

5. Press the **\* (2)** button (see Figure 336) to exit.

The computer displays **OFF** (see Figure 337).



Figure 336



Figure 337

### 4.13.6 FILTER TIME

The **FLTR TIME** option is used to set the amount of time which passes before the filtration prompt is displayed. This option is useful in lower volume stores, where filtration is desired more often than the amount the cook cycles would generate.

1. Perform steps 1-3 on page 4-37.

Scroll to **FLTR TIME** (see Figure 338).



Figure 338

2. With **FLTR TIME** displayed, press the **✓ (1 YES)** button (see Figure 339).



Figure 339

The computer displays **FLTR TIME** on the left and **:00** on the right (see Figure 340).



Figure 340

- Use the number keys from 0 to 9 to enter the amount of time between filter prompts (ex. after every 2:00 hours enter as 200) (see Figure 341).



Figure 341

The computer displays **FLTR TIME** on the left and **2:00** on the right (see Figure 342).



Figure 342

- With the desired selection displayed, press the **INFO** button (see Figure 343).



Figure 343



Figure 344

- Press the **\* (2)** button (see Figure 344) to exit.

The computer displays **OFF** (see Figure 345).



Figure 345

## 4.14 INFO Mode

The **INFO** button is used to gather information as well as navigate menus. The **INFO** button, if pressed once, shows the recovery time for each vat from the last test. Recovery displays 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).

Press the **INFO** button for three seconds and it will show usage, filter statistics and last cook cycles.

To enter **INFO** mode:

- Press the **INFO** button for three seconds (see Figure 346).



Figure 346

The computer displays **INFO MODE** for three seconds changing to **FILTER STATS** (see Figure 347).



Figure 347

- Press the **▲** and **▼** buttons to scroll between:
  - FULL VAT CONFIGURATION**
    - a. **FILTER STATS** See pg. 4-44
    - b. **REVIEW USAGE** See pg. 4-45
    - c. **LAST LOAD** See pg. 4-57
  - SPLIT VAT CONFIGURATION**
    - a. **FILTER STATS** See pg. 4-44
    - b. **REVIEW USAGE** See pg. 4-45
    - c. **LAST LOAD L** See pg. 4-47
    - d. **LAST LOAD R** See pg. 4-47

**NOTE:**

Use the ◀ and ▶ buttons to move between days within the selections.

Press the ▲ and ▼ buttons to move to other menu items.

- 3. With the desired selection displayed, press the ✓ (1 YES) button to select chosen menu item (see Figure 348).



### 4.14.1 FILTER STATS MODE

The filter stats mode is used to review information related to the filtering process such as the number of times the vat is filtered during a given day, the number of times filtering was skipped and the average number of cook cycles per filter prompt.

- 1. Perform steps 1-3 on pages 4-44.

The computer displays **FILTER STATS** (see Figure 349).



Figure 349

- 2. With the desired selection displayed, press the ✓ (1 YES) button (see Figure 350).



Figure 350

The computer displays current day on the left side and current date on the right side. See example (see Figure 351).



Figure 351

- 3. Use the ◀ and ▶ buttons to scroll records; starting at the current day and going back one week (see Figure 352).



Figure 352

- 4. Press the ▲ and ▼ buttons (see Figure 353) to scroll between:

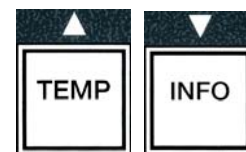


Figure 353

#### FULL VAT CONFIGURATION

- a. **DAY (TUE), DATE (07/03/07)** – Current day and date.
- b. **FILTERED # DAY.** – Number of times vat filtered and day.
- c. **FLT BPSD # DAY.** – Number of times filter was bypassed and day.
- d. **FLT AVG DAY.** – Average number of cook cycles per filter and day.

#### SPLIT VAT CONFIGURATION

- a. **DAY (WED). DATE (03/20/07)** – Current day and date.
- b. **L FILTERED # DAY** – Number of times left vat filtered and day.
- c. **L FLT BPSD # DAY.** – Number of times left vat filter was bypassed and day.
- d. **L FLT AVG DAY.** – Average number of cook cycles per filter/left vat and day.
- e. **R FILTERED # DAY.** – Number of times right vat filtered and day.
- f. **R FLT BPSD # DAY.** – Number of times right vat filter was bypassed and day.
- g. **R FLT AVG DAY.** – Average number of cook cycles per filter/right vat and day.

5. Press the **\* (2)** button (see Figure 354) to return to **FILTER STATS** prompt (see Figure 355).



Figure 354



Figure 355

6. Press the **\* (2)** button (see Figure 356) again to quit.

The computer displays **OFF** (see Figure 357).



Figure 356



Figure 357

#### 4.14.2 REVIEW USAGE MODE

The review usage is used to review historical information for the fryer such as the last date the usage tracking was reset, the total number of cook cycles per vat, the number of times the cook cycle was exited prior to completion and the number of hours the vat(s) have been on.

1. Perform steps 1-3 on pages 4-44.

Scroll to **REVIEW USAGE** (see Figure 358).

2. With **REVIEW USAGE** displayed, press the **✓ (1 YES)** button (see Figure 359).



Figure 358



Figure 359

The computer displays the date and time of the last reset usage. See example (see Figure 360).



Figure 360

3. Press the **▲** and **▼** buttons (see Figure 361) to scroll between:

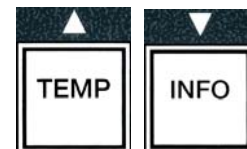


Figure 361

#### FULL VAT CONFIGURATION

- a. **USAGE SINCE TIME. DATE** – Usage since time and date of last reset.
- b. **TOTAL COOKS #** – Number of cook cycles for all products.
- c. **QUIT COOK #** – Number of cook cycles exited within first 30 seconds.
- d. **ON HRS #** – Number of hours the vat has been on.
- e. **RESET USAGE** – Resets usage counters.

#### SPLIT VAT CONFIGURATION

- a. **USAGE SINCE TIME. DATE** – Usage since time and date of last reset.
- b. **TOTAL COOKS #** – Number of cook cycles for all products.
- c. **QUIT COOK #** – Number of cook cycles exited within first 30 seconds.

