Ultrafryer

MODEL RS, RS1—RS6 20X14 GAS FRYER OPERATIONS MANUAL

ULTRAFRYER SYSTEMS INC.
302 SPENCER LN. SAN ANTONIO, TX 78201

The purchaser of this fryer must post, in prominent location, instructions to be followed in the event the user smells gas. This information shall be obtained by consulting the local gas supplier.

WARNING: California Residents Only. This product can expose you to chemicals including chromium which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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TABLE OF CONTENTS	

GENERAL INFORMATION

PREFACE

This Manual was written and published by the Engineering Department, Ultrafryer Systems for use by personnel who will operate a Model RS 20 X 14 fryer 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. These items are identified as follows:

NOTE: Pull on the filter tub to ASSURE the male docking plug is SEATED in the female bulkhead socket.

CAUTION: TO ASSURE PRODUCING A QUALITY PRODUCT WHILE PROLONGING THE LIFE EXPECTANCY OFTHE FRYER, ENSURE FILTERING, BOIL-OUT AND CLEANING INSTRUCTIONS ARE STRICTLY ADHERED TO.

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.

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 Manual was written and published by the Engineering Department, Ultrafryer Systems for use by personnel who will operate a Model RS. & RS1-RS6 Gas Fryer. This manual complements, and should be used in conjunction with the applicable Ultrafryer cooking computer operations manual.

This manual should be kept in an accessible location and should be retained for future reference.

ENGINEERING DEPARTMENT
ULTRAFRYER SYSTEMS
302 SPENCER LANE
SAN ANTONIO, TX 78201

NOTE: This manual can be used as a guide in operating special variations of a RS 20x14 Gas Fryer. *This manual is intended as a guide for all model RS fryers, regardless of configuration, filtration options and controllers. It is to be used in conjunction with the applicable controller manual that is included with the fryer.*

WARNINGS

FOR YOUR SAFETY

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

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

WARNING

Electrical Grounding Instructions

This appliance is equipped with a three-prong (grounding) plug for your protection against shock hazard and should be plugged directly into a properly grounded three-prong receptacle. Do not cut or remove the grounding prong from this plug.

NOTICE

Minimum clearances for combustible and non combustible construction are 6 inches from sides and 6 inches from the back. Suitable for installation on combustible floors, intended for other than household use.

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

NOTICE

In order to be able to service this appliance, it must be installed with the casters supplied, and shall be made with a connector that complies with the Standard for Connectors for Movable Gas Appliance, ANSI Z21.69 CSA 6.16 and a quick-disconnect device that complies with ANSI Z21.41 - CSA 6.9 (2), adequate means must be provided to limit the movement of the appliance without depending on the connector and the quick-disconnect device or its associated piping to limit the appliance movement and the locations where the restraining means may be attached to the appliance. It must also be installed with restraining means to guard against transmission of strain to the connector as specified in the appliance manufacturer's instructions.

ULTRAFRYER® LIMITED WARRANTY

Ultrafryer Systems warrants to the original purchaser of a gas or electric Ultrafryer® sold within the United States, it's 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.

Safety

The major safety concern associated with the Ultrafryer Gas Fryer is burns from hot shortening. In order to prevent serious burns, good housekeeping habits are required. The floor in front of the fryer 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 filtering or boiling out a fryer vat.

Electrical controls on all Ultrafryer Fryers operate on 120 volts single phase electrical power. No adjustments or replacement of electrical controls should ever be attempted without first disconnecting electrical power. The fryer should never be operated with wet hands or while standing in water. To do so can result in serious
electrical shock or death.

Automatic Safety Features

This fryer is equipped with the following Automatic Safety Features:

1. **High limit thermostat** to shut off gas to the main burners by operating a solenoid-actuated safety valve in the combination gas control valve if shortening temperature **exceeds** 400°F (204°C).

2. **Combination gas control valve** which includes a built-in pressure regulator and manual valve.

3. **Sensor circuit** within the spark ignitor to turn gas **OFF** if a burner **flameout** occurs.

4. A **Drain Valve Safety Switch** and a **Default-to-Off circuit (optional)** in the Default-to-Manual-Restart (DTMR) Control that will **disable** the fryer each time the drain valve is **opened**.

5. PAR-2-FL Fryers have a **centrifugal** switch whereas PAR-3-FL fryers have an **air proofing** switch to open the electrical circuit to the spark ignitor and gas valve, which will turn the gas to the fryer **OFF** in the event the blower fails.

SPECIFICATIONS
ITEM DESCRIPTION RS 20 x14

Overall Width	**21 1/2"**
Overall Depth	**28 ¾"**
Work Height	**36"**
Oil Capacity	**65lbs**
BTUS/HR	**110000**
GASES	**Natural, Propane, and Butane**
Electrical Req.	**120V,60Hz,10A**

Gas & Operational Requirements for RS 20 x 14 Fryer

GAS TYPE	INLET GAS PRESS	MANIFOLD PRESS	BTU/HR RATING MJoules	ORIFICE SIZE
NATURAL	7.0' W.C. 178 mm	4.0' W.C 102 mm	110,000 116.0 MJoules	#11
PROPANE	11.0" W.C. 279 mm	10.0" W.C 254 mm	110.000 116.0 MJoules	1/8"
BUTANE	11.0" W.C 279 mm	10.0" W.C 254 mm	110,000 116.0 MJoules	#33

NOTE: Ratings may vary due to heating value and specific gravity of gas supplied by local gas companies.

PRE-INSTALLATION

A. **GENERAL:** Safe and satisfactory operation of a gas fryer depends on its proper installation. Installation must conform to local codes or, in the absence of local codes, with the current National Fuel Gas Code ANSI Z223.1/NFPA 54 or (latest edition). In Canada, gas installation shall be in accordance with the current CSA B 149.1 and .2 installation codes and/or local codes. Each fryer bank should be installed as follows:

1. Placed beneath a properly designed exhaust hood.
2. Installed by a licensed Electrician and Plumber.
3. Connected to the type gas for which the unit was fabricated as shown on the rating plate.
4. Connected to the proper size pressure regulator installed in the gas supply line and adjusted to the proper manifold pressure.
5. Connected to the main gas supply line with the proper size line.
6. Restrained by use of a restraining device to avoid splashing of hot liquid and to assure tension cannot be placed on the gas or electrical lines or fittings. **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: Clearances of 3' should 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. The fryer and its individual shut-off valve must be disconnected from the gas supply piping system during any pressure testing of that system at pressures in excess of 1/2 psig (3.45kPa). In Canada, gas installation shall be in accordance with the current CSA B 149.1 and .2 installation codes and/or local codes.
2. The fryer must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the gas supply piping system at pressures equal to or less than 1/2 psig (3.45kPA).
3. 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). In Canada electrical installation must be in accordance with the current CSA C22.1 Canadian Electrical Code and/or local codes.
4. Other applicable nationally recognized installation standards such as:

a. National Fuel Gas Code ANSI Z223.1 (latest edition) American Gas Association 1515 Wilson Blvd. Arlington, VA22209

b. NFPA Standards #54, #94 and #221 (latest edition) National Fire Protection Association 470 Atlantic Avenue Boston, MA 02110

c. ANSI Z21.69/CSA-6.16 AND Z21.41/CSA 6.9

5. Exhaust hood, when installed must conform to the current NFPA 54-1 and Canadian CSA-1(latestedition)

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 except the filter tub assembly.

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 hood or that an exhaust fan be provided in the wall above the unit, as exhaust temperatures are in the vicinity of 400°F (204°C).

NOTE: Strong exhaust fans in a hood or in the overall air conditioning system can produce slight air drafts in the room, which can interfere with burner performance and be hard to diagnose. Air movement should be checked during installation and if burner problems persist, make-up air openings or baffles may have to be provided in the room.

2. Exhaust temperature, in addition to the open tank of hot oil, make 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 into the combustion chamber.

D. GAS CONNECTION: The gas supply (service) line must be the same size or greater than the inlet line of the appliance. **THE GAS SUPPLY LINES MUST BE SIZED TO ACCOMMODATE ALL THE GAS FIRED EQUIPMENT THAT MAY BE CONNECTED TO THAT SUPPLY.**

NOTE: Sealant used on all pipe joints must be resistive to butane and propane gas.

1. Manual shut off valve: This supplier-installed valve must be installed in the gas service line ahead of the appliance and in a position where it can be reached quickly in the event of an emergency.

2. Pressure regulator: All commercial cooking equipment must have a pressure regulator on the incoming service line for safe and efficient operation, because service pressure may fluctuate with local demand. External regulators are not required on this fryer, as that function is performed by a combination gas control valve, however if the incoming pressure is in excess of 1/2 psig, a step-down regulator will be required.

3. Natural gas: Natural gas fryers require 7" (178mm) water column (W.C.) inlet pressure to the fryer's combination gas control valve for proper operation, when all gas units are operating simultaneously. Butane and Propane gas fryers require 14" (356mm) (W.C.) inlet pressure to the fryer's combination gas control valve for proper operation, when all gas units are operating simultaneously. This inlet pressure MUST be checked with a manometer PRIOR to placing the fryer in operation.

WARNING: IF THE INLET GAS PRESSURE AT THE FRYER'S COMBINATION GAS CONTROL VALVE EXCEEDS 1/2 lb/in$_2$ (.035 kg/cm2) OR APPROXIMATELY 14" (356 mm) W.C., AN EXTERNAL REGULATOR MAY BE NEEDED TO PREVENT DAMAGE TO THE COMBINATION GAS VALVE AND VOIDING OF THE WARRANTY. FAILURE TO ADDRESS THIS COULD RESULT IN EXPLOSION OR FIRE.

