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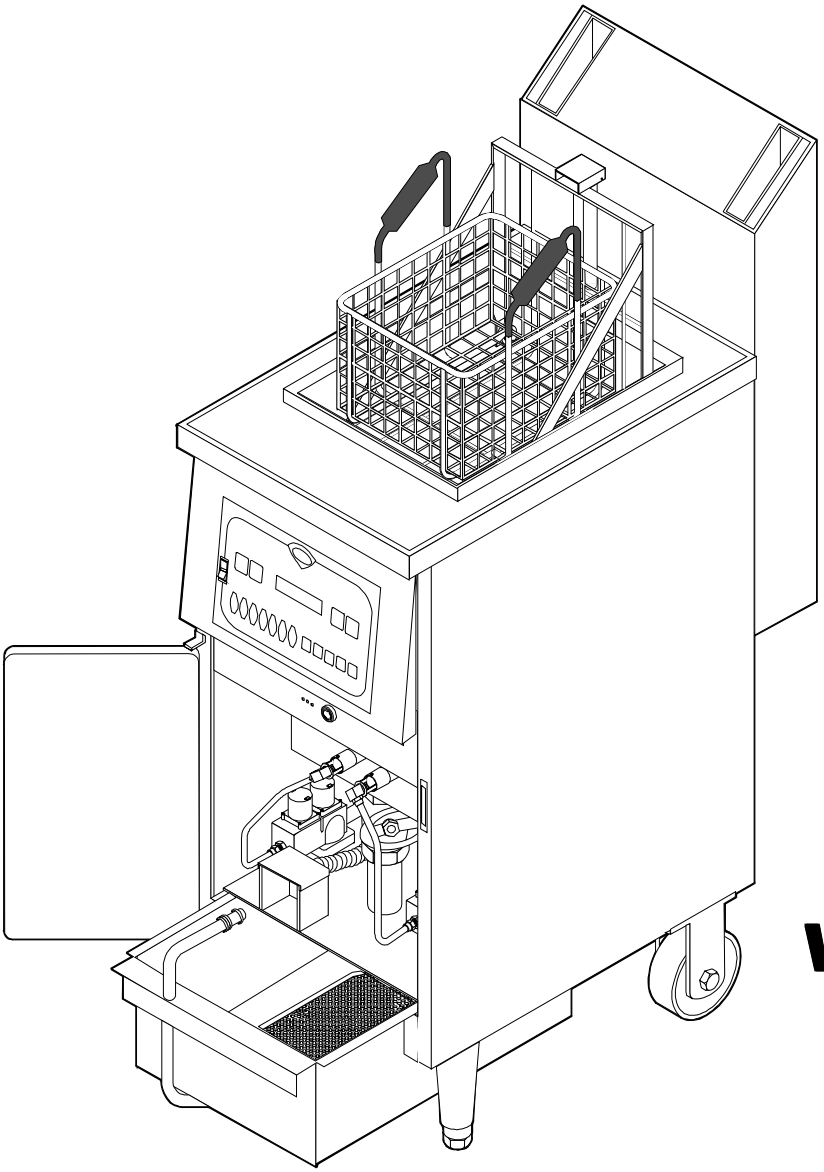
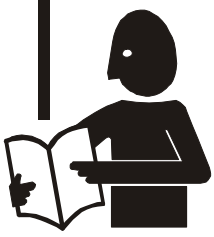


SERVICE MANUAL for GAS FRYER MODEL WFGA-60FS



IMPORTANT: WELLS MANUFACTURING PROPRIETARY INFORMATION. DISSEMINATION OF THIS INFORMATION TO ANYONE OTHER THAN WELLS AUTHORIZED SERVICE AGENTS IS STRICTLY PROHIBITED. TECHNICAL CONTENT OF THIS MANUAL IS DESIGNED FOR USE BY QUALIFIED PROFESSIONAL TECHNICIANS ONLY.

SAFETY PROCEDURES

Knowledge of proper procedures is essential to the safe operation of electrically energized equipment. In accordance with generally accepted product safety labeling guidelines for potential hazards, the following signal words and symbols are used throughout this manual.

DANGER - Danger is used to indicate the presence of a hazard which will cause severe personal injury, death, or substantial property damage in the event the statement is ignored.

WARNING - Warning is used to indicate the presence of a hazard which can cause personal injury and possibly death, or major property damage, in the event the statement is ignored.

CAUTION - Caution is used to indicate the presence of a hazard which will or can cause minor personal injury, or property damage in the event the statement is ignored.

