



**Ultra Fryer Electric Fryer
Model E3KF-14-8
Operation Instructions**



WARNING: TO ASSURE PRODUCING A QUALITY PRODUCT WHILE PROLONGING THE LIFE EXPECTANCY OF THE FRYER, ENSURE FILTERING, BOIL-OUT AND CLEANING INSTRUCTIONS ARE STRICTLY ADHERED TO. THIS APPLIANCE IS FOR PROFESSIONAL USE AND IS TO BE USED ONLY BY QUALIFIED PERSONNEL.

302 Spencer Lane / P.O. Box 5369

San Antonio, TX 78201

(800) 525-8130 / (210) 731-5000 / Fax (210) 731-5099

www.ultra Fryer.com

PREFACE

This Manual was written and published by the Engineering Department, Ultrafryer Systems for use by personnel who will operate a Model E3KF-14 Electric Fryer With 8" Vat in a commercial cooking environment.

This appliance is intended for professional use and is to be operated by qualified personnel.

Throughout this manual, **NOTES**, **CAUTIONS**, and **WARNINGS** are used to alert the operator to items of special circumstances. An **example** of these items are identified as follows:

NOTE: When the selector switch is in position #1 the fryer will not heat.

CAUTION: To assure producing a quality product while prolonging the life expectancy of the fryer, ensure that the boil-out, and cleaning instructions are strictly followed.

WARNING: Do not allow any cleaning solution or water to splash into a vessel of hot cooking oil, as it will contaminate the oil and may cause the oil to splatter, causing severe burns.

For Service or questions concerning the Ultrafryer Contact us at:

**Ultrafryer Systems Inc.
302 Spencer Ln.
San Antonio, TX 78201**

**Local: (210) 731-5000
Toll-Free: (800) 525-8130
Fax: (210) 731-5061**

This manual is intended as a guide for all Basic Model Fryers, regardless of configuration and controllers. It is to be used in conjunction with the applicable controller manual that is included with the fryer.

TABLE OF CONTENTS

	Page
GENERAL INFORMATION	
Warranty	5
Safety	6
PRE-INSTALLATION	
General	8
Standards	8
Air Supply and Ventilation	8
RECEIVING AND INSTALLING	
Unpacking	10
Installing	10
Leveling	10
Electrical Connection	10
INITIAL START-UP	
Initial Cleaning	12
Start-up	12
Initial Fryer Boil-out	12
PREVENTIVE MAINTENANCE AND TROUBLESHOOTING	
Preventative Maintenance	14
Troubleshooting/ Chart	15
CLEANING	
General/ Daily/ Weekly	17
Cleaning the Filter Tub and Filter Pad Envelope Procedure	18
Cleaning the Washwand Hose	19
FRYER OPERATION	
Overview Control Selector Box	21-22
Operation & Description of Aux. Control	23
Operation & Description of Low Oil Level Light	24-26
Ultrastat 23 Cooking Computer	27
Shortening Installation	27
Start-up and Cooking	27
Shortening Disposal	27
Fryer Boil-out	28
Fryer Shut Down Procedure	28
Filtering the Shortening Procedure	29-30
TECHNICAL ASSISTANCE & ORDERING INFORMATION	
Technical Assistance	32
Ordering Information	32
RECOMMENDED SPARE PARTS	
Recommended Spare Parts	34
PARTS IDENTIFICATION	
Parts Identification	36-38
WIRING DIAGRAMS	
Wiring Diagram for Fryer	40-41

GENERAL INFORMATION



ULTRAFRYER® LIMITED WARRANTY

Ultrafryer Systems warrants to the original purchaser of a gas or electric Ultrafryer® sold within the United States, its territories and Canada, that it will be free of defects in material and workmanship for the periods listed below:

STAINLESS STEEL FRYER VAT – Stainless Steel fryer vats are warranted for (10) ten years upon the terms hereinafter described. The (10) ten year warranty coverage applies **ONLY** to the Stainless Steel fryer vat and does not apply to the other components such as controls, fire boxes, gaskets, mounting hardware, or the heat shield weldment. The (10) ten year limited warranty coverage for the Stainless Steel fryer vats are as follows:

- (1) Vats that fail due to faulty workmanship or materials within the first twelve (12) months from the date of initial start up will be exchanged at no cost. Standard delivery ground freight will be prepaid by Ultrafryer Systems for first year failures only. The cost of labor to install the replacement vat will be covered by Ultrafryer Systems for vats, which fail within twelve (12) months from the date of initial start up. Labor for vat replacements after the first year is the responsibility of the owner.
- (2) Vats that fail within the second year will be exchanged at \$150.00 FOB San Antonio.
- (3) Vats that fail within the third through fifth year will be exchanged at a \$200.00 FOB San Antonio.
- (4) Vats that fail within the sixth through eighth year will be exchanged 50% of current selling price of said vat FOB San Antonio.
- (5) Vats that fail within ninth through tenth year will be exchanged at 70% of the current selling price of said vat FOB San Antonio. (Example: If the current selling price of a vat is \$1,000.00, then during the sixth through eighth year it would be exchanged for \$500.00; in the ninth and tenth years it would be exchanged for \$700.00). (Subject to inflation adjusted in accordance with the C.P.I.). Proper credit issue for vat failures is contingent upon receipt, by Ultrafryer Systems, of the serial number identification tag for any failed vat.

ULTRAFRYER PARTS – All parts on the Ultrafryer® are covered for a period of one (1) year from the initial date of start up. This is to include computers, gas valves, switches, thermostats, etc. Ultrafryer Systems reserves the right to charge for certain parts such as computers, filter pumps and motors or any item over the amount of \$100.00 until Ultrafryer Systems receives the defective part back. After inspection, credit for the part will be issued to the purchaser provided the part is deemed defective and that defect is not the result of neglect or abuse by the user. The shortening filtration system, (hoses) are warranted for ninety (90) days from the initial date of start up.

PROCESSING WARRANTY CLAIMS – The equipment owner must promptly notify Ultrafryer Systems Warranty Department of any alleged defects as soon as they are discovered by calling 1-800-525-8130. After such notice, the Warranty Department will perform its obligation under this warranty within a commercially reasonable period of time. If alleged defects develop after normal business hours, on weekends or on holidays the owner must call Ultrafryer Systems first at the above number. This number is monitored 24 hours a day, 7 days a week. Ultrafryer Systems will notify an authorized service agent to make repairs during normal hours or after hours. Any parts that need to be shipped back to Ultrafryer Systems will be shipped back **prepaid by the customer** marked with the processing number and to the attention of the **WARRANTY DEPARTMENT**.

NON WARRANTY COVERAGE – This warranty does not include coverage for any consequential cost of damages including, but not limited to, any loss in store sales, spoiled food products, transportation, duty or custom cost. This warranty does not cover the Ultrafryer® exported to countries outside the United States and its territories. This warranty does not cover original installation and adjustments such as leveling, calibrations, electrical and gas connections, or problems due to faulty or contaminated gas supply. This warranty does not cover travel over 100 miles or 2 hours driving time from the location of the Ultrafryer® or overtime or holiday charges unless the Warranty Department granted prior approval. This warranty does not cover damage due to misuse, abuse, alteration or accident. This Warranty does not cover improper or unauthorized repair or installation, damage in shipment, normal maintenance items such as gaskets, hoses, and exterior finishes. Ultrafryer Systems reserves the right to void component part warranty on any Ultrafryer® that is stored more than 6 (six) months after shipment from Ultrafryer Systems and not put into service.

LABOR COVERAGE – The cost for labor to replace parts are covered for one (1) year after the initial start up. This warranty will include the labor involved in the six (6) month and the twelve (12) month fryer inspections recommended by the manufacturer for the first year after initial start up. The Warranty Department must be promptly notified of any defects within the first year of operation. The labor warranty does not include the cost to repair or clear dirty filter systems or perform any adjustments that would normally fall under the tasks associated with a proper start up and/or demonstration. Labor is covered by Ultrafryer Systems for repairs by an **AUTHORIZED** service agent. Owner is responsible for all costs associated with fryer installation and start up unless prior arrangements have been made with Ultrafryer Systems.

DISCLAIMER OF WARRANTIES

Other than as stated herein **ULTRAFRYER SYSTEMS** makes no warranty of any kind, express or implied, including but not limited to any warranty of merchantability of fitness for a particular purpose, including trade usage. Ultrafryer Systems sole obligation, and purchaser's sole remedy, under this warranty is repair or replacement, at the discretion of Ultrafryer Systems, of any part or component that proves to be defective in materials or workmanship. In no event shall Ultrafryer Systems be liable for consequential, incidental, or special loss or damages arising from the use of, or inability to use, the **ULTRAFRYER®**. This limited warranty is the only and complete statement with respect to warranties of **NEW Ultrafryer® PAR-2, PAR-3 Gas and Electric ULTRAFRYERS®** sold after March 1st, 2001. There are no other documents or oral statements for which Ultrafryer Systems will be responsible.