4. Combination gas control valve: The correct combination gas control valve and orifice is installed at the factory for BUTANE, NATURAL and PROPANE units based on each Purchase Order. This valve should be CHECKED /ADJUSTED by qualified service personnel using proper test equipment for the following OUTLET gas pressure PRIOR to start-up of a fryer.

a.) NATURAL GAS FRYERS 4" (102mm) water column (W.C.)

b.) BUTANE/PROPANE FRYERS 11" (279.4mm) water column (W.C.)

5. Rigid connections: Visually check and purge any installer-supplied intake pipe(s) with compressed air to clear dirt particles, threading chips or any other foreign matter before connecting to the service line as these particles may clog the orifice when gas pressure is applied. All connections must be tested with a soapy solution before lighting the fryer. DO NOT USE AN OPEN FLAME TO CHECK FOR LEAKS! Putting an open flame beside a new con-nection is not only dangerous, but will often miss small leaks that a soapy solution would find.

E. FLEXIBLE COUPLINGS, CONNECTORS: The installation is to be made with a connector that:
(1) complies with the **Standard for Connectors for Movable Gas Appliances, ANSI Z21.69 (CSA-6.16)**, and a quick-disconnect device that complies with the **Standard for Quick-Disconnect Devices for Use With Gas Fuel, ANSI Z21.41 (CSA-6.9)**
(2) adequate means must be provided to limit the movement of the appliance without depending on the connector and the quick disconnect device or its associated piping to limit the appliance movement.
(3) the location(s) where the restraining means may be attached to the appliance shall be specified. Mounting holes for restraining cable is located on the rear legs of the fryer carriage.
DOMESTIC CONNECTORS ARE NOT SUITABLE!!!

F. FRYER SERVICE: The fryer is equipped with swivel casters. To service the fryer:
1. Turn OFF gas supply at the supply source.
2. Disconnect the flexible gas line quick-disconnect
3. Disconnect restraint means and roll fryer out for rear service access.
4. When the fryer is re-positioned, be sure to reconnect the restraint and level the fryer.

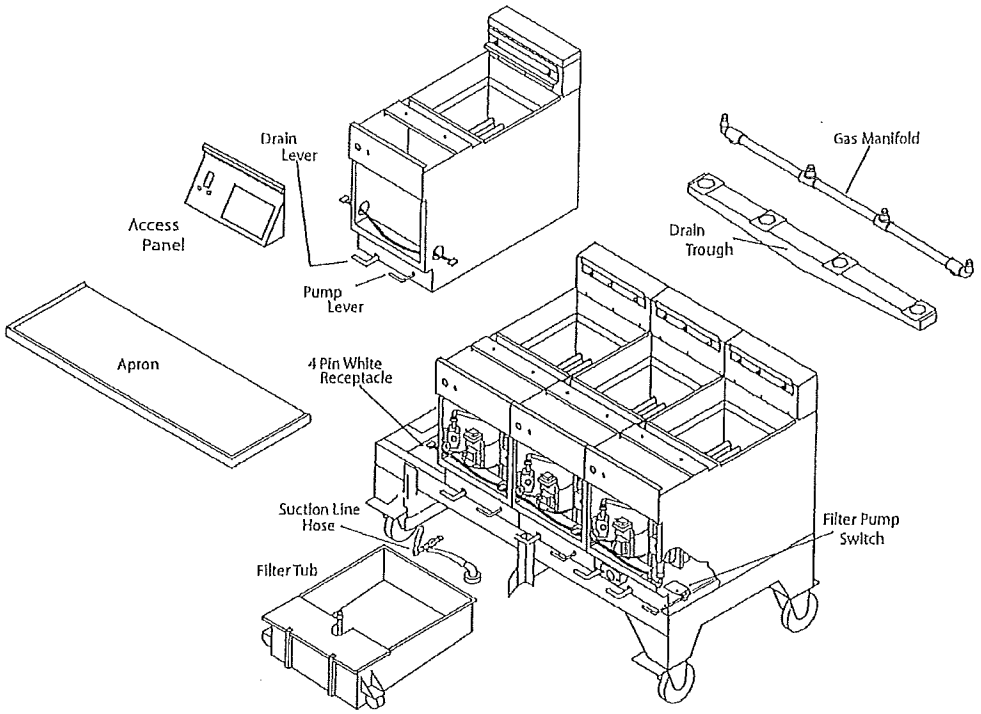
G. ELECTRICAL CONNECTION: The **MAXIMUM** current draw per vat at Initial Start-up or during a Warm-up Cycle will be 3 Amperes at 120 Volts. When running the Filter System simultaneously allow for an additional 3 Amperes. Refer to the wiring diagram attached to the front door of the fryer for internal electrical connections.

RECEIVING & INSTALLING

A. 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.

B. INSTALLING: If sufficient space is available, roll the assembled fryer into the building, to it's operating location and proceed to the LEVELING Section. In the event the entrance doors are too narrow to roll the assembled fryer into the building; dis-assemble and re-assemble the fryer as follows:

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.



1. DIS-ASSEMBLY

a. Perform the following steps facing the FRONT of the fryer:
   1) Number each vat cabinet from LEFT to RIGHT and place these numbers on the front and rear panel of each cabinet.
   2) Lower the Temperature Control access panel from each vat cabinet.
   3) CAREFULLY remove the APRON from the fryer bank by removing the two (2) ¼ - 20 wing nuts, ¼" (6mm) split washers, and n" (18mm) flat washers from each ¼ - 20 weld stud beneath each cabinet hat section.

NOTE: It may be necessary to cut the SILICONE SEAL between the apron and vat cabinets to separate the apron. DO NOT DAMAGE THE GASKET.

   4) Remove the JOINER STRIP located between each set of vats; then cut the SILICONE SEAL between the vats.
   5) CAREFULLY separate the SHORTENING DRAIN TROUGH from each 2" (51mm) ball valve plate by removing the four (4) ¼ - 20 hex head bolts and nuts; then remove the drain trough from the fryer.
   6) CAREFULLY disconnect the 4 PIN WHITE connector from its mating receptacle located on the LOWER right hand end of each vat; then remove the BLACK wiring harness protector from the 2" (51mm) opening in each vat.

7) CAREFULLY disconnect the ELECTRICAL OUTLET BOX BLACK and WHITE electrical wires connected to wires by WIRE NUTS located on the LEFT HAND side of the "extreme" RIGHT HAND vat.
8) Remove the 10-24 truss head screw and nut on the right hand side of each vat used to secure adjoining vats and remove the 10-24 truss head screw and nut that secures the "extreme" left hand vat cabinet to the base frame.

b. Perform these steps facing the REAR of the fryer:

1) Remove the REAR panel from each vat by removing the four (4) pan head self-tapping screws.
2) Remove the two (2) 10-24 truss head screws and nuts on the right hand side of each vat used to secure adjoining vats.
3) CAREFULLY remove the two (2) philips head self-tapping screws along the BOTTOM flange of each cabinet.
4) CAREFULLY loosen and separate the flexible gas line from the gas manifold flare fitting on each vat, remove the ¼ - 20 hex head bolts and nuts from each manifold "L" BRACKET; then set the GAS MANIFOLD aside.
5) CAREFULLY disconnect the SHORTENING LINE RED and WHITE heater tape electrical wires terminated in a 3 PIN WHITE connector from its mating receptacle located on the left hand side of the "extreme" LEFT HAND vat.

NOTE: BLACK and WHITE CABLETYES may have to be removed to separate connectors.

6) CAREFULLY disconnect the FILTER PUMP MOTOR RED, GREEN and WHITE electrical wires terminated in a 4 PIN WHITE connector from its mating receptacle located on the left hand side of the "extreme" LEFT HAND vat.
7) CAREFULLY disconnect the POWER LINE BLACK and WHITE electrical wires terminated in a 4 PIN WHITE connector from its mating receptacle located on the left hand side of the "extreme" LEFT HAND vat.
8) SECURE the SHORTENING LINE to the base frame on the LEFT HAND end of the fryer bank; then CAREFULLY loosen and separate the shortening line union attached to each ¾" (19mm) ball valve.
9) CAREFULLY remove each cabinet from the base frame, carry each cabinet into the building; then place the base frame into position in the kitchen.
10) PRIOR to re-assembling the fryer bank:
    a. Remove DRIED silicone used to seal the apron to vats, opening between each set of vats, front and rear of each cabinet, lower edge of the two (2) end vats, and perimeter of the base frame..
    b. THOROUGHLY clean the TEFLON TAPE from all GAS and SHORTENING fittings and pipes; then wrap all male pipes and fittings with new teflon tape.