- d. **L ON HRS #** – Number of hours the left vat has been on
- e. **R ON HRS #** – Number of hours the right vat has been on
- f. **RESET USAGE** – Resets usage counters.

4. If resetting usage statistics, return to step 3 and scroll to **RESET USAGE**, otherwise skip to step 7.

The computer displays **RESET USAGE** (see Figure 362).



Figure 362



Figure 363

5. With the desired selection displayed, press the **✓ (1 YES)** button to select chosen menu item (see Figure 363).

The computer displays **ENTER CODE** (see Figure 364).



Figure 364

6. Using the number keys enter **4321** (see Figure 365).  
Note: Codes are changeable.

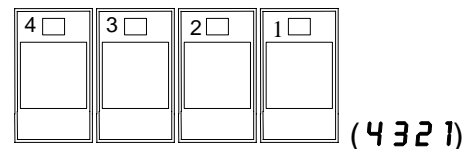


Figure 365

The computer displays current date and time usage was reset (see Figure 366).



Figure 366

7. Press the **\* (2)** button (see Figure 367) to return to **REVIEW USAGE** prompt (see Figure 368).



Figure 367



Figure 368

Computer displays **REVIEW USAGE** (see Figure 368).

8. Press the **\* (2)** button (see Figure 369) again to quit.



Figure 369



Figure 370

The computer displays **OFF** (see Figure 370).

### 4.14.3 LAST LOAD MODE

The last load mode is used to review the information pertaining to the last cook cycle in the corresponding vat.

1. Perform steps 1-3 on pages 4-44.

The computer displays **LAST LOAD** for Full Vat configurations or **LOAD L** or **LOAD R** for Split Vat configurations (see Figure 371).



Figure 371



2. With the desired selection displayed, press the ✓ (1 **YES**) button (see Figure 372).



Figure 372

3. Press the ▲ and ▼ buttons (see Figure 373) to scroll between:

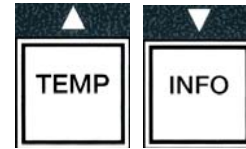


Figure 373

### FULL / SPLIT VAT CONFIGURATION

- a. **PRODUCT FRY** – Last product cooked.
- b. **STARTED 02:34PM** – Time last cook cycle started.
- c. **ACTUAL 3:15** – Actual cooking time including stretch time.
- d. **PROGTIME 3:10** – Programmed cook time.
- e. **MAX TEMP 337°** – Maximum oil temperature recorded during the cook cycle.
- f. **MIN TEMP 310°** – Minimum oil temperature recorded during the cook cycle.
- g. **AVG TEMP 335°** – Average oil temperature recorded during the cook cycle.
- h. **HEAT ON 70** – Percentage of the cook time the heat source was on.
- i. **READY YES** – Displays if the fryer was back to proper temperature before the cook cycle was started.

**NOTE** – Above numbers are examples. They do not reflect actual conditions.

4. Press the ✖ (2) button (see Figure 374) to return to **LAST LOAD** prompt (see Figure 375).



Figure 374



Figure 375

5. Press the ✖ (2) button (see Figure 376) again to quit.



Figure 376

The computer displays **OFF** (see Figure 377).



Figure 377

# BIELA14 SERIES LOV ELECTRIC FRYER

## CHAPTER 5: FILTRATION INSTRUCTIONS

### 5.1 Introduction

The FootPrint Pro filtration system allows the oil in one frypot to be safely and efficiently filtered while the other frypots in a battery remain in operation.

Section 5.2 covers preparation of the filter system for use. Operation of the system is covered in Section 5.3.

#### **⚠ 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.**

#### **⚠ WARNING**

**The filter pad or paper MUST be replaced daily.**

### 5.2 Preparing the Filter for Use

1. Pull the filter pan out from the cabinet and remove the crumb tray, hold-down ring, filter pad (or paper), and filter screen. (See Figure 1) Clean all metal parts with a solution of All Purpose Concentrate and hot water then dry thoroughly.

The pan cover must not be removed except for cleaning, interior access, or to allow a shortening disposal unit (MSDU) to be positioned under the drain. If using an MSDU built before January 2004 see instructions on page 4-21.

2. Inspect the filter pan connection fitting to ensure that both O-rings are in good condition. (See Figure 2)

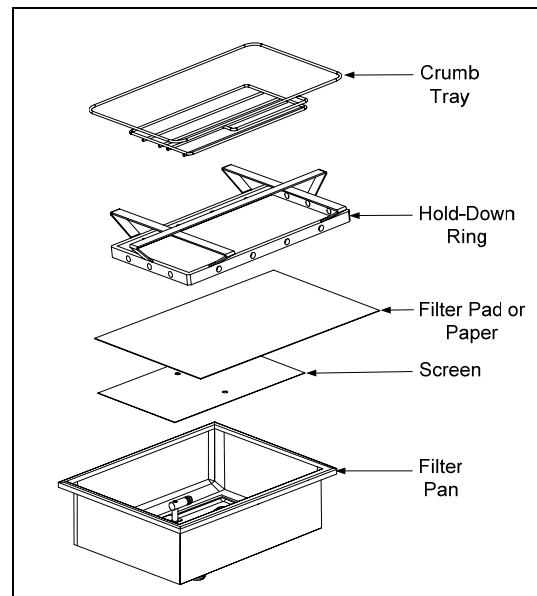


Figure 1

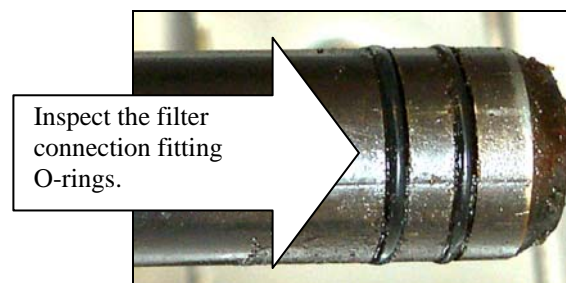


Figure 2

3. Then in reverse order, place the metal filter screen in the center of the bottom of the pan, then lay a filter pad over the screen, ensuring that the **rough** side of the pad is up. Make sure that the pad is in between the embossed ridges of the filter pan. Then position the hold down ring on top of the pad. If using filter paper, lay a sheet of filter paper over the top of the pan overlapping on all sides. Position the hold down ring over the filter paper and lower the ring into the pan, allowing the paper to fold up and around the ring as it is pushed to the bottom of the pan. Then sprinkle 1 packet (8-ounces) of filter powder over the filter paper.
4. Reinstall the crumb tray at the front of the pan. (See Figure 1)

**DO NOT USE FILTER POWDER WITH THE PAD!**

5. Push the filter pan back into the fryer, positioning it under the fryer. The filtration system is now ready for use.

**⚠ 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.**

**⚠ 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.**

### 5.3 Auto Intermittent Filtration (AIF)

Auto Intermittent Filtration (AIF) is a feature that, after a number of preset cook cycles or time, will automatically filter frypots.