SAFTEY

The major safety concern associated with the Ultrafryer Electric Fryer is burns from hot shortening. In order to prevent serious burns, good housekeeping habits are required. The floor in front of and the area around the fryer should be kept clean and dry. Whenever anything is placed into a fryer vat, care should be used not to splash the hot shortening. Product should always be “**PLACED**” into the shortening, not thrown. Safety goggles, neoprene insulated gloves, and an apron must be worn while boiling-out a fryer vat. Electrical controls used in the electric fryer operate off of the 208 or 240 volts three phase electrical power for the 14” vat heating element and 208 volt single phase for the 8” vat heating element, and no adjustments or replacement of electrical controls or parts should ever be attempted without first disconnecting **ALL** electrical power. **FAILURE** to do so can result in serious electrical shock or death. It should be determined that **ALL** electrical power has been removed prior to beginning a repair. The fryer and its controls should never be operated with wet hands or while standing in water. To do so can result in serious electrical shock or death.

Fire in liquid shortening should always be a constant concern of team members operating or working nearby the Electric Fryer. The fryer should be equipped with a Fire Suppression system, that automatically **OPENS** the shunt trip circuit breakers, removing electrical power from the fryer if a fire occurs. In addition, this system **MUST** be inspected by a licensed distributor each six (6) months to assure it is operational.

The Ultrafryer electric fryer model E3KF-14-8 was designed by Ultrafryer Systems® and is design-certified by the Underwriters Laboratories (UL) and the National Sanitation Foundation (NSF). The fryer is shipped without the power cord installed. The fryer is shipped assembled with the accessories packed inside the fryer vat, and each fryer has been adjusted, tested and inspected prior to shipment. This electric fryer is designed to be used in a commercial food preparation environment after it is properly installed as outlined in this manual.

NOTE:

Test Start-Up, Operation, Cooking, Filtering and Boil Out Procedures of a Model E3KF-14-8 Electric Fryer in the manual are based on the Ultrastat 23 Cooking Computer. Refer to Manual P/N 30A216 to perform these functions in a fryer equipped with this controller.

PRE-INSTALLATION

- A. **GENERAL:** Safe and satisfactory operation of an Electric Fryer depends on its proper installation. Installation must conform to local codes or, in the absence of local codes, with the current National Electrical Code ANSI NFPA 70 (latest edition). Each fryer should be installed as follows:
1. Power cord should be installed on the fryer contactor plate assembly
 2. Placed beneath a properly designed exhaust hood
 3. Installed by a licensed electrician.
 4. Connected to the voltage type for which the unit was fabricated as indicated on the fryer.
 5. Restrained by use of a restraining device to avoid splashing of hot liquid and to assure tension cannot be placed on the flexible power cable or connectors. **CLEARANCES:** The appliance must be kept free and clear of all combustibles. The minimum clearance from combustible and non-combustible construction is 6" (152 mm) from the sides, and 6" (152 mm) from rear. The fryer may be installed on combustible floors.

NOTE: Adequate clearances must be provided for servicing and proper operation.

B. STANDARDS: Installation must be planned in accordance with all applicable state and local codes, taking into account the following standards:

1. When installed the fryer must be electrically grounded in accordance with local codes, or in the absence of local codes, in accordance with the current National Electrical code ANSI/NFPA 70 (latest edition).
2. Other applicable nationally recognized installation standards such as:
 - a. NFPA Standards #54, #94 and #221 (latest edition)
National Fire Protection Association
470 Atlantic Avenue
Boston, MA 02110
 - b. ANSI Z21.69/CAN/CGA-6.16 AND Z21.41/CAN1 6.9
5. Exhaust vent hood, when installed must conform to the current NFPA 54-1 (latest edition)

NOTE: Local building codes will usually not permit a fryer with its open tank of hot oil to be installed immediately next to an open flame of any type, whether a broiler or an open burner or range. Check local codes before beginning installation.

C. AIR SUPPLY AND VENTILATION: The area around the appliance must be kept clear of any combustible or flammable products and avoid any obstruction to the flow of ventilation air as well as for ease of maintenance and service. **NOTHING** is to be stored in the interior of the fryer's cabinet.

1. A means must be provided for any commercial, heavy duty-cooking appliance to exhaust combustion wastes outside of the building. It is essential that a fryer be set under a powered exhaust vent hood or that an exhaust fan be provided in the wall above the unit
2. The open tank of hot oil, makes the storage of anything on shelving over or behind the fryer unsafe.
3. Filters and drip troughs should be part of any industrial hood, but consult local codes before constructing and installing any hood.
4. Provisions must be made for an adequate supply of fresh air and adequate clearance must be maintained for air openings.

RECEIVING AND INSTALLING

UNPACKING

Check that the container is upright. Use an outward prying motion – **DO NOT USE A HAMMER** - to remove the carton. Check the fryer for visible damage; if such damage has occurred do not refuse shipment, but contact the carrier and file the appropriate freight claims.

WARNING: IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.

INSTALLING

Roll the assembled fryer into the building, to its operating location.

LEVELING

1. When the fryer is placed in its operating location check to be sure it is level. If not, loosen the casters and insert the appropriate number of shim plates between carriage and caster plates then retighten the caster bolts.
2. If the floor is smooth and level, adjust to the high corner and measure with a spirit level. If the floor is uneven or has a decided slope, level the unit with metal shims.
3. Leveling will assure that each vat contains the same amount of shortening when checked at the shortening level mark on the rear wall of the fryer vat.

NOTE: A caster may not return exactly to the same position after being moved, which may require re-leveling after each move.

MODEL E3KF-14-8 ELECTRICAL CONNECTION

The Auxiliary Box for the 14" vat heating element is wired internally to operate on 208 or 240 volt 3 phase electrical power as shown on the fryer.

The Auxiliary Box for the 8" vat heating element is wired internally to operate on 208 volt single phase electrical power as shown on the fryer.

It is **ESSENTIAL** that the electrical receptacle is located within 8 feet of the fryer location and that provisions are made so that the fryer can be moved to service fryer from the rear. Electrical connections to the fryer should be made by a licensed electrician and they must conform to the **NATIONAL ELECTRICAL CODE** as well as to local electrical codes and/or ordinances.

To avoid electrical hazards and assure proper operation of the electric fryer, the following precautions should be observed during installation:

MATCH VOLTAGE

Before connecting electrical power, insure the line voltage matches the voltage rating on the fryer.

CIRCUIT BREAKERS

The fryer must be connected to a circuit having shunt-trip circuit breakers sized in accordance with requirements of the National Electrical Code as well as local codes and ordinances.

GROUNDING

The fryer **MUST** be grounded to the building ground system according to the National Electrical Code and local codes/ordinances.

FIRE PROTECTION

The fryer should be installed beneath a powered exhaust hood which complies with NFPA96 standards that is equipped with an approved Fire Suppression System designed to automatically shut-off all sources of electrical power to the fryer in case of a vat fire.

CLEARANCES

The Model E3KF-14-8 Electric Fryer **MUST** be kept free and clear of all combustibles. The **MINIMUM** clearances from combustible and non-combustible construction is 6" (152 mm) from the sides and 6" (152 mm) from the rear of the fryer. The fryer may be installed on combustible floors.

INITIAL START-UP

INITIAL CLEANING

New Electric Fryers are wiped clean with solvents at the factory to remove any visible signs of dirt, oil, grease, etc. remaining from the manufacturing process, then given a light coat of oil. Each fryer should be **THOROUGHLY** washed with **HOT** sanitizer solution to remove film residue, installation dust or debris and then wiped dry prior to placing the fryer into operation.

START-UP

The fryers are tested and adjusted prior to being shipped; however adjustments may be necessary on installation to meet local conditions and to correct possible problems caused by rough handling or vibration during shipment. Initial adjustments are the responsibility of the customer and will not be covered by the Ultrafryer Systems warranty.

NOTE: Adjustments must be performed by qualified personnel.

INITIAL FRYER BOIL-OUT

To test operate an Ultrafryer Electric Fryer equipped with an **Ultrastat 23** Cooking Computer

1. Ensure the Fryer's control selector box is in position #2 for the U23 controller.
2. Ensure the Computer's ON/OFF Button is in the OFF position.
3. Ensure the Drain Ball Valve is CLOSED with the removable handle.
4. Fill the fryer vat with hot or cold water to the applicable shortening level mark on the rear of the vat.

<u>STEP</u>	<u>ACTION</u>	<u>RESPONSE</u>
1	Ensure the Drain Ball Valve is in the closed position and the water is at the proper level	

CAUTION:

PRIOR TO PROCEEDING TO STEP 2, VISUALLY CHECK THAT THE HEATING ELEMENTS ARE COVERED BY AT LEAST 2" (51mm) OF WATER.

THE FRY VAT MUST BE BELOW A TEMPERATURE OF 225° F (124° C) TO ENTER THE BOIL MODE.

2	Turn the computer ON by pressing the computer ON/OFF Button. To enter BOIL MODE press and hold the P key for 3 seconds. PROGRAM will be displayed. Press the UP or DOWN arrow keys until BOIL is displayed, then press the P key. The feature is now activated.	BOIL will appear in the computer display The fry vat will maintain a temperature of 190°F (88°C) to allow the boil function to be performed.
3	To exit BOIL MODE press and hold the P key for 3 seconds. PROGRAM will be displayed. Press the UP or DOWN arrow keys until BOIL is displayed, then press the P key. You can also exit by pressing OFF and then ON.	The computer display will go blank.
4	Turn the fryer's power switch in the OFF position (Position #1 on the control selector box). After the water in the vat and the metal surfaces of the fryer have COOLED, drain the water into a floor drain. Once dry fill the vat with shortening.	