2. RE-ASSEMBLY

a. Place each vat cabinet in numerical order in FRONT of the base frame from LEFT to RIGHT.

b. Install each vat cabinet on the base frame as follows:

1) Place a bead of silicone around the perimeter of the base frame for the FIRST vat cabinet.
2) CAREFULLY place VAT CABINET #1 in position on the base frame; then secure the cabinet to the base frame by installing a 10-24 truss head screw and nut on the left hand flange to the base frame then install two (2) philips head self- tapping screws in the two holes on the REAR bottom flange of the cabinet.
3) Repeat the above procedures to install remaining vat cabinets on the base frame.

c. When all vat cabinets are installed on the base frame, secure the cabinets as follows:

1) Place a bead of silicone along the FRONT, TOP and REAR space between vat cabinets #1 and #2.
2) Install a 10-24 truss head screw and nut in the ¼" (6mm) holes on the FRONT right hand side of vat cabinet #I and left hand side of vat cabinet #2.
3) Install two (2) 10-24 truss head screws and nuts in the two (2) 13/64" (5mm) holes on the REAR left hand side of vat cabinet #1 used to secure it to cabinet #2.
4) Repeat the above procedures to secure remaining vat cabinets to adjoining vat cabinets.

d. Perform these steps facing the REAR of the fryer:

1) CAREFULLY connect each shortening line union HAND TIGHT, remove the device used to secure the SHORTENING LINE to the LEFT end of the base frame; then SECURELY tighten each shortening line union.
2) Place the GAS MANIFOLD in position, secure each manifold "L" BRACKET to the frame using the ¼ -20 hex head bolts and nuts removed earlier; then SECURELY connect each manual gas valve flexible gas line to the male flare fitting on the manifold.
3) SECURELY connect the SHORTENING LINE RED and WHITE heater tape electrical wires terminated in a 3 PIN WHITE connector to its mating receptacle on the left-hand side of the "extreme" LEFT HAND vat. Install a small cabletye on the connection to assure these connectors cannot be separated.
4) SECURELY connect the FILTER PUMP MOTOR RED, GREEN and WHITE electrical wires terminated in a 4 PIN WHITE connector to its mating receptacle located on the left-hand side of the "extreme" LEFT HAND vat.
5) SECURELY connect the POWER LINE BLACK and WHITE electrical wires terminated in a 4 PIN WHITE connector to its mating receptacle located on the left hand side of the "extreme" LEFT HAND vat.
6) Install a large cabletye on the cable harness on the "extreme" LEFT and RIGHT vats; then replace the REAR PANEL on each vat cabinet using eight (8) pan head self-tapping screws in each cabinet panel and fan cover.

e. Perform these steps facing the FRONT of the fryer:

1) Install the BLACK wiring harness protector in the 2" (51mm) opening of each vat; then SECURELY connect the 4 PIN WHITE wiring harness connector to its mating receptacle on each vat.
2) CAREFULLY connect the ELECTRICAL OUTLET box BLACK and WHITE wires on the "extreme" right hand vat to the POWER line BLACK and WHITE wires using the wire nuts previously removed.
3) CAREFULLY position the drain trough beneath the fryer; then SECURE the drain trough to each 2" (5mm) ball valve plate using four (4) ¼ - 20 hex head bolts and nuts previously removed.
4) Remove any dried silicone from each JOINER STRIP, place a bead of silicone in each strip; then place the joiner strip over the edge of all adjoining fryer vats.
5) CAREFULLY replace the APRON as follows:
   a) Remove any dried silicone from the front edge of each vat cabinet and the bottom of the APRON.
   b) Place a bead of silicone along the FRONT edge of each vat cabinet and fill the REAR corners of the apron with silicone so it will be flush with the top of the apron.
   c) Place the apron in position with the REAR flange towards the FRONT inside edge of each vat and the FRONT of the apron, elevated approximately 45 degrees; seat the rear flange of the apron over the front inside edge of each vat; then CAREFULLY lower the front of the apron until each ¼ - 20 weld stud is seated in the notches of the front and rear hat section of each cabinet. Slip the apron a little bit to the left and right to center it on the fryer.
   d) When the apron is properly positioned, secure it to the hat sections of each cabinet using the wing nuts, split washers and the flat washers removed earlier.
   e) After the apron has been secured to each fryer cabinet apply a small bead of multipurpose sealant to the areas as shown in Figure 1below.
6) Replace the Temperature Control Access Panel.

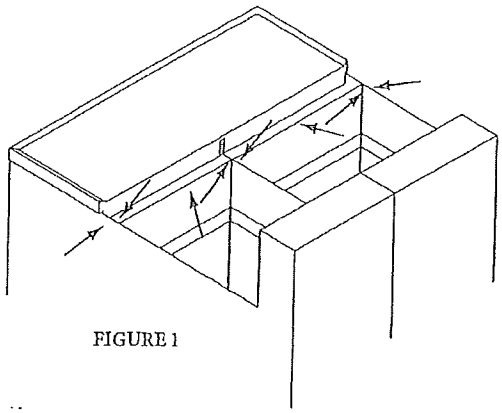


FIGURE 1

CAUTION: FAILURE TO SEAL THESE AREAS WILL PERMIT HOT SHORTENING TO BOIL UP INTO THE SPACE ALLOWING OIL TO SEEP INTO THE BURNER AREA.

C. LEVELING:

1. Roll the fryer to its operating location and check to be sure it is level at this location. If not, loosen the casters and insert the appropriate number of shim plates between leg and caster plates then retighten the caster bolts.

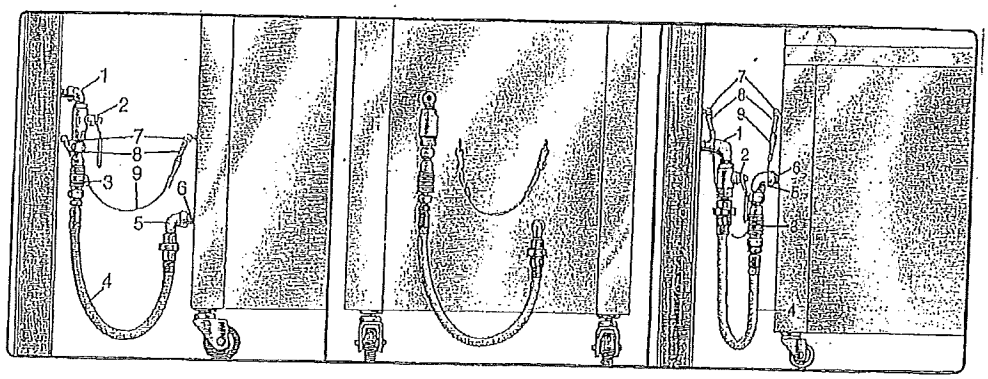
2. If the floor is smooth and level, adjust to the high corner and measure with a spirit level. If the floor is uneven or has a decided slope, level the unit with metal shims.

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

3. Connect the gas manifold to the building gas supply line by means of an APPROVED flexible gas line as shown in the figure below.

NOTE: CONNECT-IT inc. ¾" (19mm), 1" (25mm) and 1 ¼" (32mm) flexible gas hose 4 feet long (1219mm) with a quick disconnect coupling on one end is available from Ultrafryer Systems under PN 24322 (¾" (19mm) hose), PN 24323 (1" (25mm) hose) and PN 24456 (1 ¼" (32mm) hose). These hoses are euipped with a fusible link, which melts at 361°F (183°C) that will SHUT OFF the gas supply when it melts. A restraining device 44" (1119mm) long is also available under PN 24324.

CAUTION: THE BUILDING GAS SUPPLY LINE MUST BE SIZED TO PROVIDE THE VOLUME OF GAS REQUIRED FOR PROPER OPERATION AS EXPLAINED ON THE PREVIOUS PAGE.



WARNING: THE RESTRAINT DEVICE (ITEM 9) MUST BE INSTALLED TO ASSURE TENSION CANNOT BE PLACED ON THE GAS OR ELECTRICAL LINES AND FITTINGS.

1. BUILDING GAS SERVICE LINE
2. MAIN GAS CUT-OFF VALVE
3. CONNECT-IT QUICK-DISCONNECT
4. FLEX-CON CONNECTOR
5. ELBOW
6. APPLIANCE MANIFOLD/NIPPLE
7. EYELET FASTENERS
8. SPRING HOOK
9. RESTRAINING CHAIN

FRYER OPERATION

A. GENERAL - The "basic" Gas Fryer is equipped with a Default-to-Manual-Restart (DTMR) Control, which uses an Electronic Thermostat. Some fryers are equipped with an Ultrastat 12,23 or 25 Cooking Computer that use the same Temperature Sensing Probe. In this section, the operation of the Gas Fryer will cover the Default-to-Manual-Restart (DTMR) Control.

NOTE: Refer to Manual PN 30A053, Ultrastat 11 Cooking Computer Operation Instructions; or 30A216, ULTRASTAT 23 Cooking Computer Operation Instructions; or Manual PN 30A051,ULTRASTAT 25 Cooking Computer Operation Instructions for operation of a fryer with one of these controls.

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

DO 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.

DO FILTER SHORTENING AFTER THE LUNCH AND DINNER RUSH AND MORE OFTEN IN A HIGH SALE VOLUME STORE; AND BOIL-OUT THE FRYER EVERY SEVEN (7) DAYS.

WARNING: WHEN ASSEMBLED, ENSURE THERE ARE NO FINGER LOOPS ON THE STANDPIPE SIDE OF THE MICRO-MESH FILTER.

C. TEST START-UP AND COOKING

1. **GENERAL:** The Default-To-Manual-Restart(DTMR) Control along with an Electronic Thermostat is connected to a fryer's electrical system to control operation of the fryer.
a. The DTMR contains a Default-To-Off circuit that will **DISABLE** the fryer anytime the Drain Valve is **OPEN**, and a Default-To-Melt circuit that will automatically place the fryer in a **SHORTENING MELT MODE** to gradually and safely heat shortening each time the fryer's toggle ON/OFF switch is turned **ON**.

b. Electronic Thermostat: The Electronic Thermostat has a temperature range from 200°F (93°C) to 400°F (204°C) and will accurately maintain a preset shortening cook temperature within ± 2°.