An M2007 computer controls the Auto Intermittent Filtration (AIF) system on the LOV fryer. After a preset number of cook cycles or time the computer will display **FLTR NOW** (see Figure 3). The blue LED is activated simultaneously (see Figure 4). The LED will turn off once a filtration cycle is started. If **NO** is selected or a cook cycle is started, the blue LED will go off and will prompt again soon to filter the oil.



Figure 3



Figure 4

Press ✓ (1) for **YES** to start filtration and ✖ (2) for **NO** (see Figure 5).



Figure 5

**Note:** If a timer button is activated during this filter prompt it will be as if No is chosen. (See below.)

If **YES** is chosen, **SKIM VAT** is displayed for ten seconds changing to **CNFM FLTR** (see Figure 6). Skim the crumbs from the oil with a front to back motion, removing as many crumbs as possible from each vat. This is critical to optimizing usable oil life and quality in the oil.



Figure 6

**Note:** If **NO** is chosen in response to either **FLTR NOW** or **CNFM FLTR**, filtering is cancelled and the fryer resumes normal operation. The **FLTR NOW** prompt is displayed once the FLTR AFTR count is satisfied. This sequence repeats until yes is chosen.

If the filter pan is not fully engaged, the computer displays **CHK PAN**. Once the filter pan is pushed fully into place, press the ✓ (1) button to continue.

When ✓ (1) **YES** is chosen, the fryer displays **FILTERING** (see Figure 7) and the auto filtration cycle is started.



Figure 7

**Note:** If a vat is filtering another vat will not filter until the first vat is finished filtering. This prevents multiple vats from filtering at the same time or multiple vats from being inoperable.

Once filtering is complete the computer display changes to **LOW TEMP** until the fryer reaches setpoint (see Figure 8).



Figure 8

Once fryer reaches setpoint and the computer display changes to the product or dashed lines, the fryer is ready for use (see Figure 9).



Figure 9

The complete filtering process takes roughly three minutes.



**DANGER**

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

## 5.4 Troubleshooting the Auto Intermittent Filtration (AIF)

### 5.4.1 Incomplete AIF

Should the AIF procedure fail for any reason after the second filter cycle after the filter pad was changed - the oil does not completely return to the vat, the drain valve is blocked, an actuator does not operate, etc - a signal is generated telling the computer that something is wrong.

The computer displays **GET MGR** for ten seconds then displays **ENTER MGR CODE** (see Figure 10).



Figure 10

1. Enter **1234** (see Figure 11).

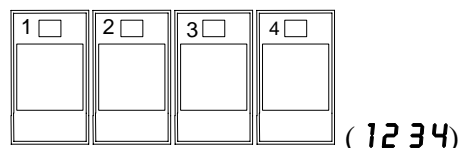


Figure 11

Computer displays **FILL POT FROM DRAIN PAN** (see Figure 12).



Figure 12

2. With **FILL POT FROM DRAIN PAN** displayed, press the **✓ (1 YES)** to continue (see Figure 13).



Figure 13

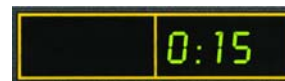


Figure 14

Computer displays 15 second countdown timer while the pump is running (see Figure 14).

Computer displays **15 POT FILLED** alternating with **YES NO** (see Figure 15).

3. Press **✓ (1 YES)** if the vat is full (see Figure 16) and skip to section **5.4.2 REMOVE PAN PROMPT**. If the pot is not filled completely continue to next step.



Figure 15



Figure 16

Computer displays **15 POT FILLED** alternating with **YES NO** (see Figure 17).

4. Press **x (2 NO)** (see Figure 18) if pot is not filled completely.



Figure 17



Figure 18

If **NO** is chosen, the pump runs for an additional 15 seconds and the computer displays **15 POT FILLED** alternating with **YES NO** again.

If **NO** is chosen again, the pump runs for a final 15 seconds and the computer displays **15 POT FILLED** alternating with **YES NO** again (see Figure 17).

If **NO** is chosen a third time (see Figure 19), the computer displays **CHANGE FILTER PAD** alternating with **YES NO** (see Figure 20). Skip to section **5.4.3 CHANGE FILTER PAD**.

If **NO** is chosen, the computer returns to the regular cook mode for 15 minutes. After 15 minutes, the computer resumes displaying **CHANGE FILTER PAD** alternating with **YES NO** again, repeating until the filter pad is changed.



Figure 19



Figure 20

### 5.4.2 Remove Pan Prompt

Computer displays **REMOVE PAN** (see Figure 21).



Figure 21

Remove and replace the filter pan from the cabinet checking for excess oil in the pan.

Computer displays **IS PAN EMPTY** alternating with **YES NO** (see Figure 22).

1. Press ✓ (**1 YES**) if the pan is empty (see Figure 23) and skip to section **5.4.3 CHANGE FILTER PAD**.
2. Press ✖ (**2 NO**) (see Figure 24) if pan is not empty and continue to the next step.



Figure 22



Figure 23



Figure 24

Computer displays **FILTER PAD CLOGGED** alternating with **YES NO** (see Figure 25).

3. Press ✓ (**1 YES**) if the pad is clogged (see Figure 26) and skip to section **5.4.3 CHANGE FILTER PAD**.
4. Press ✖ (**2 NO**) (see Figure 27) if pan is not empty and continue to the next step.



Figure 25



Figure 26



Figure 27

Computer displays **FILTER SERVICE REQUIRED** - **SEE MANUAL** alternating with **YES NO** (see Figure 28).