CAUTION - Used to indicate the presence of an electrical hazard which will or can cause personal injury, or property damage in the event the statement is ignored.

NOTE - Note is used to notify personnel of installation, operation or maintenance information which is important, but not hazard related.

FRYER PRECAUTIONS AND GENERAL INFORMATION

1. This fryer is intended for use to deep fry food products for human consumption. No other use is recommended or authorized by the manufacturer or its agents.

2. Service technicians must be familiar with the appliance use, limitations and associated hazards. Operating instructions and warnings must be read and understood by all operators and users.

3. Your WELLS fryer is equipped with an oil filtration system, which is designed to filter hot shortening ONLY. Water, cleaning agents or other liquids will damage the FILTER PUMP.

4. Except where otherwise noted, this piece of equipment is made in the USA and has American sizes on hardware.

5. This manual supplements the *Owners Manual* (p/n 301198) for this equipment. Refer to the *Owners Manual* for normal operating procedures and programming procedures.

6. Any trouble shooting guides, electrical diagrams, component views or parts lists included in this manual are intended for use by qualified service technicians only.

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GENERAL SPECIFICATIONS

DIMENSIONS

Wide	18-3/16””
Deep	38-1/4”
High (Basket Raised)	47-7/16”

CAPACITIES	**Lb.**	**Kg.**
Cooking Oil (Liquid Shortening Only)	60	27
Chicken (fresh) (Standard Basket)	30	13
Chicken (frozen) (Standard Basket)	25	11

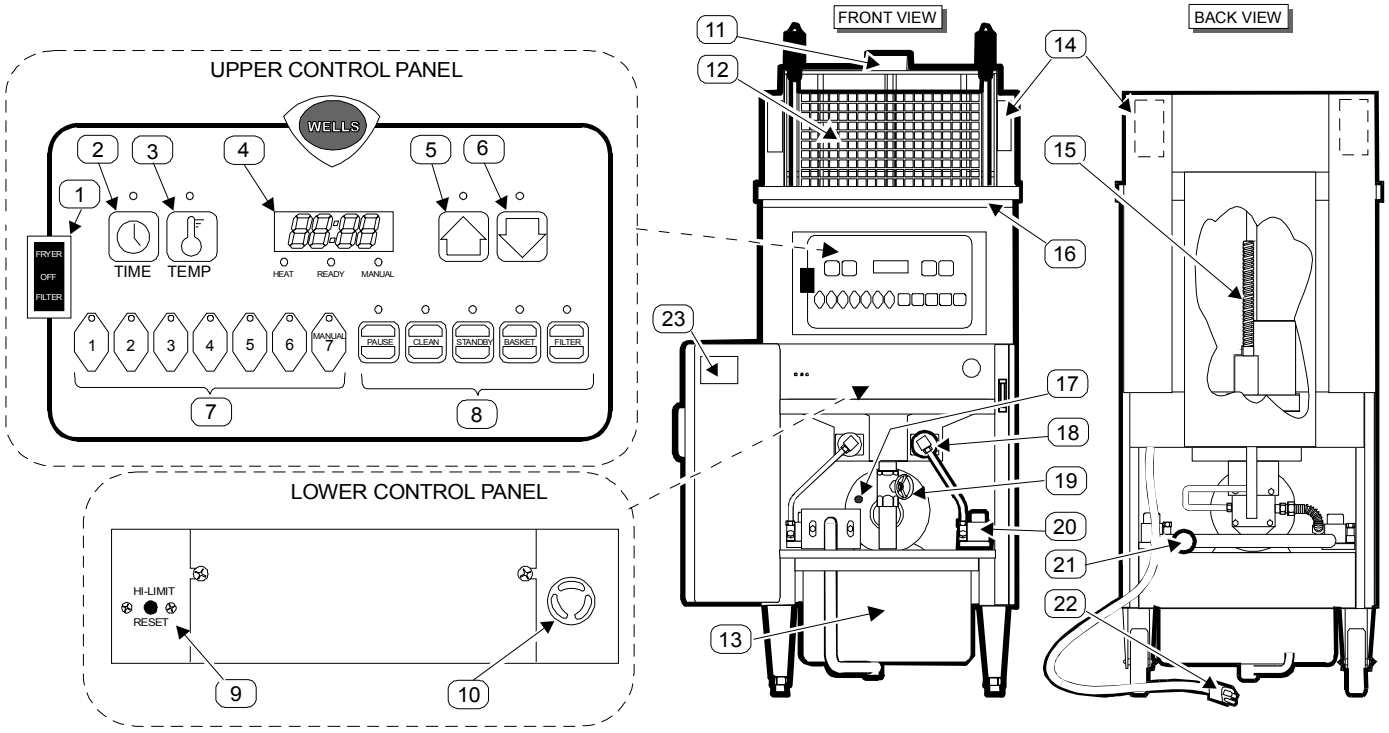
ELECTRICAL

Voltage Requirement	120 VAC / 5 Amp 1∅ operation ONLY

GAS

Natural Gas	62,000 BTU/hr
Pressure	3.5” water column
Field convertible to LP/Propane	
Pressure	10” water column