2. **DEFAULT-TO-MANUAL-RESTART (DTMR) CONTROL**
a. BLUE READY TO START LAMP - When lit indicates the fryer's Toggle ON/OFF switch is in the **ON** position, the Drain Valve is **CLOSED** and the fryer is ready to be placed in operation.

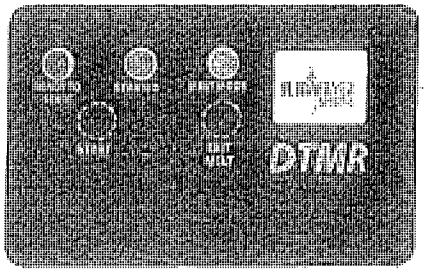
b. START BUTTON - When the button is momentarily depressed, it places the fryer in operation.

c. RED STARTED LAMP - When lit indicates the **START BUTTON** has been depressed, placing the fryer in opera tion.

d. AMBER MELT MODE LAMP - When lit indicates the fryer is in the **MELT MODE** and that the melt cycle timing module in the DTMR Default-to-Melt circuit is turning the fryer's heat mechanism **ON** and **OFF**, to gradually and safely heat the shortening.

e. EXIT MELT BUTTON - When this button is momentarily depressed, the melt cycle timing module in the DTMR's Default-to-Melt circuit will switch to the FULL-ON position allowing the Electronic Thermostat to heat shortening to its PRE-SET temperature.

D. DTMR OPERATION - Prior to operating the Gas Fryer, ENSURE the Filter Tub Assembly is properly installed and DOCKED to the fryer's Bulkhead socket and the Temperature Control Access Door is closed, the fryer vat is filled with shortening to the middle of the "E" in the word LEVEL of the shortening level mark on the rear wall of the vat; then:



1. Turn the Toggle ON/OFF Power Switch to the OFF Position.
2. Turn the MANUAL gas valve to the OFF position and wait FIVE (5) minutes for any accumulated gas to disperse.
3. ENSURE the MAIN gas shut-off valve is in the ON position, and that the EXHAUST FAN is ON.
4. Turn the MANUAL gas valve to the ON position.
5. Perform the following steps, in the order listed:

ITEM	ACTION	DTMR CONDITION
1	ENSURE the drain valve is in the CLOSED UP position and that shortening is at the proper level; then turn the Toggle ON/OFF switch to the ON position.	A. AMBER power lamp will LIGHT. B. BLUE READY TO START lamp will LIGHT.
CAUTION: PRIOR TO PROCEEDING TO STEP 2 VISUALLY CHECK THAT THE HEAT MECHANISM IS COVERED WITH AT LEAST 2" (51 mm) OF SHORTENING.		
2	Depress, then release the momentary START button.	A. RED STARTED lamp and AMBER MELT MODE lamp will light. B. BLUE READY TO START lamp will turn OFF. C. The MELT CYCLE TIMING MODULE in the Default-To-Melt electrical circuit will begin cycling the fryer heat mechanism ON for twelve (12) seconds and OFF for 28 seconds to safely heat the shortening.
CAUTION: PRIOR TO PROCEEDING TO STEP 3, VISUALLY CHECK THAT THE SHORTENING COMPLETELY COVERS THE HEAT MECHANISM.		
3	Depress, then release the momentary EXIT MELT button.	A. AMBER MELT MODE lamp will turn OFF, RED STARTED lamp will remain lit. B. The Melt Cycle Timing Module in the Default-To-Melt circuit will switch to the FULL ON position allowing the Electronic Thermostat to heat shortening to its pre-set temperature.
4	When the fryer's pre-set temperature has been reached, initiate a cook cycle.	

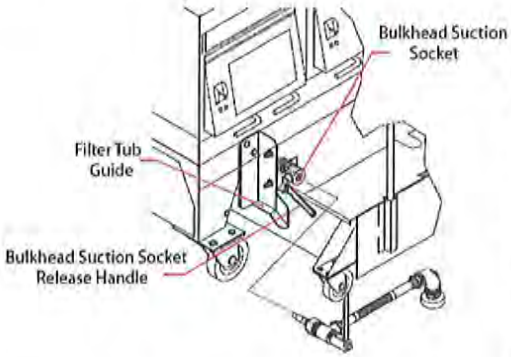
FILTERING & POLISHING SHORTENING

A. **FILTERING & POLISHING SHORTENING**

Assemble the Filter Tub, connect the Suction Line Hose Assembly to the Filter Screen **STANDPIPE,** install the Filter Tub beneath the fryer; then connect the **MALE PLUG** on the Suction Line Hose to the fryer's **BULKHEAD** Coupling as de- scribed in the FILTER TUB ASSEMBLY AND INSTALLATION section.

1. Turn the Toggle ON/OFF Switch on the fryer vat to be filtered **OFF**, and if applicable, place the recommended amount of **FILTER AGENT** in the fryer vat; thoroughly stir the filter agent into the shortening using the skimmer, then skim the shortening to remove any floating crumbs.

CAUTION: PRIOR TO PROCEEDING TO THE NEXT STEP, PUT ON SAFETY GOGGLES, NEO-PRENE INSULATED GLOVES, AND A PROTECTIVE APRON



2. Carefully open the drain valve on the vat to be filtered by turning the **DRAIN LEVER** slightly downward. When the bottom of the filter tub is covered with about 2" (51 mm) of shortening, **OPEN** the drain valve and slowly drain shortening to allow the heat mechanism to gradually **COOL.**

3. When all shortening in the vat has drained into the filter tub, use the **DRAIN ROD** to stand the wire rack on one side of the vat.

4. Use the drain rod to break up the sediment cake on the bottom of the vat and to pull the sediment toward and into the drain valve opening.

5. Use a scraper to remove encrusted material from the sides of the vat and a stropping pad to remove carbon buildup from the top and sides of the heat mechanism.

6. **SECURELY** connect the Wash Down Hose female **QUICK-CONNECT FITTING**to the male **QUICK-CONNECT STEM** on the rear wall of the vat.

CAUTION: IF THE FITTING IS NOT SECURELY ATTACHED TO THE STEM, HOT SHORTENING WILL BE DIS- CHARGED AROUND THE CONNECTION WHICH COULD CAUSE SEVERE BURNS.

7. Place the Wash Down Hose Nozzle into the fryer and hold it firmly against an inner wall. This prevents the hose from "recoiling upward" when the Filter Pump is turned on.

8. Turn the **PUMP LEVER** to the open **(DOWN)** position, hold the nozzle at a 45° angle from the bottom of the fryer causing shortening and debris to bounce off the rear wall of the vat and flow towards the drain valve opening.

9. Use the "L" shaped vat brush to push the sediment through the drain valve to keep the drain clear. Hose off the burner tubes and all walls of the vat until all the shortening and residue at the bottom of the fryer has been flushed through the drain into the filter tub.

10. Turn the **PUMP LEVER** to the closed **(UP)** position, disconnect the Wash Down Hose **COUPLER** from the **STEM** on the rear wall of the vat; then hang the wash down hose in an upright position so shortening can drain into a container.

NOTE: Failure to hang the Wash Down Hose in an upright position to drain may cause the hose to become clogged with hardened shortening.

11. Replace the wire grill in the fryer with the **SHORTENING DEFLECTOR** on the right **COVERING** the quick-
connect stem on the vat.

12. Set a timer for for the amount of time established for **POLISHING** shortening, then turn the **PUMP LEVER** to the open **(DOWN)** position to allow shortening to circulate through the system to **POLISH** the shortening.

CAUTION: DO NOT POLISH THE SHORTENING MORE THAN THE ESTABLISHED TIME AS IT WILL PUMP EXCESS AIR INTO THE SHORTENING CAUSING SHORTENING BREAKDOWN.

13. At the end of the established time, TURN the PUMP LEVER, and the DRAIN LEVER to the Closed UP position; then TURN the PUMP LEVER to the OPEN (DOWN) position to automatically return shortening in the filter tub to the fryer vat.

14. When all shortening in the filter tub has been returned to the fryer, TURN the PUMP LEVER to the CLOSED (UP) position, check and if necessary add fresh shortening so shortening is level with the middle line of the letter "E" in the word LEVEL of the applicable shortening level mark on the rear wall of the fryer.

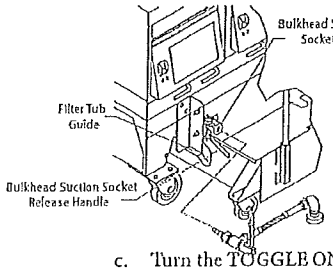
15. Disconnect the suction line hose from the Fryer's Bulkhead Suction Coupling; then THORUGHLY clean the filter tub assembly.