- Press ✓ (1 **YES**) (see Figure 29) and check to see if the pad needs replaced and filter pan needs cleaning. The fryer resumes to normal cooking mode for 30 minutes (see Figure 30).



Figure 28



Figure 29

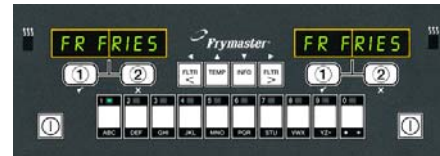


Figure 30

After 30 minutes the computer displays **FILTER PROBLEM FIXED** alternating with **YES NO** with a flashing filter light (see Figure 31).

- Press ✓ (1 **YES**) if the filter problem is fixed and the pan is clean and ready for use. The fryer returns to normal cooking mode (see Figure 32). Pressing ✕ (2 **NO**), restarts a 30 minutes timer ending with the **FILTER PROBLEM FIXED** alternating with **YES NO** prompt repeating, until **YES** is chosen.



Figure 31



Figure 32



Figure 32

### 5.4.3 Change Filter Pad Prompt

- With **CHANGE FILTER PAD** alternating with **YES NO** displayed (see Figure 33), press the ✓ (1 **YES**) after the filter pad is changed and the pan has been pulled forward from the cabinet for at least two minutes. **DO NOT PRESS** YES before the two minutes have elapsed. (see Figure 34).



Figure 33



Figure 34

The computer returns to the regular cook mode (see Figure 35).

The computer restarts **CHANGE FILTER PAD** sequence if the pad was not changed.

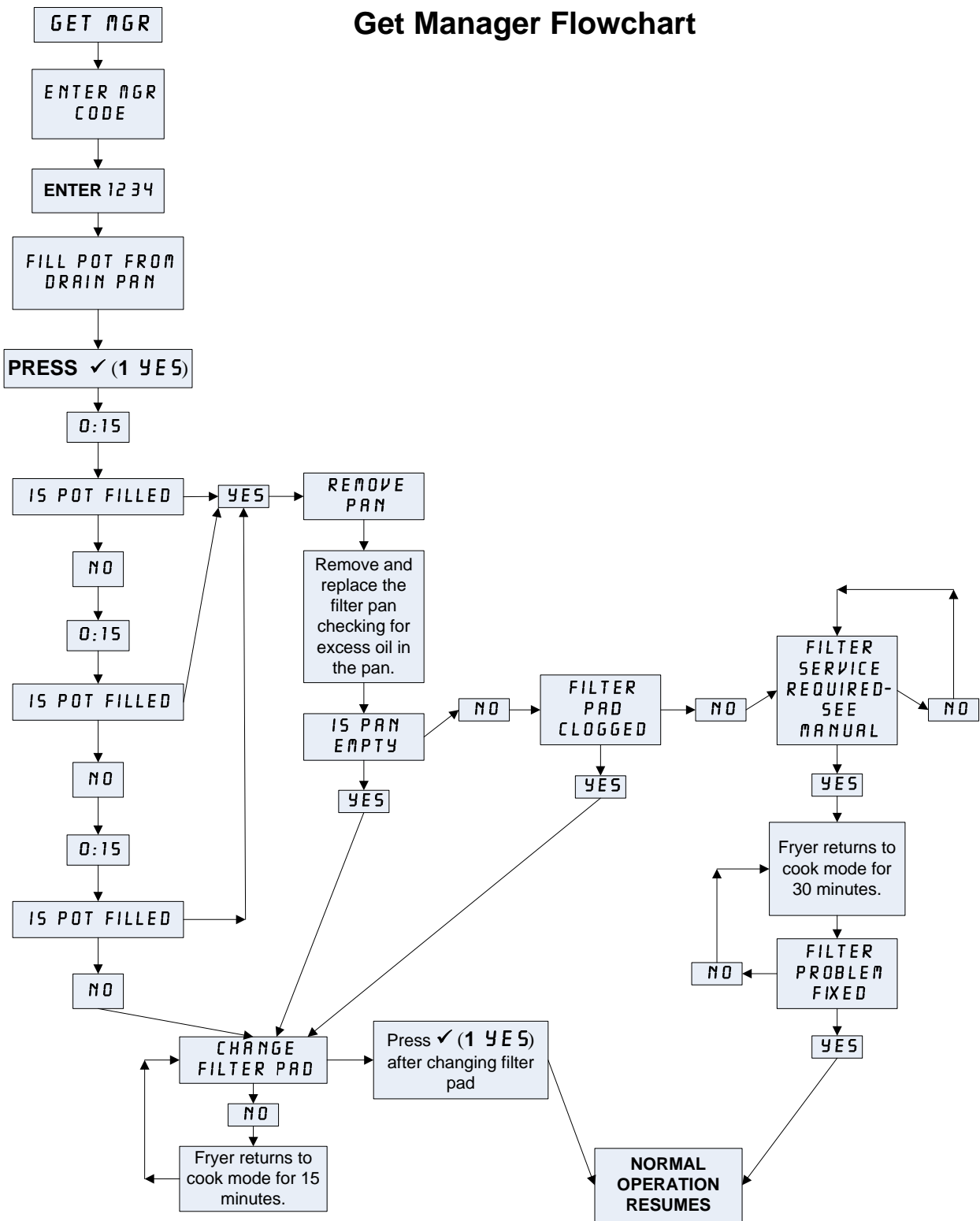
Pressing ✕ (2 **NO**), restarts a 15 minutes timer ending with the **CHANGE FILTER PAD** alternating with **YES NO** prompt with an alarm repeating, until **YES** is chosen.



Figure 35

### 5.4.4 Get Manager Flowchart

### Get Manager Flowchart





### 5.4.5 Filter Busy

When **FILTER BUSY** is displayed (see Figure 36) the MIB board is waiting on another vat to be filtered or waiting on a computer error to clear. Wait 30 minutes to see if problem is corrected. If not, follow the instructions below.



Figure 36

#### 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.**

The reset switch is used in case the valves did not close completely. Pressing the reset switch closes all the valves and resets the system. It takes approximately 60 seconds to completely reset the filter system.