**PREVENTIVE MAINTENANCE
AND TROUBLESHOOTING**

PREVENTIVE MAINTENANCE

Minimal maintenance is required on a 14" (356 mm)/ 8" (203mm) electric fryer because of its design and materials used in the manufacturing process. However some preventive maintenance and inspection must be performed periodically to prevent breakdowns which could curtail food sales. Any preventive maintenance or inspection should be accomplished with **CAUTION** while the fryer is in operation since **HOT** liquid shortening could cause severe burns. If service or repair is required, all electrical power **MUST BE TURNED OFF PRIOR TO** performing that service or repair.

PREVENTIVE MAINTENANCE SCHEDULE

DAILY

ITEM

INSPECT FOR

Grease Filters

Clean grease filters in the exhaust vent hood every evening and allow them to dry overnight

WEEKLY

ITEM

INSPECT FOR

Drain Valve

Attach the Drain Valve Handle to the drain valve and make sure the valve can be easily opened and closed

Temperature Sensing Probes

During boil-out of the fryer, inspect the temperature and hi-limit sensing probes for any visual damage

TROUBLESHOOTING

A. GENERAL: The problems and possible solutions listed in the troubleshooting chart below are typical problems that are frequently encountered. **ONLY** qualified repairmen are to use the troubleshooting chart to repair this fryer. In the event a main burner malfunction occurs, perform the following checks **PRIOR** to contacting a repairman:

1. Ensure high voltage circuit breakers are in the proper position
2. Ensure the applicable Circuit Breaker is in the **ON** position and that the fryer power toggle ON/OFF switch is in the **ON** Position and the computer is "Powering Up"

B. TROUBLESHOOTING CHART: Should a problem occur that cannot be corrected after performing the above CHECKS, contact an **AUTHORIZED** repairman and/or Ultrafryer Systems Customer Service 1-800-525-8130 and provide the information acquired while performing these checks.

CAUTION: ENSURE REPAIRMEN ARE ADVISED THAT FRYER RESTRAINTS MUST BE DISCONNECTED/ CONNECTED. IF A FRYER IS TO BE MOVED DURING MAINTENANCE OR REPAIR, AND THAT ELECTRICAL POWER AND GAS MUST BE TURNED OFF PRIOR TO PERFORMING ANY MAINTENANCE OR REPAIR.

<u>ITEM</u>	<u>PROBLEMS</u>	<u>POSSIBLE SOLUTIONS</u>
1	Excessive smoke from the shortening.	A. Check the Computer Program to ensure the Pre-Set Cook Temperature is correct B. Shortening break down has occurred . Replace shortening
2	Process Contactor chatters.	A. Check and/ or tighten the Contactor Coil connections B. Defective Contactor. Replace the contactor
3	Excessive time is required to raise the shortening to cooking temperature. Temperature recovery is slow.	A. Check 3 phase 208/ 240 Voltage applied to Heating Element in 14" vat. B. Check single phase 208 Voltage applied to Heating Element in 8" vat. C. Defective Heating Element.

CLEANING

GENERAL

Any item of equipment operates better and lasts longer when it is kept clean and properly maintained, and the 14"(356 mm)/8"(203mm) electric fryer is no exception. In order for this fryer to provide years of trouble-free service, it must be CLEANED and MAINTAINED according to the instructions as listed below:

DAILY

1) Clean the fryer surface periodically during operating hours with a damp cloth and hot water, and at closing. If necessary, use a dampened type 7447 RED or 7440 BROWN (heavy duty) Scotch brite pad to remove encrusted material. DO NOT use steel wool, abrasive cloths, cleaners, powders, metal knife, spatula or any other metal object to scrape stainless steel! Scratches on stainless steel are almost impossible to remove!

2) Filter shortening in each fryer once a day according to Company Policy.

CAUTION:
DO NOT ALLOW ANY CLEANING SOLUTION / WATER TO SPLASH INTO A VESSEL OF HOT COOKING OILS AS IT WILL CONTAMINATE THE OIL AND MAY CAUSE THE OIL TO SPLATTER, CAUSING SEVERE BURNS

WEEKLY

1) BOIL OUT the fryer vat using Boil Out Compound according to procedures in the cleaning manual provided by the chemical provider.

2) Perform steps 1 and 2 listed above under Daily Cleaning.

CLEANING THE FILTER TUB AND FILTER PAD ENVELOPE

The Filter Tub Assembly and Gycor Filter Pad Envelope should be cleaned **EACH DAY** after **FILTERING** and **AT CLOSING** and **THOROUGHLY** cleaned once each week.

1. REMOVING THE FILTER TUB AND DISASSEMBLING

- a) **OPEN** the Fryer's Temperature Control Access Door.
- b) **PULL** the Filter Tub Assembly from the fryer.
- c) **REMOVE** the Filter Assembly.

CAUTION: DO NOT REMOVE TUB WHEN TUB IS FULL WITH SHORTENING.

2. CLEANING THE FILTER TUB

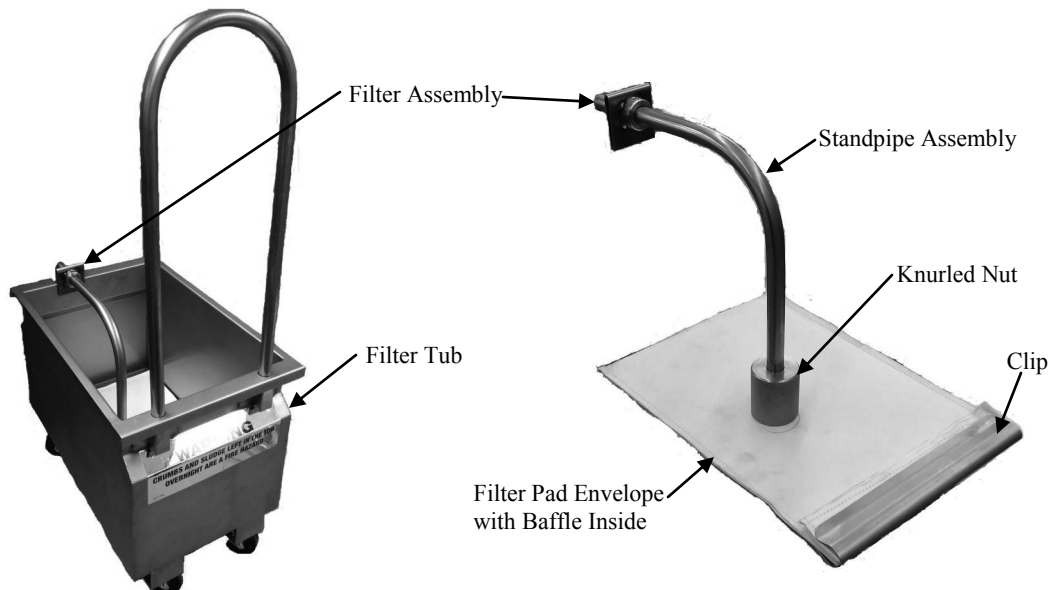
- a) **RAISE** the Filter Assembly with Standpipe above the Filter Tub and let any sediment or shortening drain into the tub; then **SEPARATE** the standpipe assembly from the Filter Pad Envelope Assembly and **DISCARD** Pad Envelope. **CLEAN** the Standpipe Assembly with sanitizer solution and **WIPE** it dry with a lint free cloth.
- b) **REMOVE** any sediment and shortening in the Filter Tub using a scraper; then **WIPE** the tub dry with paper towels.

3. CLEANING THE GYCOR FILTER PAD ENVELOPE

- a) **REMOVE** and **DISCARD** the **USED** Filter Pad Envelope. **CAREFULLY** clean the Baffle Assembly, Clip, & Standpipe Assembly in the 3 compartment sink with **HOT** water and allow these items to air dry. **DO NOT USE SOAP!!**
- b) **RE-ASSEMBLE** the Envelope Filter using a **NEW** Filter Pad Envelope as follows:
 - 1) **INSERT** the **BAFFLE** into the **Filter Pad Envelope**; when inserted properly the **SUCTION FITTING** will protrude through the hole in the pad.
 - 2) **FOLD FLAP** over (in the direction of the hole), securing the Baffle inside the **FILTER PAD ENVELOPE**.
 - 3) **CAREFULLY**, align the **CLIP** so that the **CLIP** can secure the **FLAP** on the Envelope.
 - 4) **TIGHTEN** the knurled **NUT** on the **STANDPIPE ASSEMBLY** to the **SUCTION FITTING** protruding through the envelope. **DO NOT OVER TIGHTEN!! HAND TIGHTEN ONLY!!**