16. Repeat the above steps to filter and polish shortening in the remaining vats.

SHORTENING DISPOSAL, BOIL-OUT & INSTALLATION

A. SHORTENING REMOVE/DISPOSAL

1. SHORTENING REMOVAL / DISPOSAL - Fryer vats should be BOILED-OUT at least every 7 DAYS to remove carbon build up and other encrusted materials.



a. If the store is equipped with a Shortening Disposal System, remove used shortening from the fryer vat that is CLOSEST to the Shortening Disposal System connector. If the store is NOT equipped with a Shortening Disposal System, remove used shortening from the first fryer vat.

b. Assemble the filter Tub as described previously, position the filter tub in front of the FILTER TUB GUIDES, SECURELY connect the FEMALE coupler on the Suction Line Hose to the MALE plug on the Filter Screen standpipe, insert the filter tub beneath the fryer until it is butted against the STOP bracket; then connect the MALE plug on the Suction Line Hose to the fryer's FEMALE Bulkhead Socket.

c. Turn the TOGGLE ON/OFF SWITCH and, if applicable, the MANUAL GAS VALVE to the first vat OFF.

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

d. Turn the venthood Exhaust Fan ON and drain shortening from EACH fryer vat as follows:
   1) Carefully open the drain valve by turning the DRAIN LEVER slightly downward. When the bottom of the filter tub is covered with about 2" (51 mm) of shortening, OPEN the drain valve and slowly drain shortening to allow the heat mechanism to gradually COOL.
   2) When all shortening has drained into the filter tub, use the DRAIN ROD to stand the wire rack on one side of the vat.
   3) Use a scraper to remove encrusted material from the sides of the vat and a stropping pad to remove carbon buildup from the top and sides of the heat mechanism.
   4) SECURELY connect the Wash Down Hose female QUICK-CONNECT FITTING to the male QUICK-CONNECT STEM on the rear wall of the vat.

CAUTION: IF THE FITTING IS NOT SECURELY ATTACHED TO THE STEM, HOT SHORTENING WILL BE DISCHARGED AROUND THIS CONNECTION WHICH COULD CAUSE SEVERE BURNS.

   5) Place the Wash Down Hose Nozzle into the fryer and hold it firmly against an inner wall. This prevents the hose from "recoiling up" when the filter pump is turned on.
   6) Turn the PUMP LEVER to the open (DOWN) position, hold the nozzle at a 45° angle from the bottom of the fryer causing shortening and debris to bounce off the rear wall of the vat and flow towards the drain valve opening.
   7) Use the "L" shaped vat brush to push the sediment through the valve to keep the drain clear. Hose off the burner tubes and walls of the vat until all the shortening and residue at the bottom of the fryer has been flushed through the drain into the filter tub.
   8) Turn the PUMP LEVER to the closed (UP) position, disconnect the Wash Down Hose FITTING from the STEM on the rear wall of the vat; then hang the wash down hose in an upright position so shortening can drain into a container.
   9) Dispose of used shortening as follows:
      a) Restaurants NOT equipped with a Shortening Disposal System
         (1) Connect the Wash Down Hose female QUICK-CONNECT FITTING to the male QUICK-CONNECT STEM on the rear wall of the vat, place the hose nozzle into a METAL container and hold it firmly against an inner wall.
         (2) Turn the PUMP LEVER to the open (DOWN) position and pump shortening in the filter tub into the metal container.
         (3) When all shortening has been pumped into the container, turn the PUMP LEVER to the closed (UP) position, disconnect the Wash Down Hose FITTING from the STEM on the rear wall of the vat; then hang the wash down hose in an upright position so shortening can drain into a container.

b) Restaurants EQUIPPED with a Shortening Disposal System
   (1) SECURELY connect the Shortening Disposal System Hose fitting to the male QUICK-CONNECT STEM on the rear wall of the vat and connect the fitting on the other end of the hose to the Disposal System connector on the wall.
   (2) Turn the PUMP LEVER to the open (DOWN) position and pump shortening in the filter tub into the exterior rendering tank.
   (3) When all shortening has been pumped into the rendering tank, turn the PUMP LEVER to the closed (UP) position, remove the shortening disposal hose from the Disposal System connector on the wall and vat stem; then hang the disposal hose in an upright position so shortening can drain into a container.

10) When shortening has been removed from all Fryers, THOROUGHLY clean and re-assemble the filter tub.
11) Repeat the above steps to remove shortening from remaining vats.

B. FRYER BOIL-OUT

a. 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 all Drain Levers are in the closed (UP) position and the pump toggle ON/OFF switch is OFF, then add water to each vat until it reaches a point two 2" (51 mm) BELOW the middle line of the "E" in the word LEVEL of the UPPER shortening level mark on the rear wall of the vats.

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

   2) Add the amount of BOIL-OUT COMPOUND in each fryer vat as prescribed in the Cleaning Manual provided by the Chemical Supplier.
   3) Turn the fryer's Toggle ON / OFF Switch and manual Gas Valve for the fryer to the ON position, depress and release the START button; then depress and release the EXIT MELT button on the DTMR.
   4) When the boil-out solution starts to BOIL set a timer for 30 minutes and frequently scrub the sides, front and back of the vat with a long handled scrub brush.
   5) While the fryer is being BOILED OUT, clean the filter tub assembly according to procedures in the cleaning section.

NOTE: If the boil-out solution starts to boil over, shut the fryer OFF for a few minutes and add water as necessary, then turn it back ON.

   6) When the timer sounds, turn the fryer's Toggle ON / OFF Switch and Manual Gas Valve for the fryer to the OFF position; then CAREFULLY dispose of the boil-out solution in the fryer in a floor drain.

CAUTION: DO NOT USE THE PUMP/MOTOR UNIT TO REMOVE WATER FROM THE FRYER AS THIS WILL CAUSE PREMATURE PUMP FAILURE AND VOID THE WARANTY.

   7) Use a scrubbing pad to remove carbon build-up from the top of the burner. To remove carbon build-up on the sides and bottom of the heat exchanger, slide one end of a stropping pad under each heat exchanger, grasp that end with a pair of tongs and rock the pad up and down along the length of each heat exchanger until all encrusted material has been removed. Replace the wire rack in the fryer.
   8) Rinse the fryer with hot water until the water coming out of the drain valve is clear.
   9) 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, BURNER TUBES and BOTTOM of the fryer to neutralize the Boil-Out Compound.

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

   10) THOROUGHLY wipe the sides, burner tubes and bottom of the fryer with clean, lint-free, dry towels to remove any remaining water, turn the DRAIN VALVE to the closed UP position; then fill the fryer with NEW shortening to the applicable shortening level mark, and resume normal operations.

C. SHORTENING INSTALLATION:

1. LIQUID SHORTENING: When using liquid shortening fill the fryer with cool shortening 1/2" (13mm) BELOW the "E" in the word LEVEL.. When heated ensure shortening is even with the "E" in the word LEVEL.

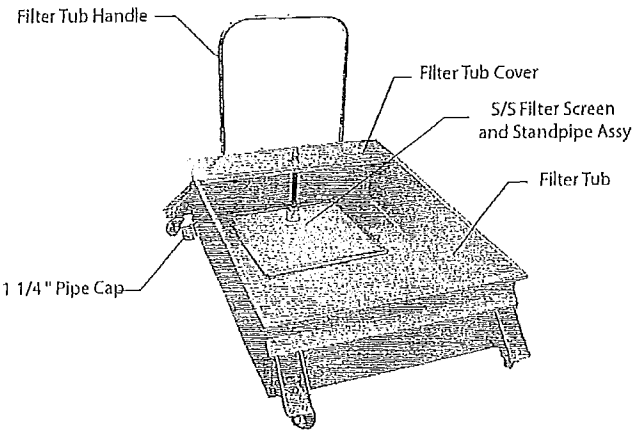
2. SOLID SHORTENING:
   a) Cut a block of solid shortening into small pieces.
   b) Place small pieces of solid shortening EVENLY on top of the HEAT EXCHANGER TUBES or THOROUGHLY PACK these pieces of solid shortening between, below and above the HEAT EXCHANGER TUBES. While packing solid shortening is messy and time consuming, it is the fastest way to melt solid shortening.
   c) Turn the fryer ON/OFF switch to the ON position; then place the DTMR or other fryer control in the MELT MODE.
   d) When the BURNER TUBES are completely covered with LIQUID shortening , replace the grill in the fryer vat; then place the fryer in the FULL ON mode.
   e) Continue adding solid shortening as follows:
      1) Place small pieces of solid shortening into a fry basket.
      2) CAREFULLY lower the basket into the fryer vat.
      3) GENTLY turn the basket to allow these pieces of solid shortening to float away.
      4) Repeat the above steps until liquid shortening is even with the middle line of the "E" in the word LEVEL of the applicable shortening level mark on the rear wall of the fryer vat.

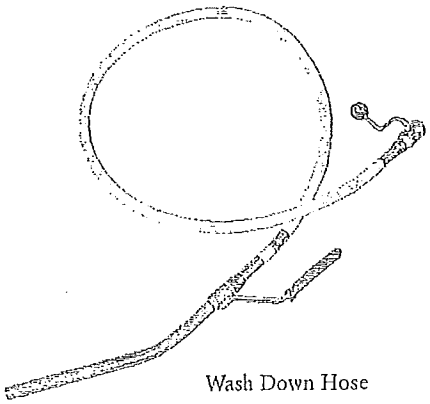
WARNING!!! TO AVOID INJURY

I DO NOT MOVE A FRYER FILLED WITH HOT LIQUID.
II THE FRYER MUST BE RESTRAINED BY USE OF A RETAINING DEVICE TO PREVENT TIPPING TO AVOID THE SPLASHING OF HOT LIQUID.
III THE AREA SURROUNDING THE FRYER MUST BE KEPT FREE AND CLEAR OF ALL COMBUSTIBLES.
IV DO NOT GO NEAR THE AREA DIRECTLY OVER THE FLUE OUTLET WHEN THE FRYER'S MAIN BURNERS ARE OPERATING.
V ALWAYS WEAR OIL-PROOF, INSULATED GLOVES WHEN WORKING WITH A FRYER FILLED WITH HOT OIL.
VI ALWAYS DRAIN HOT OIL INTO A METAL TUB, POT OR CAN ... HOT OIL CAN MELT PLASTIC BUCKETS OR SHATTER GLASS CONTAINERS.