**NOTE:** The auto top off feature and the fryer continue to operate normally during this reset.



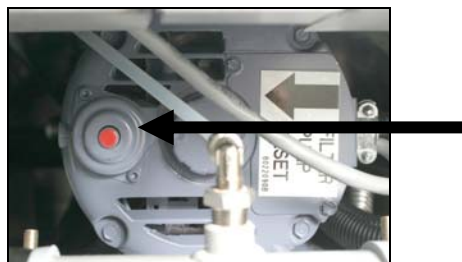
Figure 37

#### WARNING

The filter pump 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 pump 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 Pump Reset Switch

## 5.5 Manual or End of Day Filtration (MAINT FLTR)

**NOTICE**  
The filter pad or paper must be replaced daily.

**⚠ 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.

Ensure that the filter pad or paper is replaced daily to keep the system operating correctly.

1. With the computer **OFF** (see Figure 13) press and hold the **FLTR** button for three seconds (see Figure 14).

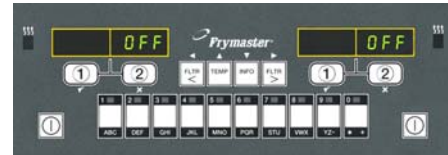


Figure 13



Figure 14

Computer displays **FLTR MENU** for three seconds changing to **AUTO FILTER** (see Figure 15).



Figure 15

2. Press the **▼ (INFO)** button (see Figure 16) to scroll to **MAINT FLTR** (see Figure 17).



Figure 16



Figure 17

3. When the desired selection is displayed press the **✓ (1 YES)** button to continue (see Figure 18).



Figure 18

The screen alternates between **MAN FLTR** and **YES NO** (see Figure 19).



Figure 19

4. Press the **✓ (1 YES)** button to start the manual filtration process (see Figure 20).



Figure 20

The heat source is disabled and the system verifies that the pan is in place.

If no pan is in place the computer displays **CHK PAN** until a pan is detected. The computer displays **FILTERING** and oil drains from the frypot (see Figure 21).



Figure 21

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

The computer display changes to **SCRUB VAT COMPLETE** (see Figure 22).



Figure 22

5. Clean the vat with a scrub brush and press the ✓ (1 YES) button to continue when complete (see Figure 23). The drain valve closes and the vat is ready to be refilled with oil.



Figure 23

The computer displays **WASH VAT** (see Figure 24).



Figure 24

6. Press the ✓ (1 YES) button to continue (see Figure 25).



Figure 25

The return valve opens and the pot is flushed with oil from the pan.

The filter pump shuts off and the computer displays **WASH AGAIN** alternating with **YES NO** (see Figure 26).



Figure 26

7. If the pot is clean of debris, press the ✗ (2 NO) button to continue and skip the wash again cycle (see Figure 27). If crumbs are still present, press the ✓ (1 YES) button and the filter pump runs for another 30 seconds. This cycle repeats until the ✗ (2 NO) button is pressed.

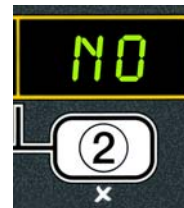


Figure 27

The computer displays **RINSING** (see Figure 28). The drain valve closes and the filter pump continues to run and refills the pot.



Figure 28

The drain valve opens and remains open and the computer displays **RINSE AGAIN** (see Figure 29).

8. If the pot is clear of debris, press the ✖ (2 **NO**) button to continue and skip the rinse again cycle (see Figure 30). If rinse again is desired, press the ✓ (1 **YES**) button and the rinse repeats. This cycle repeats until the ✖ (2 **NO**) button is pressed.



Figure 29

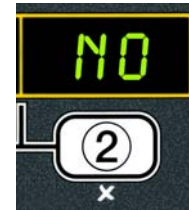


Figure 30

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

The computer displays **POLISH** alternating with **YES NO** (see Figure 31).

9. Press the ✓ (1 **YES**) button to continue (see Figure 32).



Figure 31



Figure 32

The filter pump turns on. The drain and return valves are open and oil is pumped through the frypot. The computer displays a five minute countdown timer (see Figure 33). When the timer expires, the filter pump shuts off.



Figure 33

The computer displays **FILL VAT** alternating with **YES NO** (see Figure 34).

10. Press the ✓ (**YES**) button to continue (see Figure 35).

The drain valve closes and the filter pump turns on and refills the frypot. As the frypot fills, bubbles appear, the return valve closes and the pump shuts off. Once the system verifies the oil level, the top off pump will add oil if necessary.



Figure 34



Figure 35

The computer will verify the oil temperature and turn on the heat source if needed. The computer will display **LOW TEMP** until the setpoint is reached (see Figure 36).



Figure 36

Once setpoint is reached, the computer displays the product or dashed lines and is ready to resume cooking (see Figure 37).

**Note:** Cooking cannot start until low temp display changes to product or dashed lines.



Figure 37

# BIELA14 SERIES LOV ELECTRIC FRYER

## CHAPTER 6: PREVENTATIVE MAINTENANCE

---

### 6.1 Cleaning the Fryer

** 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.

** DANGER**

Never attempt to clean the fryer during the frying process or when the frypot is filled with hot oil. If water comes in contact with oil heated to frying temperature, it will cause spattering of the oil, which can result in severe burns to nearby personnel.

** WARNING**

Use McDonald's All Purpose Concentrate. Read the directions for use and precautionary statements before use. Particular attention must be paid to the concentration of cleaner and the length of time the cleaner remains on the food contact surfaces.

#### 6.1.1 Clean Inside and Outside of the Fryer Cabinet – Daily

Clean inside the fryer cabinet with a dry, clean cloth. Wipe all accessible metal surfaces and components to remove accumulated oil and dust.

Clean the outside of the fryer cabinet with a clean, damp cloth soaked with McDonald's All Purpose Concentrate. Wipe with a clean, damp cloth.

#### 6.1.2 Clean the Built-in Filtration System – Daily

** WARNING**

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

There are no periodic preventive maintenance checks and services required for your FootPrint Pro Filtration System other than daily cleaning of the filter pan and associated components with a solution of hot water and McDonald's All Purpose Concentrate.

#### 6.1.3 Clean Behind Fryers – Weekly

Clean behind fryers in accordance with the procedure detailed in maintenance requirement card (MRC14A).

** WARNING**

To ensure the safe and efficient operation of the fryer and hood, the electrical plug for the 120-volt line, which powers the hood, must be fully engaged and locked in its pin and sleeve socket.