4. ASSEMBLING THE FILTER TUB

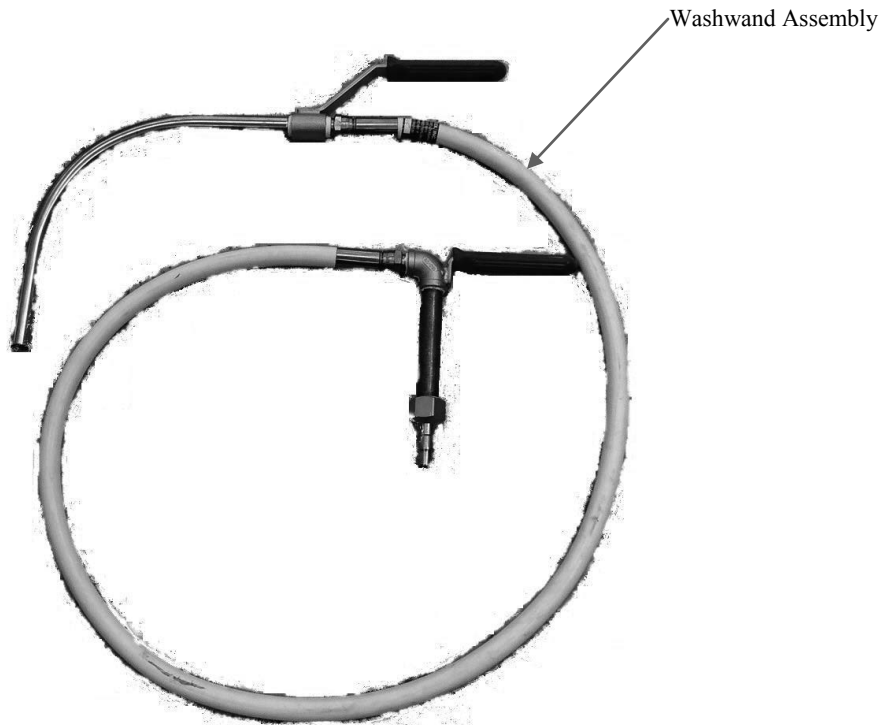
- a) **CAREFULLY** insert the **FILTER ASSEMBLY** in the bottom of the Filter Tub with the **STANDPIPE ASSEMBLY BRACKET** inserted in the slot in the handle end of the tub.
- b) Position the **ASSEMBLED** Filter Tub in front of the **FILTER TUB GUIDES** on the carriage; then **CAREFULLY** and **SLOWLY** insert the Filter Tub into the fryer until the **MALE** end of the **STANDPIPE ASSEMBLY** seats in the **FEMALE** Bulkhead Coupling.



CLEANING THE WASHWAND HOSE

1. CLEANING THE WASHWAND HOSE

a) **CLEAN** the Washwand Hose with sanitizer solution; then **HANG** the Washwand Hose in an upright position so shortening can drain into a container. Always hang the washwand hose in an upright position for storage. Do not store washwand hose underneath fryer vats.

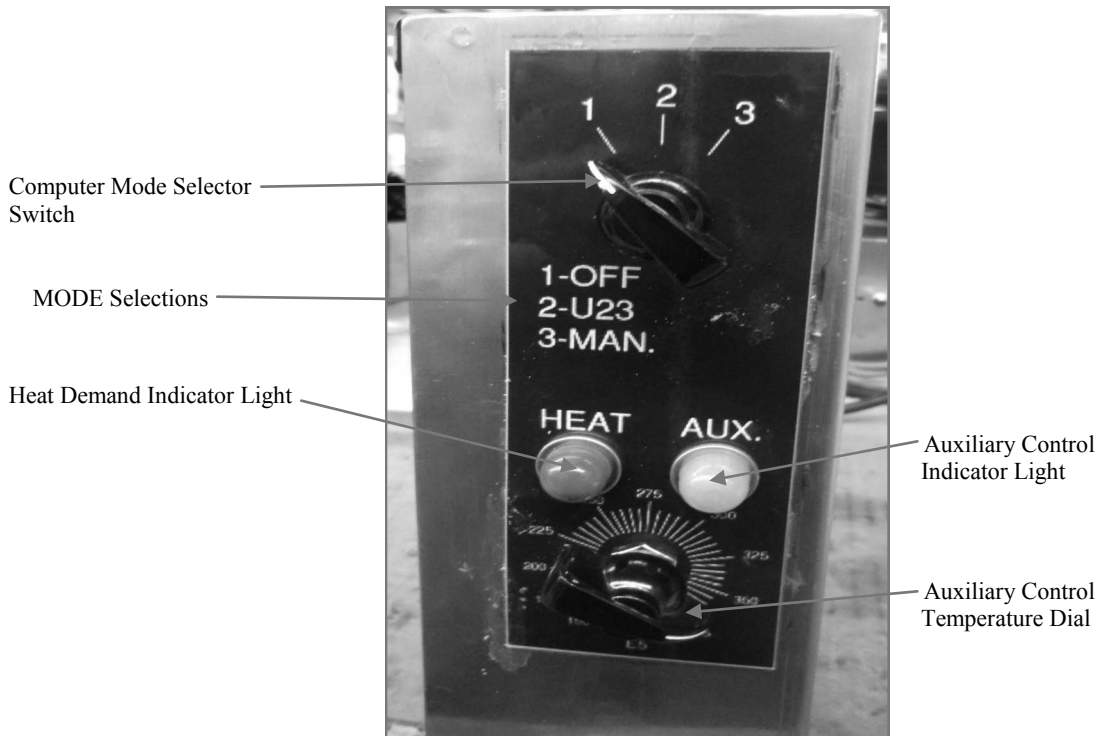


FRYER OPERATION

**OVERVIEW
CONTROL SELECTOR BOX**

BASIC UNIT PN #12C942

**NOTE: THERE ARE 2 CONTROL SELECTOR BOXES LOCATED UNDER THE 8" VAT.
THE BOX ON YOUR LEFT CONTROLS THE 14" VAT. THE BOX ON YOUR RIGHT CONTROLS THE 8" VAT.**



SELECTION MODES

1. Position #1 is the Power Off mode. There is no power to the box, and all controllers are off (not powered up)
2. Position #2 turns on power to the U-23 computers. The yellow indicator light remains off, the red heat demand light will turn on when the U23 calls for heat.
3. Position #3 is the manual mode. The E5 control (inside the selector box) is activated and all temperature selections are made with the Auxiliary Temperature Dial located on the front of the box. The yellow indicator light will turn on and remain on while this mode has been selected. The red heat demand light will turn on when the E5 control calls for heat.

OVERVIEW CONTROL SELECTOR BOX

1. Position #1 Off condition When fryers are not in use no electrical power is supplied to the control box .



2. Full computer control is obtained by setting the control mode selector switch to position #2. The most effective control of the fryer heating is the computerized controllers on the remote computer control box. All filtering operations require manual operation.



3. By setting control selector box to position #3, the auxiliary E5 control will be activated. The yellow incandescent light will come on indicating the U-23 's have been deactivated and fryer operation is now being accomplished with E5 auxiliary control.



OPERATION & DESCRIPTION OF AUX. CONTROL

OPERATION & DESCRIPTION OF AUXILIARY COOKING CONTROL BACK UP E5 CONTROL POSITION #3

PURPOSE: The purpose of the auxiliary cooking controller MANUAL POSITION #3 is to provide uninterrupted service to the fryer in case the primary controller fails.

HOW DOES IT WORK: To activate the auxiliary controller, turn the black knob to position #3. The yellow incandescent light will come on. Power from the primary controller will be removed and sent to the auxiliary control board (located inside the control box shown here). The fryer will be immediately turned on. Depending on current status of the fryer, the auxiliary control will either activate the power train (heating elements on the electric fryer or the heat exchanger on the gas fryer) calling for heat or, if the fryer is up to the set point temperature, the fryer will stay in the ready mode and not call for heat. NOTE: The heat demand (RED LIGHT) will be on to signify the call for heat. This is located on the front face of the control box next to the yellow "AUX" light. When you first switch to the auxiliary control, a slight delay will occur while the auxiliary control board powers up.

To restore power to the primary controller, simply turn the dial to position #2. Power will be removed from auxiliary controller and returned to the primary controller. To turn the fryer on, push the on/off button located on the primary controller overlay.



SEQUENCE OF OPERATIONS:

1. Select the set point on the potentiometer to the desired cooking temperature. NOTE: The potentiometer will be located below the lights on the control selector box, and will be calibrated by the manufacturer.
2. Press the ON/OFF button on the primary controller to the off position.
3. Turn on the black knob on aux, control box to position #3.
4. This will bring power to the auxiliary control. The yellow light will come on indicating the auxiliary control has power.
5. The fryer will turn on and bring the oil temperature up to the set point. If oil temperature is at the set point temperature, the fryer will be in the ready mode.
6. Fryer is ready to cook. The operator will be required to provide their own timing device i.e. timer, stop watch, clock, etc.
7. Turn the black dial knob to position #2. The LED on the primary controller will light up.
8. Push the ON/OFF button on the primary controller to ON.
9. The fryer will turn on and power the fryer up or stay in the ready mode.
10. The fryer is ready to cook.

OPERATION & DESCRIPTION OF LOW OIL LEVEL LIGHT

PURPOSE: The purpose of the “Low Oil Level Light” is to alert the operator the oil level in the fryer vat is below the fill level and may be required to top off the oil level in the vat. **NOTE:** The light is a “warning only” and does not stop the operation of the fryer.

HOW DOES IT WORK: A temperature probe (sensor) located on the front wall of the vat activates the oil light. When the probe is in contact with the hot oil (above the factory set point) the light will remain off. Once the probe is exposed to oil/air temperatures below factory set point, the light will turn on and remain on until the probe senses a temperature above the factory set point. **NOTE:** During fryer start up, the oil light will be on until the oil temperature exceeds the factory set point.