CLEANING

A. GENERAL - As mentioned earlier, Any item of equipment operates better and lasts longer when it is kept cleaned and properly maintained, and the FRYER and FILTER TUB ASSEMBLY are no exception. Clean the FILTER SCREEN after Filtering Shortening and at Closing; and THOROUGHLY clean the FILTER TUB ASSEMBLY each DAY and WEEK as described below.



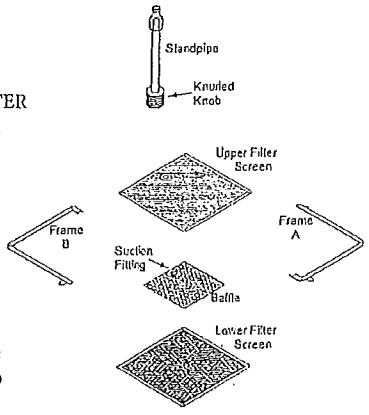

Wash Down Hose

B. DAILY

1. Clean the Filter Machine and Filter Assembly after FILTERING and AT CLOSING as follows:

a After Filtering Shortening:

1) Disassemble the Filter Machine by removing the following items in the order listed; (1) FILTER TUB HANDLE, (2) COVER, (3) WASH DOWN HOSE, (4) SUCTION LINE HOSE, and (5) FILTER ASSEMBLY.
2) Clean the Suction Line Hose and Wash Down Hose with sanitizer solution; then hang these hoses in an upright position so any shortening can drain into a container.
3) Raise the Filter Assembly above the Filter Tub and let any sediment or shortening drain into the tub; then THOROUGHLY clean the filter assembly as follows:
   (a) "Micro-Mesh" Stainless Steel Filter Screen
      (1) CAREFULLY remove any debris from the screen using a scraper.
      (2) Remove the STANDPIPE and KNURL knob from the FILTER SCREEN assembly, grasp the FINGER LOOP on FRAME A and adjacent FINGER LOOP on FRAME B, EVENLY pull the frames apart; then HINGE FRAME A to remove it from the FILTER SCREENS FIRST.
      (3) Grasp the FINGER LOOP on the straight side of FRAME B; then HINGE it to remove FRAME B from the FILTER SCREENS.
      (4) Separate the UPPER FILTER SCREEN and BAFFLE from the LOWER FILTER SCREEN.
      (5) CAREFULLY clean the two frames, screens and baffle in the 3 compartment sink with hot water and allow these items to air dry. DO NOT USE SOAP. If necessary the channels in each frame can be cleaned with the edge of a scotch-brite pad.



      (6) Insert the SUCTION FITTING on the BAFFLE in the hole of the UPPER FILTER SCREEN; then place these items on top of the LOWER FILTER SCREEN.
      (7) ENSURE all sides of the FILTER SCREEN assembly are aligned, place the PIN end of FRAME A on the FILTER SCREENS, place the CHANNEL on the frame adjacent to the PIN end over the FILTER SCREENS; then HINGE the frame so the edge of the FILTER SCREENS are inserted in the other CHANNEL of FRAME A.
      (8) Place the PIN end of FRAME B on the FILTER SCREENS so the PIN is seated in the CHANNEL of FRAME A near the FINGER LOOP, place the CHANNEL on the frame adjacent to the PIN end over the edge of the FILTER SCREENS; then HINGE the frame so the edge of the FILTER SCREENS are inserted in the other CHANNEL of FRAME B and the PIN of FRAME A is seated in the CHANNEL of FRAME B .

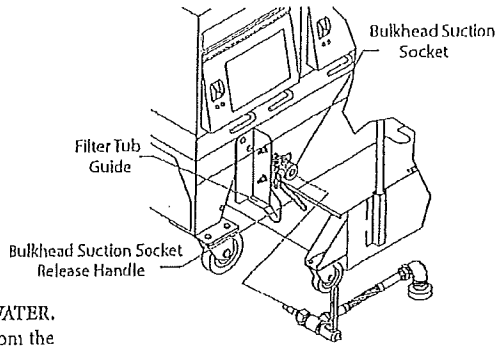
(9) Adjust FRAME A and B so both PINS are properly seated in the CHANNEL of the opposite frame; then CAREFULLY connect the KNURL KNOB and STANDPIPE to the SUCTION FITTING on the FILTER SCREEN assembly. DO NOT OVERTIGHTEN!!!

(b) "Magnepad Envelope" Filter: Magnepad Filter Assemblies DO NOT have to be SCRAPED after filtering shortening

4) Remove any sediment and shortening in the Filter Tub using a scraper; then wipe the tub dry with paper towels.
5) Carefully insert the Filter Assembly in the bottom of the Filter Tub with the STANDPIPE centered in the handle end of the tub.

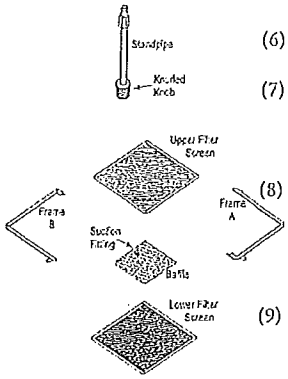
WARNING: WHEN ASSEMBLED, ENSURE THERE ARE NO FINGER LOOPS ON THE STANDPIPE SIDE OF THE FILTER.

6) SECURELY connect the FEMALE fitting on the Suction Line Hose to the MALE stem on the Filter Screen STANDPIPE, install the assembled Filter Tub beneath the fryer until it is butted against the STOP bracket; then connect the MALE plug on the Suction Line Hose to the fryer's FEMALE Bulkhead Socket shown to the right.

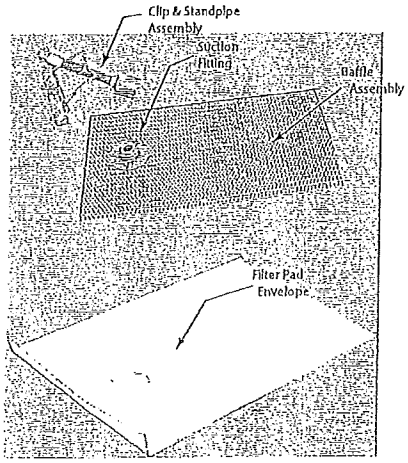


b. At Closing

1) Repeat DAILY steps B 1 a 1) thru B 1 a 3) above.
2) THOROUGHLY clean the Filter Assembly as follows:
   (a) "Micro-Mesh" s/s Filter Screen:
      (1) THOROUGHLY flush any remaining sediment from both sides of the filter screen with HOT WATER.
      (2) Remove the STANDPIPE and KNURL knob from the FILTER SCREEN assembly, grasp the FINGER LOOP on FRAME A and adjacent FINGER LOOP on FRAME B, EVENLY pull the frames apart; then HINGE FRAME A to remove it from the FILTER SCREENS FIRST.
      (3) Grasp the FINGER LOOP on the straight side of FRAME B; then HINGE it to remove FRAME B from the FILTER SCREENS.
      (4) Separate the UPPER FILTER SCREEN and BAFFLE from the LOWER FILTER SCREEN.
      (5) CAREFULLY clean the two frames, screens and baffle in the 3 compartment sink with hot water and allow these items to air dry. DO NOT USE SOAP. If necessary the channels in each frame can be cleaned with the edge of a scotch-brite pad.



      (6) Insert the SUCTION FITTING on the BAFFLE in the hole of the UPPER FILTER SCREEN; then place these items on top of the LOWER FILTER SCREEN.
      (7) ENSURE all sides of the FILTER SCREEN assembly are aligned, place the PIN end of FRAME A on the FILTER SCREENS, place the CHANNEL on the frame adjacent to the PIN end over the FILTER SCREENS; then HINGE the frame so the edge of the FILTER SCREENS are inserted in the other CHANNEL of FRAME A.
      (8) Place the PIN end of FRAME B on the FILTER SCREENS so the PIN is seated in the CHANNEL of FRAME A near the FINGER LOOP, place the CHANNEL on the frame adjacent to the PIN end over the edge of the FILTER SCREENS; then HINGE the frame so the edge of the FILTER SCREENS are inserted in the other CHANNEL of FRAME B and the PIN on FRAME B is seated in the CHANNEL of FRAME A.
      (9) Adjust FRAME A and B so other PINS are properly seated in the CHANNEL of the opposite frame; then CAREFULLY connect the KNURL KNOB and STANDPIPE to the SUCTION FITTING on the FILTER SCREEN assembly. DO NOT OVERTIGHTEN!!!
   (b) "Magnepad" Envelope Filter - Remove and discard the USED Filter Pad Envelope, CAREFULLY clean the Baffle Assembly and Clip / Standpipe Assembly in a 3 compartment sink with HOT water and allow these items to air dry. DO NOT USE SOAP!! Re-assemble the Magnepad Envelope Filter using a NEW MAGNESOL IMPREGNATED 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 the FLAP over (in the direction of the hole), securing the Baffle inside the FILTER PAD ENVELOPE.
(3) CAREFULLY, align the CLIP & STANDPIPE ASSEMBLY so that the CLIP can secure the FLAP on the Envelope and the STANDPIPE will align over the SUCTION FITTING protruding through the Envelope.
(4) Tighten the knurled NUT on the STANDPIPE to the SUCTION FITTING protruding through the Envelope.