#### 6.1.4 Clean the Frypot and Heating Elements – Quarterly

** DANGER**

Never operate the appliance with an empty frypot. The frypot must be filled to the fill line with water or cooking oil before energizing the elements. Failure to do so will result in irreparable damage to the elements and may cause a fire.

## Boiling Out the Frypot

Before the fryer is first used, it should be boiled out to ensure that residue from the manufacturing process has been eliminated. Also, after the fryer has been in use for a period of time, a hard film of caramelized cooking oil will form on the inside of the frypot. This film should be periodically removed by following the boil-out procedure contained in maintenance requirement card (MRC14A). *Refer to page 4-37 For specific details on setting up the computer for boil-out operation.*



## Replace the O-rings

Refer to McDonald's MRC cards for specific details on replacing the O-rings on the filter connection.

### 6.1.5 Clean Detachable Parts and Accessories – Weekly

Wipe all detachable parts and accessories with a clean, dry cloth. Use a clean cloth saturated with a solution of McDonald's All Purpose Concentrate to remove accumulated carbonized oil on detachable parts and accessories. Rinse the parts and accessories thoroughly with clean water and wipe dry before reinstalling.

### 6.1.6 Check M2007 Computer Set Point Accuracy- Bi-Weekly

1. Insert a good-grade thermometer or pyrometer probe into the oil, with the end touching the fryer temperature-sensing probe.
2. When the computer display shows a series of dashes “----” or a product name (indicating that the frypot contents are within the cooking range), press the  switch once to display the temperature of the oil as sensed by the temperature probe.
3. Press the  switch twice to display the set point.
4. Note the temperature on the thermometer or pyrometer. Actual temperature and pyrometer readings should be within  $\pm 5^{\circ}\text{F}$  ( $3^{\circ}\text{C}$ ) of each other. If not, contact a Factory Authorized Service Center for assistance.

## 6.2 Annual/Periodic System Inspection

This appliance should be inspected and adjusted periodically by qualified service personnel as part of a regular kitchen maintenance program.

Frymaster recommends that a Factory Authorized Service Technician inspect this appliance at least annually as follows:

### Fryer

- Inspect the cabinet inside and out, front and rear for excessive oil.
- Verify that the heating element wires are in good condition and that leads have no visible fraying or insulation damage and that they are free of oil.

- Verify that heating elements are in good condition with no carbon/caramelized oil build-up. Inspect the elements for signs of extensive dry-firing.
- Verify that the tilt mechanism is working properly when lifting and lowering elements and that the element wires are not binding and/or chafing.
- Verify the heating-element amp-draw is within the allowed range as indicated on the appliance's rating plate.
- Verify that the temperature and high-limit probes are properly connected, tightened and functioning properly, and that mounting hardware and probe guards are present and properly installed.
- Verify that component box and contactor box components (i.e. computer/controller, relays, interface boards, transformers, contactors, etc.) are in good condition and free from oil and other debris.
- Verify that component box and contactor box wiring connections are tight and that wiring is in good condition.
- Verify that all safety features (i.e. contactor shields, reset switches, etc.) are present and functioning properly.
- Verify that the frypot is in good condition and free of leaks and that the frypot insulation is in serviceable condition.
- Verify that all wiring harnesses and connections are tight and in good condition.

### **Built-In Filtration System**

- Inspect all oil-return and drain lines for leaks and verify that all connections are tight.
- Inspect the filter pan for leaks and cleanliness. If there is a large accumulation of crumbs in the crumb basket, advise the owner/operator that the crumb basket should be emptied into a fireproof container and cleaned daily.
- Verify that all O-rings and seals are present and in good condition. Replace O-rings and seals if worn or damaged.
- Check filtration system integrity as follows:
  - Verify that filter pan cover is present and properly installed.
  - With the filter pan empty, place each vat into return to pan selection, one at a time. Verify proper functioning of each oil return valve by activating the filter pump using the return to pan selection. Verify that the pump activates and that bubbles appear in the cooking oil of the associated frypot.
  - Verify that the filter pan is properly prepared for filtering, then drain a frypot of oil heated to 350°F (177°C) into the filter pan by using the drain to pan selection (see page 4-27). Now using the fill pot from pan selection (see page 4-29), allow all oil to return to the frypot (indicated by bubbles in the cooking oil). Press the check button when all oil is returned. The frypot should have refilled in approximately 2 minutes and 30 seconds.



# BIELA14 SERIES LOV ELECTRIC FRYER

## CHAPTER 7: OPERATOR TROUBLESHOOTING

---

### 7.1 Introduction

This section provides an easy reference guide to some of the common problems that may occur during the operation of this equipment. The troubleshooting guides that follow are intended to help correct, or at least accurately diagnose, problems with this 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. Never overlook the obvious – anyone can forget to plug in a cord or fail to close a valve completely. Most importantly, always try to establish a clear idea of why a problem has occurred. Part of any 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, too. 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.

***Before calling a service agent or the Frymaster HOTLINE (1-800-24-FRYER):***

- **Verify that electrical cords are plugged in and that circuit breakers are on.**
- **Verify that frypot drain valves are fully closed.**
- **Have your fryer's model and serial numbers ready to give to 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.**

## 7.2 Troubleshooting

### 7.2.1 Computer and Heating Problems

Problem	Probable Causes	Corrective Action
<p><b>No Display on Computer.</b></p>	<p>A. Computer not turned on.</p>	<p>A. Press the ON/OFF switch to turn the computer on.</p>
	<p>B. No power to the fryer.</p>	<p>B. This fryer has two cords: a computer power cord and a main power cord. If the computer cord is not plugged in, the computer will not activate. Verify computer power cord is plugged in and that circuit breaker is not tripped.</p>
	<p>C. Computer has failed.</p>	<p>C. Call your FASC.</p>
	<p>D. Damaged computer wiring harness.</p>	<p>D. Call your FASC</p>
	<p>E. Power supply component or interface board has failed.</p>	<p>E. If any component in the power supply system (including the transformer and interface board) fail, power will not be supplied to the computer and it will not function. Determining which component has failed is beyond the scope of operator troubleshooting. Call your FASC.</p>
<p><b>M2007 displays GET MGR.</b></p>	<p>A filter error has occurred due to dirty or clogged filter pad or paper, clogged filter pumps, filter pump thermal overload, or an actuator problem and shut the computer off.</p>	<p>Follow instructions on page 5-4 through 5-7 to clear the <b>GET MGR</b> error.</p>
<p><b>Fryer does not heat.</b></p>	<p>A. Drain valve is open.</p>	<p>A. A drain safety circuit prevents the heating element from being energized if the drain valve is not fully closed. Verify that the drain valve is fully closed.</p>
	<p>B. Computer has failed.</p>	<p>B. Call your FASC.</p>