OIL LEVEL: The 14” vat is designed to hold 35 lbs. of oil (one container of liquid oil) and the 8” vat is designed to hold 20 lbs. of oil. At this oil level, the shortening will be just enough to reach the bottom of the stamped “shortening level” mark. The recommended fill level is for the oil level to reach the middle of the “E” in the word “Level”. This will ensure the oil covers the oil level probe, and the proper temperatures are reached to keep the low oil level light off when the vat is full.

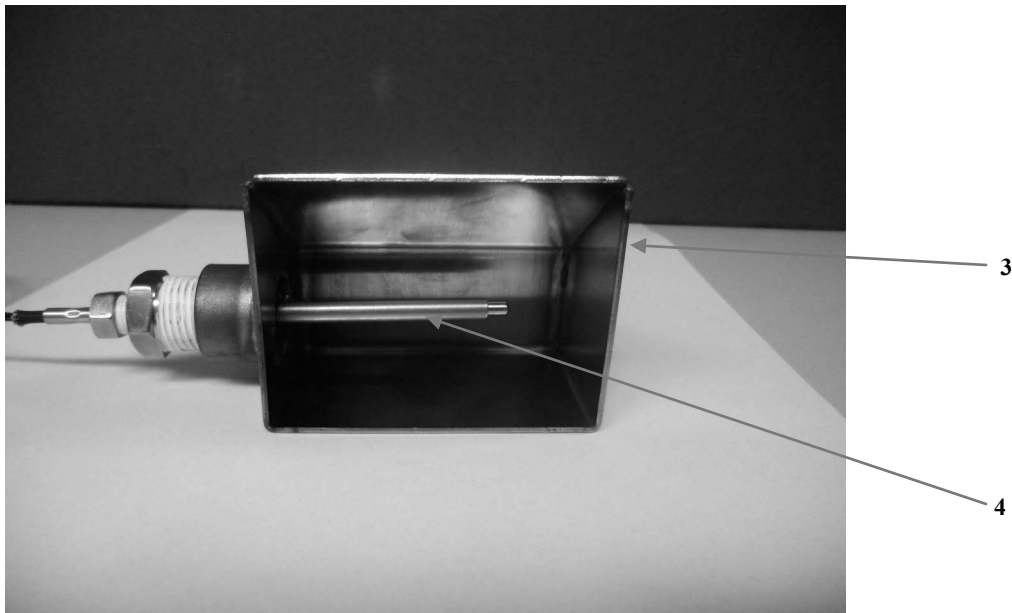
OPERATION: During normal cooking, the oil level light will remain in the off position. At which point the oil level should be checked. In order to see if the oil level in the vat needs to be topped off, cooking must be stopped and the vat is allowed to idle (the fryer must remain on). **ONLY DURING IDLE CAN YOU GET AN ACCURATE READING OF THE OIL LEVEL.** Once the vat is in idle mode, the oil will level off. If the oil level is below the probe, the light will turn on and remain in the on position. If the oil is touching the probe, the light will remain in the off position assuming oil temperature is above factory set point. **NOTE:** When topping off with cold oil, you may need to wait until the added oil heats up and reaches the cooking set point temperature.

OPERATION & DESCRIPTION OF LOW OIL LEVEL LIGHT

GENERAL INFORMATION: Normally, when the 14" vat is filled to the 35lb level and the 8" vat is filled to the 20lb level, once the vat loses approximately 1.5 lbs. of shortening, due to drag out, the oil light will come on. At this level, the oil is still well above the heating elements, and the oil level in the baskets is approximately at $\frac{1}{2}$ the basket. After an oil loss of 5 to 6 lbs., the oil level is still above the heating elements, but the oil level in the baskets is now below $\frac{1}{2}$ the basket. Food product loaded above this level will now be exposed and could result in uncooked product.

RECOMMENDATIONS: When to fill the vat is up to the operator. However, the recommended time to fill the vat would be to check the oil level after a long period of cooking, i.e. lunch or dinner rush, or any unexpected rush in between and top off the shortening to the proper level. The oil level in the vats should NOT drop approximately 1" to 2" above the heating elements.

OPERATION & DESCRIPTION OF LOW OIL LEVEL LIGHT



1. Low Oil Level Decal
2. Low Oil Indicator Light
3. Low Oil Probe Box
4. Low Oil Level Probe (Thermistor)

ULTRASTAT 23 COOKING COMPUTER

The Ultrafryer 14" (356 mm)/ 8" (203mm) Electric Fryer is equipped with an Ultrastat 23 Cooking Computer which is connected to the fryer's electrical system to serve as its ON/OFF switch and Thermostat as well as providing heat control, status information and product cook timer.

For Operating Instructions for the Ultrastat 23 Cooking Computer reference manual (P/N 30A216) provided with the fryer.

SHORTENING INSTALLATION

LIQUID SHORTENING

When using liquid shortening fill the fryer with cold shortening 1/2" (13mm) BELOW the SHORTENING LEVEL MARK. When the shortening is heated, ensure it is even with the SHORTENING LEVEL MARK.

WARNING TO AVOID INJURY

DO NOT MOVE THE FRYER FILLED WITH HOT LIQUID.

ALWAYS WEAR OIL-PROOF INSULATED GLOVES WHEN WORKING WITH A FRYER FILLED WITH HOT OIL.

**ALWAYS DRAIN HOT OIL INTO THE PROVIDED FILTER TUB.
HOT OIL CAN MELT PLASTIC BUCKETS OR SHATTER GLASS.**

START-UP

To operate an Ultrafryer Electric Fryer equipped with an Ultrastat 23 Cooking Computer

1. Ensure the Fryer's Aux Control Box is in mode selection #2 for the U23 Controller.
2. Ensure the Computer's ON/OFF Button is in the OFF position.
3. Ensure the Drain Ball Valve is CLOSED with the removable handle.
4. Safely start up the 14" (356 mm)/ 8" (203mm) electric fryer equipped with an Ultrastat 23 Cooking Computer.

COOKING

Most products should be cooked with a shortening temperature about 350 degrees F (177 Degrees C), however each product should be cooked at the LOWEST temperature that produces a high quality product while obtaining maximum usage of the shortening.

USE A HIGH QUALITY SHORTENING TO ACHIEVE A CONSISTENT QUALITY PRODUCT AND LONG TERM SAVINGS.

DO NOT SALT PRODUCTS OVER THE FRYER AS SALT QUICKLY DETERIORATES THE SHORTENING AND FLAVORS OTHER PRODUCTS COOKED IN THE SAME SHORTENING.

RECOMMENDED TO FILTER SHORTENING AFTER LUNCH AND DINNER RUSH AND MORE OFTEN IN A HIGH SALE VOLUME STORE AND BOIL-OUT THE FRYER EVERY 7 DAYS.

SHORTENING DISPOSAL

Dispose of oil per company procedures.

FRYER BOIL-OUT

BOIL-OUT each fryer following cleaning instructions contained in the Cleaning Manual provided by your approved chemical supplier. The following are generic procedures:

1) Ensure the Drain Ball Valve is in the closed position, then add water to vat until it reaches a point 2" (51 mm) BELOW the middle of the shortening level mark on the rear wall of the vats.

WARNING

ONLY USE A COMMERCIAL GRADE "NON CHLORINE" BOIL-OUT COMPOUND !!

2) Add the amount of **BOIL-OUT COMPOUND** in the fryer vat as prescribed in the Cleaning Manual provided by the Chemical Supplier.

3) Ensure the fryer's Control Selector Box is in position #2 for the U23 Controller; then depress the Computer ON/OFF Button to the **ON** position.

NOTE

THE FRY VAT MUST BE BELOW A TEMPERATURE OF 225° F (124° C) TO ENTER THE BOIL MODE.

4) **To enter BOIL MODE** press and hold the P key for 3 seconds. PROGRAM will be displayed. Press the UP or DOWN arrow keys until BOIL is displayed, then press the P key. BOIL will appear in the computer display. The feature is now activated. The fry vat will maintain a temperature of 190°F (88°C) to allow the boil function to be performed.

5) Frequently scrub the sides, front and rear of the fryer vat with a long handled synthetic bristle scrub brush.

6) After the boil-out solution has **BOILED** for 30 minutes, EXIT BOIL MODE.
To exit BOIL MODE press and hold the P key for 3 seconds. PROGRAM will be displayed. Press the UP or DOWN arrow keys until BOIL is displayed, then press the P key. You can also exit by pressing OFF and then ON.

7) Turn the fryer's power switch to the OFF position (Position #1 on the Control Selector Box) and CAREFULLY dispose of the boil-out solution in a floor drain.

8) Use a scrubbing pad to remove carbon buildup from the Electric Elements until all encrusted material has been removed.

9) Rinse the vat with hot water until the water coming out of the drain valve is clear.

10) Mix a solution of ONE PART vinegar to 25 PARTS of water. Place this mixture into a one gallon garden pressure sprayer; and THOROUGHLY spray this solution onto the SIDES, ELECTRIC ELEMENTS, and BOTTOM of each vat to neutralize the Boil-Out Compound.

NOTE

Boil-Out Compound will cause shortening to break down rapidly if it is not neutralized.

11) **THOROUGHLY** wipe the sides, electric element, and bottom of the vat with clean, lint-free, dry towels to remove any remaining water; then fill each fryer with **NEW** shortening following shortening installation procedures in this manual.