3) Repeat DAILY steps B 1 (a) 4) through steps B 1 (a) 6).

C. WEEKLY

1. Perform the daily cleaning steps B 1 (a) 1) through B 1 (a) 3) above.

2. Clean the Filter Assembly as follows:
   A) "Micro-Mesh" stainless steel filter screen:
      1) Disassemble the filter according to DAILY steps B 1 a 3) a) (1) through B 1 a 3) a) (4) and clean the two (2) frames as described in step B 1 a 3) a) (5).
      2) Place the upper and lower FILTER SCREENS in the fryer with BOIL-OUT SOLUTION for cleaning. DO NOT PLACE THE BAFFLE OR STANDPIPE IN THIS SOLUTION!!! BOIL-OUT the fryer vat according to instructions contained in the cleaning manual provided by your chemical supplier.
      3) After the filter screens have been cleaned in the Boil-Out Solution, ENSURE they are THOROUGHLY sprayed with a solution of 1 PART vinegar to 25 PARTS of water to NEUTRALIZE the boil-out solution, then allow the screens to air dry. NOTE: any residue of boil-out solution on the filter screens could cause the rapid break-down of the shortening.
      4) Reassemble the "Micro-Mesh stainless steel filter screen according to DAILY steps B 1 a 3) a) (6) through B 1 a 3) a) (9).
   B) "Magnepad" Envelope Filter - Disassemble, clean, and re-assemble the "Magnepad" Filter Assembly according to DAILY cleaning steps B 1 b 2) b) above.

3. THOROUGHLY clean the Filter Tub and Cover with HOT SANITIZER SOLUTION and allow them to air dry.

4. Re-assemble and install the Filter Tub according to the FILTER TUB ASSEMBLY AND INSTALLATION section of this manual..

WARNING: WHEN ASSEMBLED, ENSURE THERE ARE NO FINGER LOOPS ON THE STANDPIPE SIDE OF THE MICRO-MESH FILTER.

PREVENTIVE MAINENANCE & TROUBLESHOOTING

A. PREVENTIVE MAINTENANCE

Minimal maintenance is required on the fryer because of its design and the materials used in manufacture. However, some preventive maintenance and inspection must be performed periodically to prevent break downs which could curtail food sales. Anypreventive 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 gas and electric power MUST BE TURNED OFF PRIOR TO performing that service or repair.

PREVENTIVE MAINTENANCE SCHEDULE	
INSPECTION ITEM	INSPECTION DESCRIPTION
DAILY	
Grease Filters	Clean grease filters in the exhaust hood each evening and allow them to dry overnight.
Filter Tub	Thoroughly clean the filter tub assembly prior to leaving the store at closing
NOTE: ENSURE THE WASH DOWN HOSE IS HUNG IN AN UPRIGHT POSITION (BY ONE END) SO SHORTENING CAN DRAIN INTO A CONTAINER!	
WEEKLY	
Drain Valve & Shortening Return Levers	Determine that all levers are securely attached and that they can be easily opened and closed.
Drain Hoses	Inspect the suction line hose, wash down hose and if applicable the shortening disposal hose for any evidence of deterioration.
Plumbing Heat Tape Insulation	Ensure that the insulation and electric heat tape that are wrapped around the plumbing directly behind the drain trough has not been damaged.
Temperature Sensing Probes	During Boil-Out of the fryer, inspect the temperature and high limit sensing probes for any visual damage.

B TROUBLESHOOTING

I. 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 repairmau:

a. Ensure Gas Valves are in their proper position.
b. Check that the fryer electrical plug is connected to an electrical receptacle.
c. Ensure the applicable Circuit Breaker is in the ON position and that the fryer ON/OFF switch is in the ON position.
d. Ensure the applicable fryer control has been placed in the FULL ON mode.
e. Ensure the gas supply line quick-disconnect coupling is SEATED on the gas manifold fitting.
f. Determine that the blower is operating.

C TROUBLESHOOTING CHART: Should a problem occur that cannot be corrected after performing the above CHECKS, contact an authorized repairman and/or Ultrafryer Systems 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.

TROUBLESHOOTING CHART		
ITEM	PROBLEMS	POSSIBLE SOLUTIONS
1	Main burner will not ignite. Blower is operating; but gas is not present at the burner.	A. Check the Blower air pressure Switch by temporarily disconnecting the two (2) ORANGE air switch wires and connecting them together. If the IGNITOR sparks when these wires are conected, the air pressure switch is defective and it will have to be replaced. B. Check the following components and replace if found to be defective: Gas Control Valve Hi-Limit Switch Transformer
2	Electrical power is present at the fryer, but the Blower is not operating.	A. Blower may have over-heated and shut off on thermal overload. If this situation did occur, it will correct itself when the motor cools (10-20 minutes). If this overheating problem persists, replace the blower motor.
3	Excessive time is required to raise the shortening to cooking temperature. Temperature recovery is slow and main burner flames are small and appear to be lethargic.	A. Ensure that the MANUAL GAS VALVE is completely open. B. Check for an obstruction in the gas line C. Check for an obstruction in the flue pipe. D. Check that the ORFICE PLUG has the correct drill size opening as indicated on the operational requirements chart. E. Check for damaged BLOWER fins. F. Use a standard water-type U-gauge Manometoer to check the pressure at the gas control valve pressure tap. Proper gas pressure is indicated on the operational requirements chart. NOTE: If necessary remove the Pressure Regulator Adjustment Cover and adjust this control to the proper pressure. (Turn adjusting screw CLOCKWISE to increase gas pressure to the burner and COUNTER CLOCKWISE to decrease gas pressure. Replace adjustment cover.)
4	Shortening temperature is too high and breaks down quickly.	A. Check the gas pressure as described above. B. Check calibration of the Electronic Thermostat with an ACCURATE digital thermometer.
5	The filter pump motor fails to operate when the Vat Shortening Return / Topside Shortening Lever is placed in the OPEN position.	A. Insure the filter pump micro-switch is good, then check the manual reset button on the filter pump motor. B. If the filter pump motor fails to operate after the reset button has been depressed, repair or replace the motor.
6	Decreased shortening flow rate while filtering.	A. Check for excessive sediment on the filter screen, standpipe suction fitting or in filter tub.
7	Pump/Motor operates but does not pump shoretening.	A. Check for congealed shortening in the shortening system. B. Check for loose Standpipe / Suction Line Coupler connection.
8	Pump / Motor hums but will not pump shortening	A. Check for congealed shortening in the pump or in shortening plumbing.

WARNING: To prevent shortening from flowing out of the return hose, close the drain handle and the filter handles and place the return wand is inside the vat facing downward before pressing the reset button on the pump motor.

TECHNICAL ASSISTANCE & ORDERING INFORMATION

A. TECHNICAL ASSISTANCE - Contact an authorized service agent or the Customer Service Department, Ultrafryer Systems at 1-800-525-8130 for technical assistance.

B. 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: 1-800-545-9189 Ext 5029
FAX order to: 1-210-731-5099
Mail order to: Ultrafryer Systems
Order Entry Office
P.O. Box 5369
San Antonio, TX 78201
E-Mail your order to: Ultafryerservice@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 - Ultrafiyer 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.

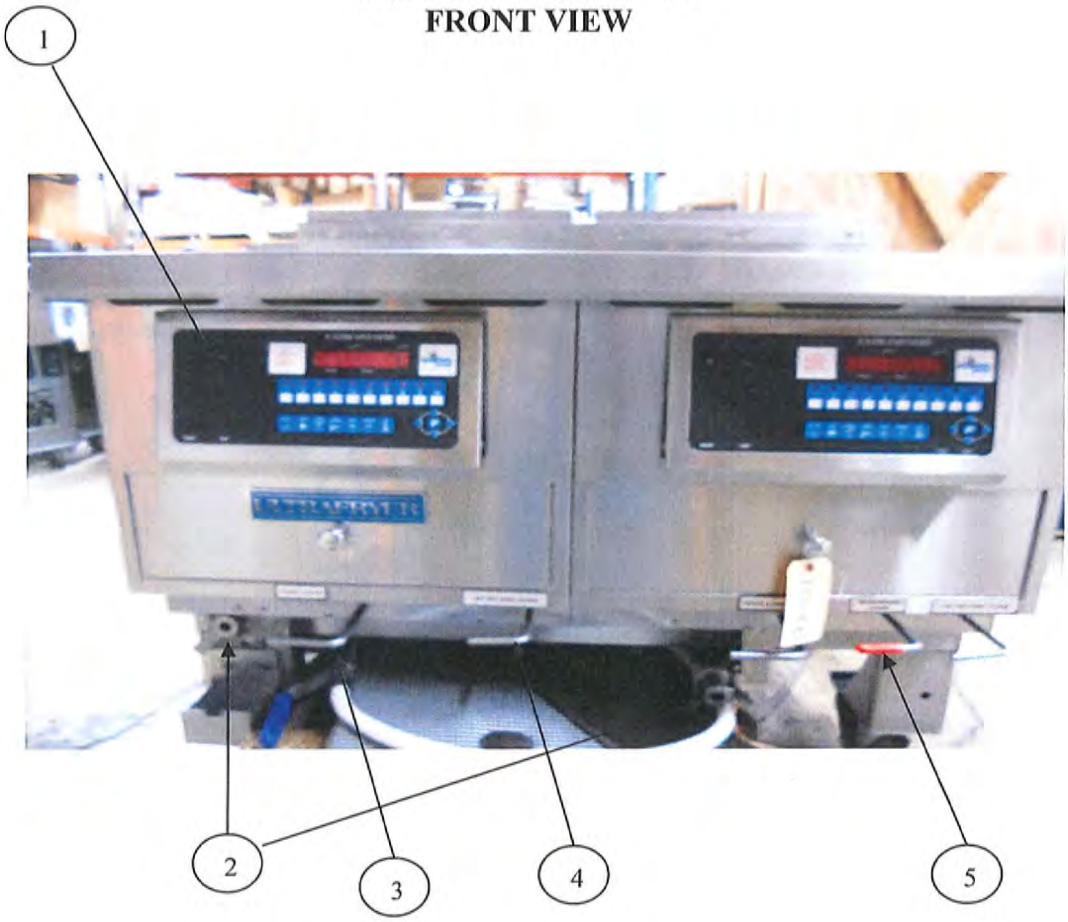
4. RETURNS - Ultrafyer Systems cannot guarantee credit for items returned without proper authorization. All returns must have prior Ultafryer Systems Customer Service or Warranty department approval. An assigned number will be issued by the approval authority. Please print the assigned number on all 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 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:

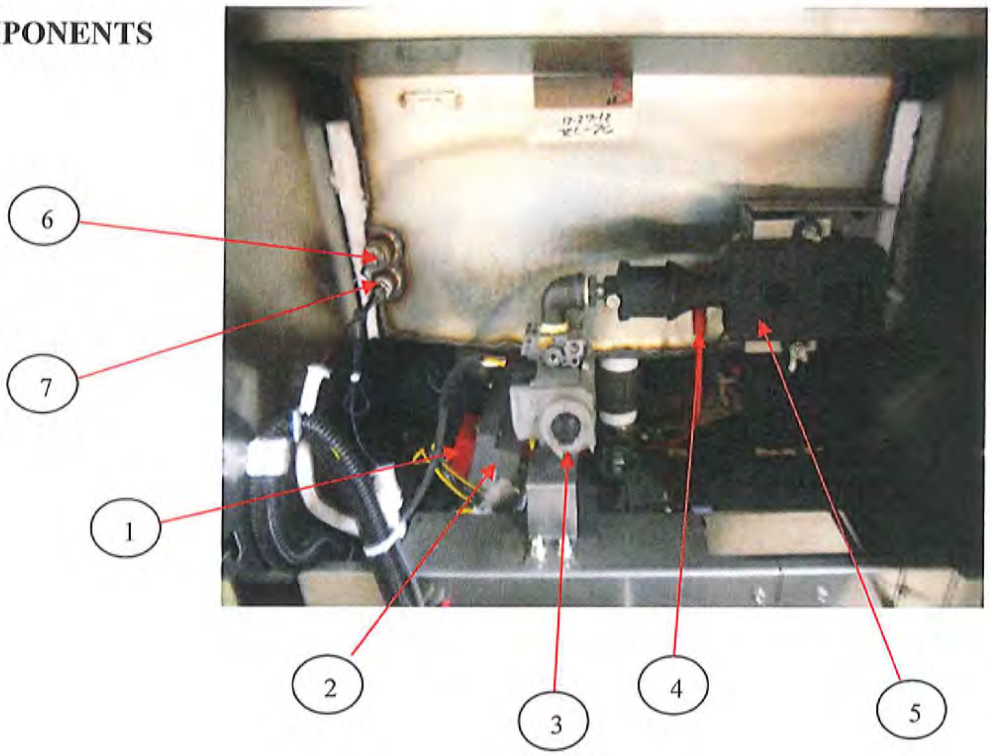
Description	Manufacturer's Part No.	UFS PN
Spark Ignitor Module	Honeywell S87B1008	18179
Transformer 120V/24V Stepdown	Honeywell AT40A1121	18180
Comb. Gas Control Valve 24V	Honeywell VR8203A-1005	18227
Toggle Switch DPDT On/Off	McGill	18A287
Air Pressure Switch	Antunes SMD 1204	18A291
Hi Limit Switch	Stemco 103KM1	19B783
Temperature Probe	Probes Unlimited 91K	18A006
Kit, Micro Switch	Ultrafryer	62365
Blower Motor	Fasco	17A021

RS2 20X14 GAS FRYER
FRONT VIEW



ITEM	DESCRIPTION	PN
1	CONTROLLER, FAST U-23 10 BUTTON (unprogrammed)	22A651
2	Staubli Female Bulkhead Coupling	24A238
3	LEVER, BV DRAIN SHORT	12B807
4	HANDLE, FILTER BV	19C057
5	LEVER, WASH WAND	19C057

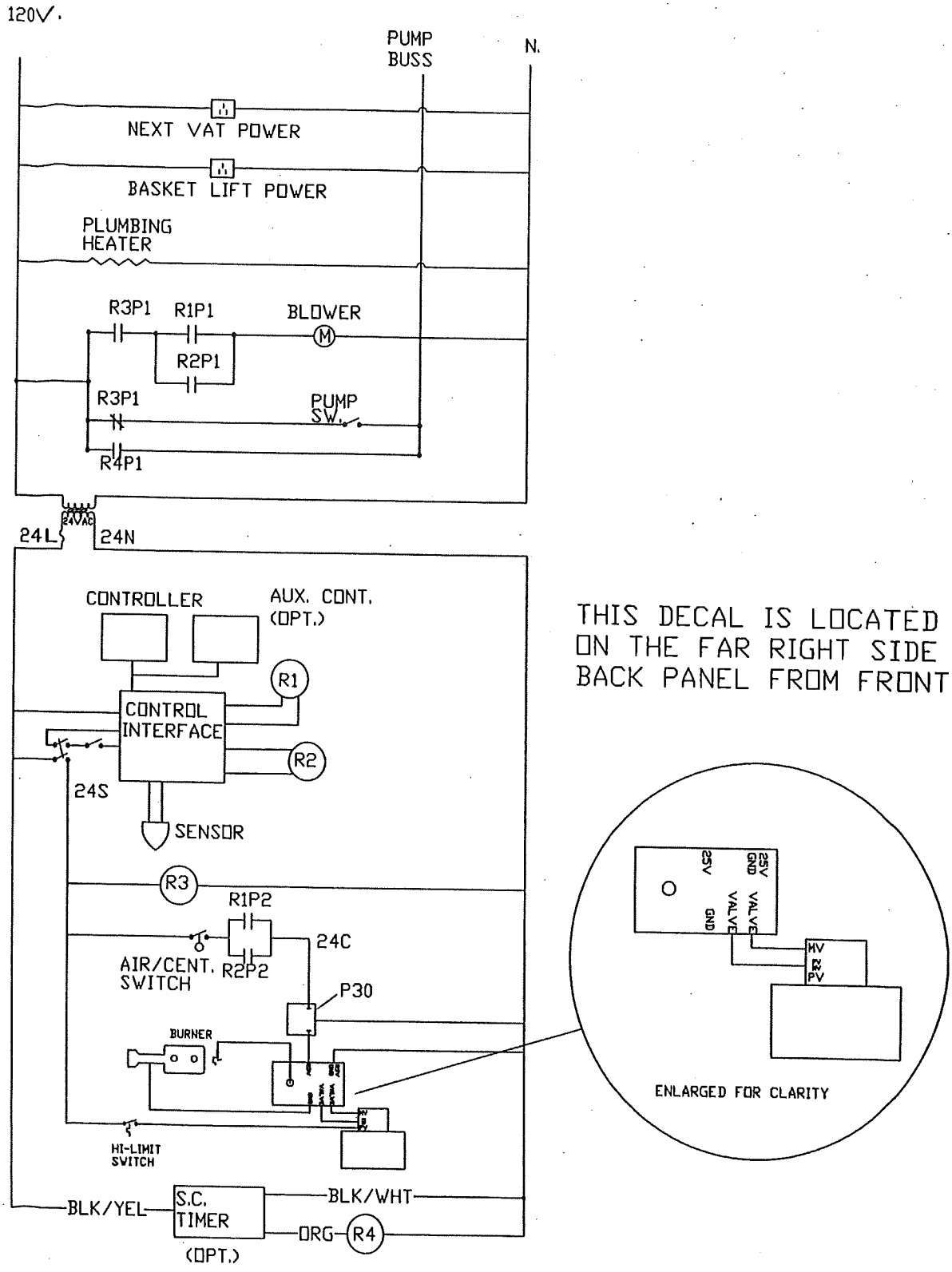
FRYER COMPONENTS



ITEM	DESCRIPTION	PN
1	Delay on Make Relay	18A045
2	Ignitor Module	18179
3	Gas Control Valve	18227
4	Wire, Ignitor 26"	18187
5	Cast Iron Burner	22A341
6	Temperature Probe Thermistor	18A006
7	Hi Limit Switch– Order a 1/4" (5mm) Compression Fitting PN 24247 When ordering this item	19A144

WIRING DIAGRAM

LADDER DIAGRAM



Wiring diagram is located on the front door panel of the furthest Right Hand vat.