Problem	Probable Causes	Corrective Action
Continued from previous page.	C. Main power cord not plugged in.	C. This fryer has two cords: a 120V power cord and the main three-phase power cord. If the 120V power cord is plugged in but the main power cord is not, the computer will appear to work normally, but the fryer will not heat. Verify that both the main power cord and 120V is fully seated in its receptacle, locked into place and that circuit breaker is not tripped.
	D. One or more other components have failed.	D. If the circuitry in the fryer control system cannot determine the frypot temperature, the system will not allow the element to be energized or will de-energize the element if it is already energized. If the contactor, element, or associated wiring fails, the element will not energize. Determining which specific component is malfunctioning is beyond the scope of operator troubleshooting. Call your FASC.
	E. Main switch inside cabinet next to fuse is switched to OFF.	E. Ensure switch is switched to ON.
Fryer does not heat after filtering.	Drain valve is open.	This fryer is equipped with a drain safety circuit that prevents the heating element from being energized if the drain valve is not fully closed. Verify that the drain valve is fully closed.
Fryer heats until high-limit trips with heat indicator ON.	Temperature probe or computer has failed.	Call your FASC.
Fryer heats until high-limit trips without heat indicator ON.	Contactor or computer has failed	Call your FASC.

Problem	Probable Causes	Corrective Action
<p><b>Fryer repeatedly cycles on and off when first started.</b></p>	<p>Fryer is in melt-cycle mode</p>	<p>This is normal for fryers equipped with <i>M2007 computers</i>. The default operational mode for these controllers is for the elements to cycle on and off until the temperature in the frypot reaches 180°F (82°C). In M2007 computers, <b>LOW TEMP</b> will appear in the display when in the melt-cycle mode. The melt-cycle can be cancelled by pressing and holding the #2 product button until it chirps. <b>EXIT MLT</b> is displayed with <b>YES NO</b>. Select <b>(1) YES</b> to exit the melt cycle.</p>
<p><b>Fryer stops heating with heat indicator ON.</b></p>	<p>The high-limit thermostat or contactor has failed.</p>	<p>The fact that the heat indicator is ON indicates that the computer is functioning properly and is calling for heat. The high-limit thermostat functions as a normally closed switch. If the thermostat fails, the "switch" opens and power to the elements is shut off. If the contactor fails to close, no power is supplied to the elements. Determining which component has failed is beyond the scope of operator troubleshooting. Call your FASC.</p>

### 7.2.2 Error Messages and Display Problems

Problem	Probable Causes	Corrective Action
<p><b>M2007 display is in wrong temperature scale (Fahrenheit or Celsius).</b></p>	<p>Incorrect display option programmed.</p>	<p>M2007 computers may be programmed to display in either Fahrenheit or Celsius. Press and hold ◀ and ▶ simultaneously until <b>CODE</b> appears. Enter <b>1658</b>. The computer displays <b>OFF</b>. This toggles the temperature from F° to C° or vice versa. Turn the computer on to check temperature and see the temperature scale. If the desired scale is not displayed, repeat.</p>

<b>Problem</b>	<b>Probable Causes</b>	<b>Corrective Action</b>
<b>M2007 display shows REMOVE DISCARD.</b>	In non-dedicated mode a product is dropped that has a different setpoint than the current vat temperature.	Remove and discard product. Press and hold the cook button for three seconds under the display with the error to remove the error. Reset the setpoint of the vat before trying to cook product.
<b>M2007 display shows HOT-HI-1.</b>	Frypot temperature is more than 410°F (210°C) or, in CE countries, 395°F (202°C).	This is an indication of a malfunction in the temperature control circuitry, including a failure of the high-limit thermostat. Shut the fryer down immediately and call your FASC.
<b>M2007 display shows LOW TEMP heating indicator cycles on and off normally.</b>	Frypot temperature is between 180°F (82°C) and 315°F (157°C).	This display is normal when the fryer is first turned on while in the melt cycle mode. It may appear for a short while if a large batch of frozen product is added to the frypot. If the display never goes out, the fryer is not heating. Shut the fryer down and call your FASC.
<b>M2007 display shows PROBE FAILURE.</b>	Problem with the temperature measuring circuitry including the probe.	This indicates a problem within the temperature measuring circuitry that is beyond the scope of operator troubleshooting. Shut the fryer down and call your FASC.
<b>M2007 display shows IGNITION FAILURE.</b>	Open drain valve, failed computer, failed interface board, open high-limit thermostat.	This indicates that the fryer is not heating. It is displayed if the fryer loses its ability to heat oil. It is also displayed when the oil temperature is above 450°F (232°C) and the high-limit thermostat has opened, halting the heating of the oil. Verify that the drain valves are fully closed. If this does not correct the problem, call your FASC.
<b>M2007 display shows HI-LIMIT.</b>	Computer in high-limit test mode.	This is displayed only during a test of the high-limit circuit and indicates that the high-limit has opened properly.
<b>M2007 display shows HI 2 BAD.</b>	Computer in high-limit test mode.	This is displayed only during a test of the high-limit circuit and indicates that the high-limit has failed. <b>DO NOT OPERATE THE FRYER!</b> Call your FASC.