12) After the fryer has been filled with new shortening, turn ON the fryer and the computer to return to normal operation.

FRYER SHUT DOWN PROCEDURE

1. Ensure the Computer's ON/OFF Button is in the OFF position.
2. Ensure the Fryer's Power Switch is in the OFF position (position #1 on the control selector box).

FILTERING THE SHORTENING PROCEDURE

PURPOSE: To provide for manually filtering the fryer .

NOTE: Position #1 is the preferred position when the fryers are not being utilized.

HOW IT WORKS: Position #1 diverts power to the Power Off circuit and allows for filtration service.

NOTE: When the selector switch is in this position, the fryers will NOT heat.

SEQUENCE OF OPERATION:

1. TURN selector switch to POSITION #1. Removes power from the fryer.
2. Ensure the filter tub is properly docked beneath the drain valve. Verify the male end of the standpipe assembly is seated in the female bulkhead.
3. SKIM the shortening to remove any floating crumbs.
4. To drain the shortening into the filter tub use the DRAIN VALVE HANDLE provided to TURN the DRAIN VALVE of the selected vat slightly downward. When the bottom of the filter tub is covered with about 2 inches of shortening, completely open the drain valve. While shortening is draining, SCRAPE all sides of the vat to remove encrusted material using the scraper.
5. When all shortening has drained into the filter tub, use the DRAIN ROD to stand the wire rack on one side of the vat. Use the drain rod to pull the sediment on the bottom of the vat towards the valve opening, then use the rod to push sediment through the valve opening.
6. If there is sediment or debris visible on the heat elements or bottom of the vat, flush this sediment from the vat using the washwand hose. CONNECT the WASHWAND end to the female bulkhead inside the cabinet and place the washwand nozzle into the vat and hold it firmly against the inner wall. To activate the washwand PULL the WASHWAND LEVER to open the valve and TURN ON the FILTER PUMP. Hold the nozzle at a 45 degree angle from the bottom of the vat causing sediment and debris to bounce off the side walls and flow towards the drain valve. Use the "L" shaped brush to push the sediment through the drain valve to keep the drain clear. Hose off the heat elements and vat walls until all sediment and debris has been flushed through the drain into the filter tub. TURN OFF the FILTER PUMP and PUSH the WASHWAND LEVER to close the valve.
7. Polish the shortening per the company requirements. PULL the VAT RETURN LEVER to open the valve of the empty, cleaned vat. TURN ON the FILTER PUMP. This will filter the shortening. When finished filtering TURN OFF the FILTER PUMP.
8. CLOSE the DRAIN VALVE with the drain valve handle.
9. To return the clean shortening to the vat TURN ON the FILTER PUMP. After the vat is full of clean shortening, TURN OFF the FILTER PUMP and PUSH the VAT RETURN LEVER to close the valve.
10. Place the washwand nozzle into the vat and DISCONNECT the other end of the WASHWAND and lift hose up to drain shortening into vat. Always hang the washwand hose in an upright position for storage. Do not store washwand hose underneath fryer vats.
11. Repeat steps 3-9 to clean & filter other vat.
12. TURN the SELECTOR SWITCH to position #2 or #3. This will allow the controllers to power up and work the fryer.

CAUTION: DO NOT ACTIVATE (PULL) THE VAT RETURN LEVER AND THE WASHWAND LEVER AT THE SAME TIME. THIS WILL REDUCE SHORTENING FLOW.

CAUTION: DO NOT REMOVE TUB WHEN TUB IS FULL WITH SHORTENING.

SELECTOR SWITCH



FILTER TUB



CAUTION: PRIOR TO STEP 4, PUT ON SAFETY GOGGLES, NEOPRENE INSULATED GLOVES AND AN APRON.

DRAIN VALVE HANDLE #19C888



SEE PAGE 30 FOR ADDITIONAL PICTURES.

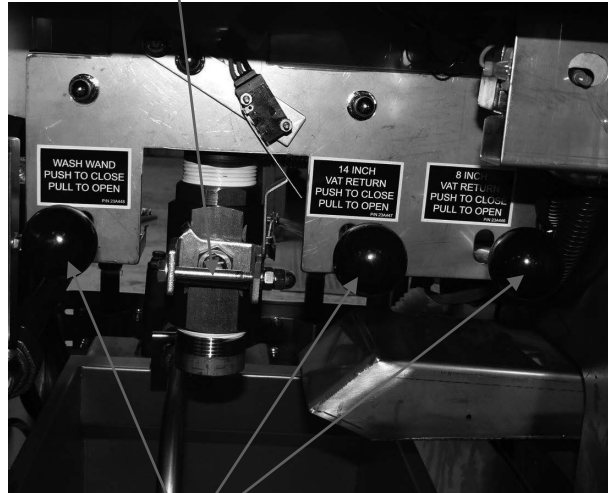
FILTERING THE SHORTENING PROCEDURE CONTINUED

Filter Pump On/Off Switch



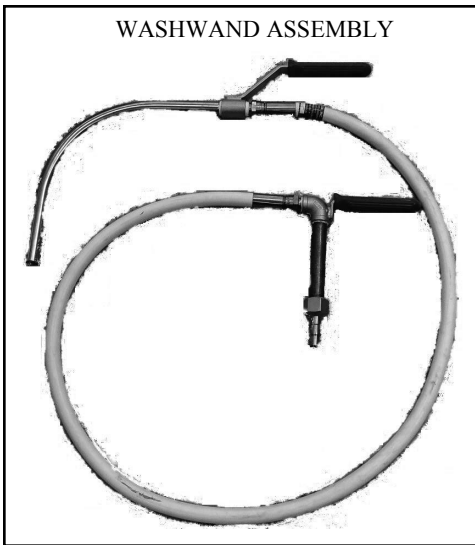
Female Bulkhead for Washwand

Drain Valve for 14" Vat



Push/Pull Levers

WASHWAND ASSEMBLY



L-SHAPED CLEANING BRUSH #29A044



**TECHNICAL ASSISTANCE &
ORDERING INFORMATION**

TECHNICAL ASSISTANCE - Contact an authorized service agent or the Customer Service Department, Ultrafryer Systems at 1-800-525-8130 for technical assistance.
E-Mail technical assistance at: techserv@ultrafryer.com

ORDERING INFORMATION:

1. **REPLACEMENT PARTS** - Provide the following information when ordering replacement parts by phone, fax or mail:

Your company name and phone number
Your company purchase order number
Bill-to address
Ship-to address
Quantity desired
Part number and description of the desired-item Your name or signature of authorized-buyer

Phone in order to: 1-888-331-5013
FAX order to: 1-210-731-5061
Mail order to: Ultrafryer Systems
Order Entry Office
P.O. Box 5369
San Antonio, TX 78201
E-Mail your order to: custserv@ultrafryer.com

2. **TERMS** - Net 30 days for customers on approved accounts. Past due balances will be charged 1% per month (12% per annum) until full balance is paid.
3. **DAMAGES** - Ultrafryer Systems is not responsible for damage occurring in transit. All deliveries must be inspected for damage to shipping containers prior to departure of the delivering carrier. Any damage must be notated on the receiving document to facilitate filing of freight claims. Carriers must be notified immediately and freight inspections must be requested from the carrier. Ultrafryer Systems can and will gladly assist you in preparing and processing of the necessary claims only if proper notification has been accomplished on the carrier delivery document. Damaged equipment and or containers must be available for the claims inspector to inspect.
4. **RETURNS** - Ultrafryer Systems cannot guarantee credit for items returned without proper authorization. All returns must have prior Ultrafryer Systems Customer Service or Warranty department approval. An assigned number will be issued by the approval authority. Please print the assigned number on all returned packages and corresponding paperwork. Returned goods are subject to a 15% restocking charge. Ultrafryer Systems is not responsible for freight charges on returned goods unless authorized by Customer Service and or Warranty personnel. Ultrafryer Systems does not receive freight collect or C.O.D. shipments.

RECOMMENDED SPARE PARTS

RECOMMENDED SPARE PARTS

To minimize downtime on the Electric Fryer upon failure of a component part, at least one (1) of the following items should be kept as a spare part in the local area.

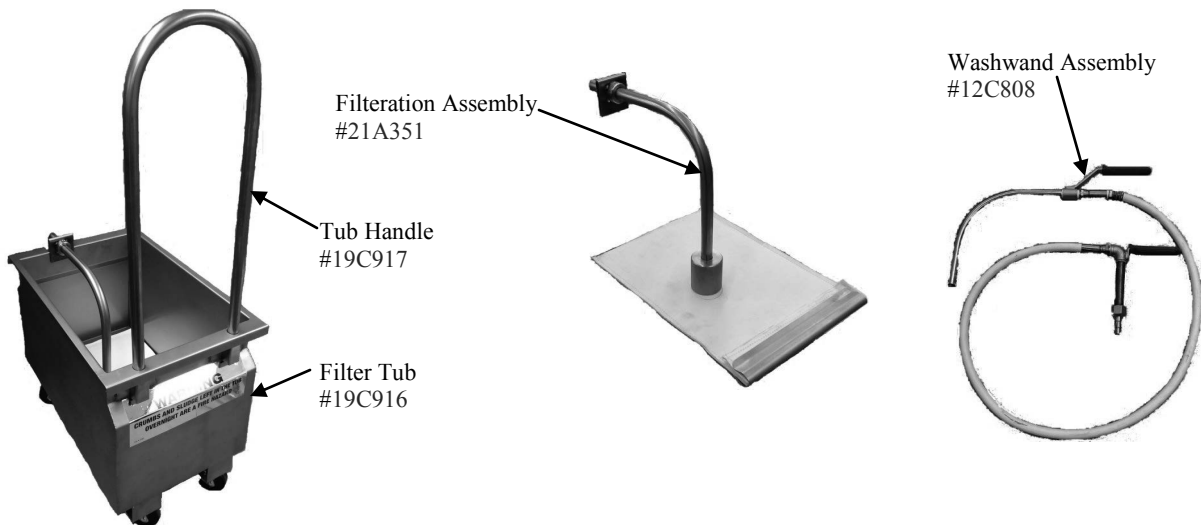
Description	P/N
U23 Controller, Braums	22A774
Cable, Remote CTL 6 Ft F/ Braums Hood	22A739
Box Assy Low Oil Level w/Aux Basic	12C942
Electrical Heat Element 208V 8.5KW	18A012
Mechanical Contactor 2 pole	18A373
Durakool Contactor 3 Pole	18231
Durakool Contactor 2 Pole	18A372
Contactor 3 Pole	18A103
Pump/ Motor Assembly	24A299
Switch, Toggle DPST 15A 120V	18A081
Snap Light 24V Red	23A406
Temp Probe	18A006
Hi-Limit Switch	19B781
Switch, Micro-Drain w/ Leads	18A332

PARTS IDENTIFICATION

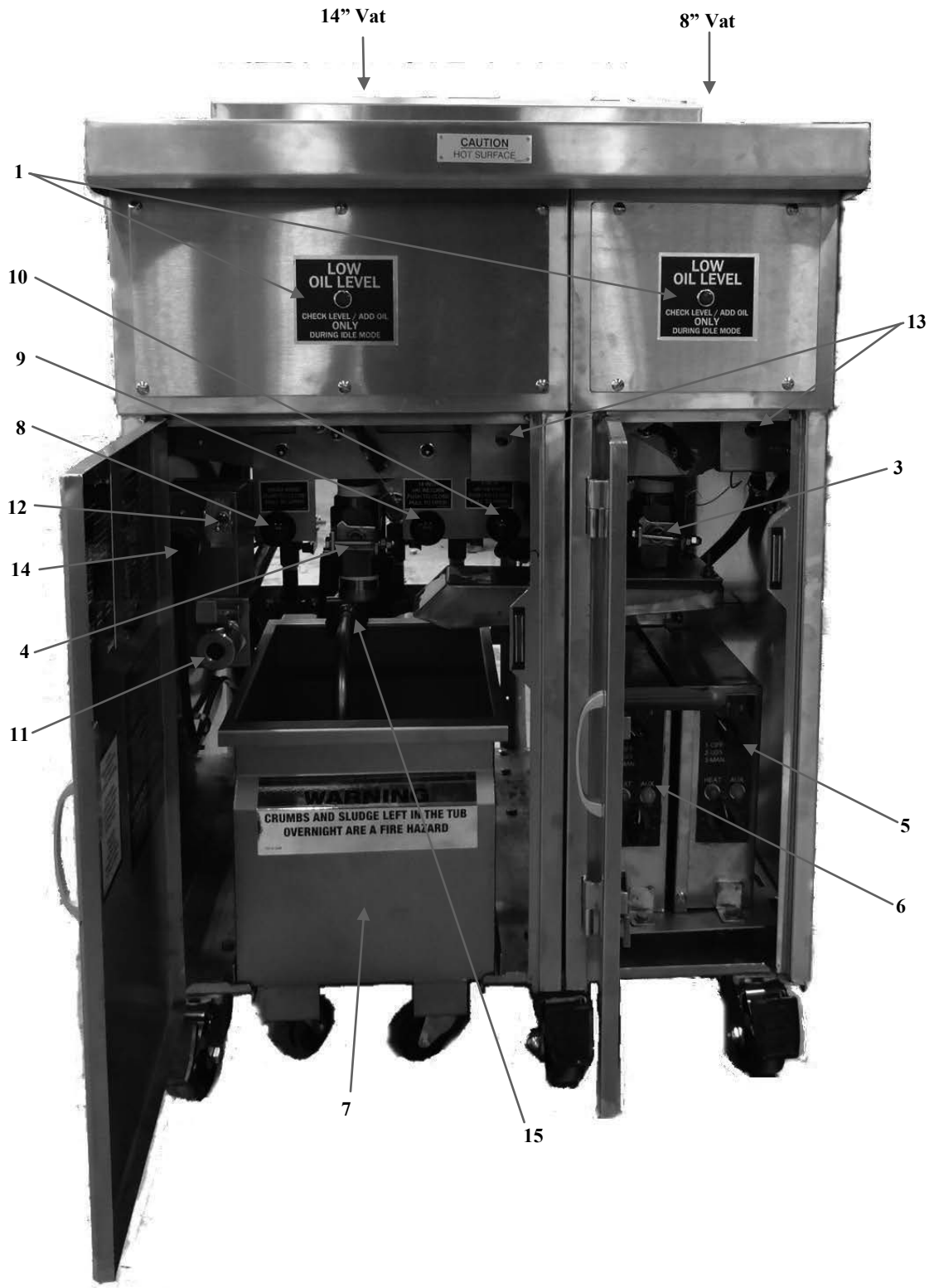
PARTS IDENTIFICATION

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PN</u>
1	Oil Level Indicator Lights (Snaplight, Red)	23A406
2	U23 Controller (*Shipped Loose. To be connected to existing hood)	22A774
3	Vat Drain Valve Assy for 8 Inch Vat	19A564
4	Vat Drain Valve Assy for 14 Inch Vat	19A564
5	Control Selector Box Assy for 8 Inch Vat	12C942
6	Control Selector Box Assy for 14 Inch Vat	12C942
7	Filter Tub with casters	19C875
8	Lever-Washwand/ Push to close/ Pull to open	19C889
9	Lever-14 Inch Vat Return/ Push to close/ Pull to open	19C889
10	Lever-8 Inch Vat Return/ Push to close/ Pull to open	19C889
11	Washwand Hose Female Coupling	24A238
12	Filter Pump On/Off Switch Assy.	12C837
13	Hi-Limit Switch	19B781
14	Pump Receptacle for Pump Assy.	23304
15	Filter Pump Assy.	12D033