<b>Problem</b>	<b>Probable Causes</b>	<b>Corrective Action</b>
<b>M2007 display shows <i>PROBE FAILURE</i> with alarm sounding.</b>	Damaged computer wiring harness or connector.	Call your FASC
<b>M2007 display shows <i>IGNITION FAILURE</i> with alarm sounding. Heating indicator is on, but fryer is not heating.</b>	Drain valve not fully closed.	Press the reset switch on the front of the MIB box, located inside the filter cabinet. All drain valves should close. Using the ON/OFF switch, turn the computer OFF and then ON again. If the problem continues call your FASC.
<b>M2007 display shows <i>IGNITION FAILURE</i> and alarm sounds, but fryer operates normally (false alarm).</b>	Failed computer.	Call your FASC.
<b>Computer will not go into program mode or some buttons do not actuate.</b>	Failed computer.	Call your FASC.
<b>Heat indicator off upon initial startup. Display shows <i>H I</i> or <i>HOT</i> with alarm sounding.</b>	Failed computer.	Call your FASC.
<b>Computer locks up.</b>	Computer error.	Remove power to the computer using the master power switch on the bottom of the component box, located inside the cabinet. If problem persists, contact your FASC.

### 7.2.3 Filtration Problems

<b>Problem</b>	<b>Probable Causes</b>	<b>Corrective Action</b>
<b>No power present at the MIB board</b>	Transformer has failed in left component box.	This indicates a problem that is beyond the scope of operator troubleshooting. Call your FASC.
<b>Filter pump won't start.</b>	A. Power cord is not plugged in or circuit breaker is tripped.	A. Verify that the power cord is fully plugged in. If so, verify that circuit breaker is not tripped.

Problem	Probable Causes	Corrective Action
	<p>B. Pump motor has overheated causing the thermal overload switch to trip.</p>	<p>B. If the motor is too hot to touch for more than a few seconds, the thermal overload switch has probably tripped. Allow the motor to cool at least 45 minutes then press the Pump Reset Switch.</p>
	<p>C. Blockage in filter pump.</p> <p><b>Test:</b> Close the drain valve and pull the filter pan out from the fryer. Activate the pump. If the pump motor hums for a short time then stops, the probable cause is blockage of the pump itself.</p>	<p>C. Pump blockages are usually caused by sediment buildup in the pump due to improperly sized or installed filter components and failure to use the crumb screen. Call your FASC.</p>
<p><b>Filter pump runs but oil does not return to frypot and there is no bubbling oil.</b></p>	<p>Blockage in filter pan suction tube.</p> <p><b>Test:</b> Close the drain valve and pull the filter pan out from the fryer. Activate the pump. If bubbling occurs, there is a blockage in the filter pan suction tube.</p>	<p>The blockage may be caused by sediment buildup or, if solid shortening is used, solidified shortening in the tube. Use a thin, flexible wire to remove the blockage. If the blockage cannot be removed, call your FASC.</p>
<p><b>Drain valve or return valve stays open.</b></p>	<p>A. AIF board has failed.</p> <p>B. Actuator has failed.</p>	<p>This indicates a problem that is beyond the scope of operator troubleshooting. Call your FASC.</p>
<p><b>Filter pump runs, but oil return is very slow.</b></p>	<p>A. Improperly installed filter pan components.</p>	<p>A. If using filter paper or pad configuration, verify that filter screen is in bottom of pan with paper or pad on top of screen. Verify if using a pad that the rough side is facing up.</p> <p>Verify that O-rings are present and in good condition on filter pan connection fitting.</p>

Problem	Probable Causes	Corrective Action
	<p>B. Attempting to filter with oil that is not hot enough.</p>	<p>B. In order to properly filter, the oil should be at or near 350°F (177°C). At temperatures lower than this, the oil becomes too thick to pass through the filter medium easily, resulting in much slower oil return and eventual overheating of the filter pump motor. Make sure oil is at or near frying temperature before draining oil into filter pan.</p>
<p><b>M2007 display shows CHK PAN.</b></p>	<p>A. Filter pan is not fully set into fryer.  B. Missing filter pan magnet.  C. Defective filter pan switch.</p>	<p>A. Pull filter pan out and fully reinsert into fryer.  B. Ensure the filter pan magnet is in place and if missing replace.  C. If the filter pan magnet is fully against the switch and computer continues to display <b>CHK PAN</b>, switch is possibly defective.</p>
<p><b>Auto filtration won't start.</b></p>	<p>A. Check that MIB board is not in manual mode.  B. Check to see that the MIB cover is not damaged and depressing the buttons.  C. Filter relay has failed.</p>	<p>A. Ensure MIB board is in "A" automatic mode. Press the reset button.  B. Remove and replace cover and see if filtration will start.  C. Call your FASC</p>
<p><b>M2007 display shows FILTER BUSY.</b></p>	<p>Another filtration cycle is still in process.</p>	<p>A. Wait until the previous filtration cycle ends to start another filtration cycle.  B. Press reset button and wait at least 60 seconds. Computer should clear and return to normal operation once complete. If the problem continues call your FASC.</p>



### 7.2.4 Auto Top Off Problems

Problem	Probable Causes	Corrective Action
<b>Frypots won't top off.</b>	<ul style="list-style-type: none"> <li>A. Auto top off power switch is off.</li> <li>B. Pump defective or over tightened.</li> </ul>	<ul style="list-style-type: none"> <li>A. Verify that the auto top off power switch is switched on. The switch is located behind the JIB on the left side of the auto top off control box.</li> <li>B. Call your FASC.</li> </ul>
<b>The yellow JIB low light won't illuminate.</b>	<ul style="list-style-type: none"> <li>A. Failed transformer</li> <li>B. Three-phase power in the contactor box left of the JIB is not present.</li> <li>C. Loose wire connection</li> </ul>	This indicates a problem that is beyond the scope of operator troubleshooting. Call your FASC.
<b>One vat tops off but other vats fail to top off.</b>	<ul style="list-style-type: none"> <li>A. Failed solenoid</li> </ul>	This indicates a problem that is beyond the scope of operator troubleshooting. Call your FASC.



**Enodis**<sup>®</sup>  
One Company, Countless Solutions

**Frymaster, L.L.C., 8700 Line Avenue, PO Box 51000, Shreveport, Louisiana 71135-1000**  
**Shipping Address: 8700 Line Avenue, Shreveport, Louisiana 71106**

**TEL 1-318-865-1711**

**FAX (Parts) 1-318-688-2200**

**(Tech Support) 1-318-219-7135**

**PRINTED IN THE UNITED STATES**

**SERVICE HOTLINE**  
**1-800-551-8633**

**819-6239**  
**NOVEMBER 2007**