Note: See page 37 for Picture Diagram.
* = Not Shown

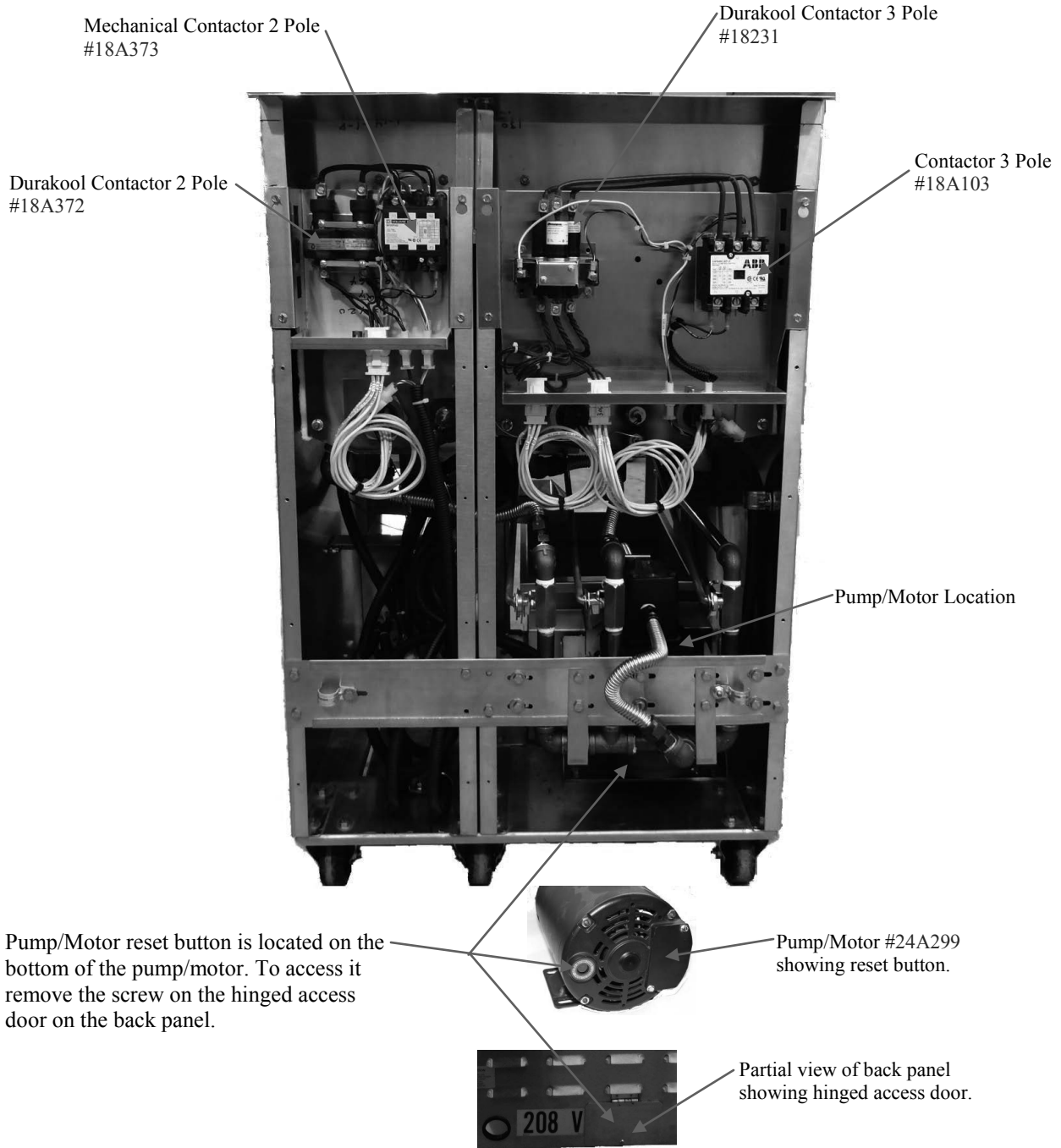


PARTS IDENTIFICATION



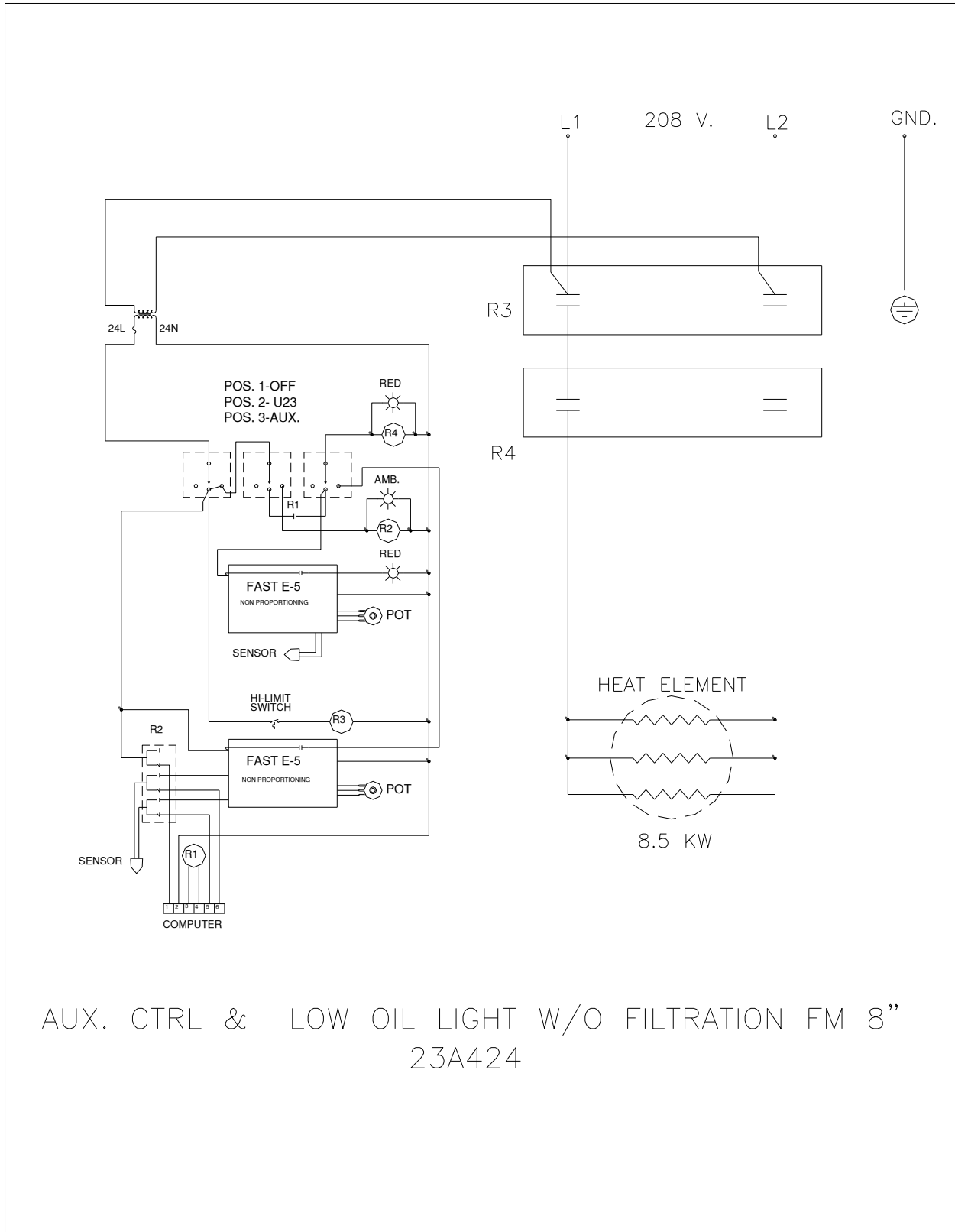
PARTS IDENTIFICATION

**REAR VIEW OF FRYER
(BACK PANEL NOT SHOWN)**



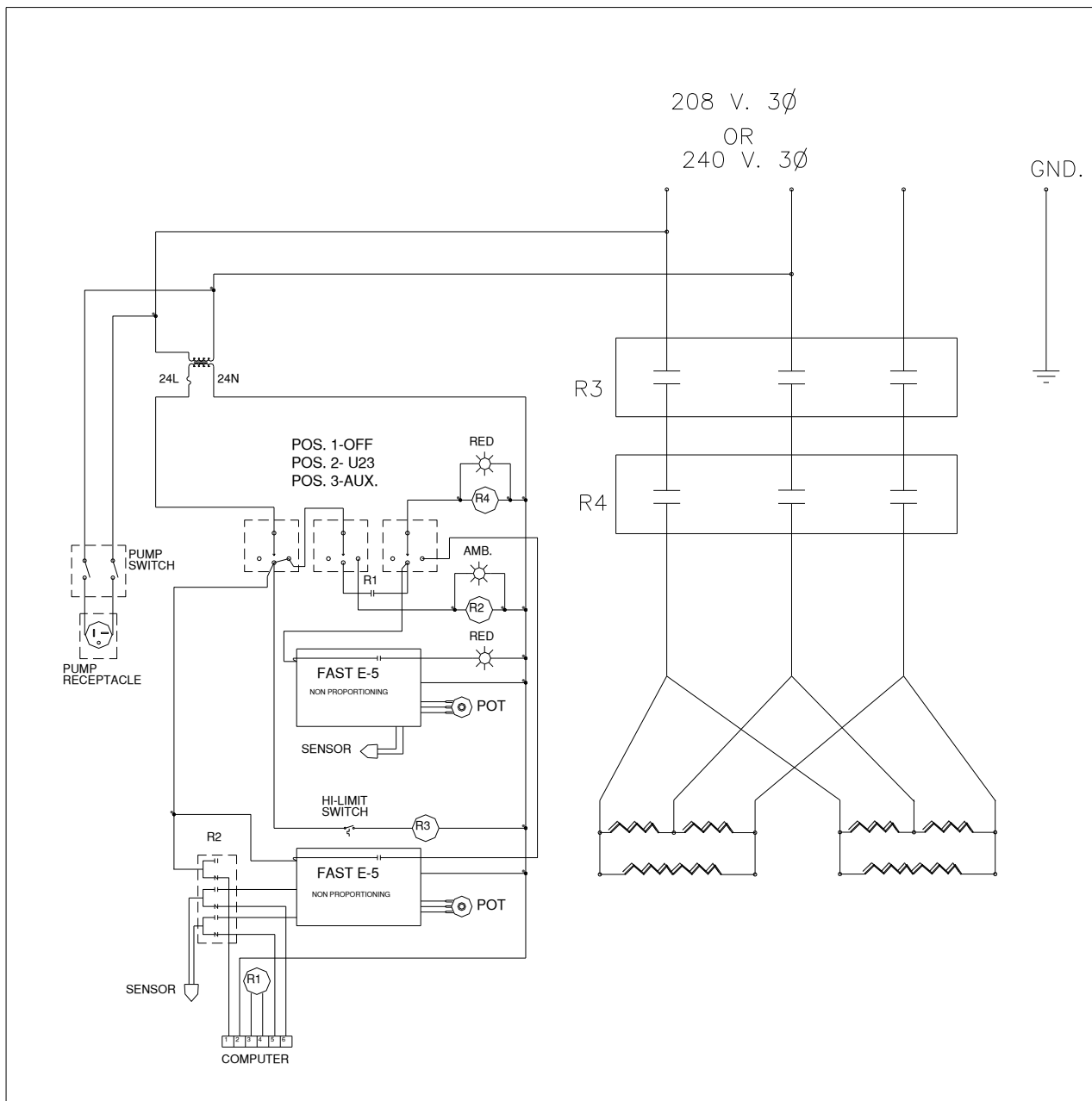
WIRING DIAGRAMS

Wiring Diagram for Fryer (1 of 2)



AUX. CTRL & LOW OIL LIGHT W/O FILTRATION FM 8" 23A424

Wiring Diagram for Fryer (2 of 2)



AUX. CTRL & LOW OIL LIGHT W/FILTRATION FM 14" E3KF
23A449

This page is intentionally left blank