WFGA-60FS w/SOLID STATE CONTROLLER
FEATURES and OPERATING CONTROLS



1. POWER SWITCH (*FRYER / OFF / FILTER*)
   FRYER position turns *ON* the FRYER and energizes the UPPER CONTROL PANEL; and, turns *OFF* the FILTER PUMP. Burner circuits are energized and regulate to the programmed temperature.
   OFF position turns *OFF* the FRYER.
   FILTER position energizes the FILTER PUMP.
2. TIME KEY — Used to check and set menu times.
3. TEMP KEY — Used to check and set menu temperatures.
4. READOUT — LED display of various data and functions.
5. UP ARROW KEY — Used to raise FRY BASKET and change program settings.
6. DOWN ARROW KEY — Used to lower FRY BASKET and change program settings.
7. MENU KEYS — Used to begin a menu time/temp cycle.
   Keys 1 thru 6 are programmable for time and temperature;
   Key 7 is available for individually set time/temp cook cycles
8. FUNCTION KEYS — Used to perform the functions of PAUSE, CLEAN, STANDBY, BASKET (raise/lower) and FILTER (warning/acknowledge)
9. HI-LIMIT THERMOSTAT — Provides over-temperature protection by de-energizing the GAS VALVES if the oil temperature exceeds the factory-set limit. RESET must be performed manually. Allow the oil to cool below 350ºF (177ºC), then firmly press the red button on the LOWER CONTROL PANEL until it “clicks”.

CAUTION: FIRE HAZARD / HOT OIL

THE HI-LIMIT THERMOSTAT IS A FIRE PROTECTION DEVICE.
If tripping persists, contact your authorized Wells service agency for repairs.
DO NOT ATTEMPT TO BYPASS OR HOLD IN THE BUTTON OF THE HI-LIMIT THERMOSTAT. A FIRE WILL RESULT.

10.	SONALERT	Audible alarm to signal end of a cook cycle and other programmed functions.
11.	LIFT CRADLE	Raises and lowers FRY BASKET.
12.	FRY BASKET	Sits on the LIFT CRADLE and holds product to be cooked. Raised and lowered by the LIFT CRADLE.
13.	OIL FILTER RESERVOIR	Holds the filter element. Holds oil during filtering cycle.
14.	EXHAUST FLUE	Twin flues. Hot flue gases exit here.
15.	LIFT MOTOR	Raises / lowers LIFT CRADLE. Accessible for lubrication thru the access plate in back panel.
16.	VENTILATION SLOT	Provides air inlet for COOLING FAN inside CONTROL PANEL. ***NEVER ALLOW WATER TO GET INTO THIS SLOT.***
17.	FILTER PUMP MOTOR RESET BUTTON	The FILTER PUMP MOTOR is equipped with an over-heating protection device. RESET must be performed manually. Allow the motor to cool for approx. 15 min., then firmly press the red button on the motor until it "clicks".
18.	BURNER ASSEMBLY	Two assemblies; comprised of orifice, shutter, burner tube and ignitor/flame sensor.
19.	DRAIN VALVE OVAL HANDLE	Opens and closes the DRAIN VALVE. To OPEN, turn the handle counterclockwise (to vertical). To CLOSE, turn the handle clockwise (to horizontal).
20.	GAS SHUT-OFF VALVES	Two valves, one located behind each gas control valve. Allow isolation of either burner circuit.
21.	GAS CONNECTION	Gas supply connects here.
22.	POWER CORD	115V 15Amp, NEMA 5-15P
23.	DATA PLATE	Identifies the appliance manufacturer, model and serial number; also gives electrical ratings, gas ratings.

EQUIPMENT INSTALLATION AND SET-UP

A. INITIAL INSTALLATION

1. A single WFGA-60FS gas-fired fryer requires a minimum of 500 cubic feet per hour (12 CFM) exhaust air, measured at the exhaust hood ventilator fan. Supply ventilation for the kitchen must have sufficient capacity to prevent a negative-pressure condition.
   DO NOT obstruct or restrict ventilation and make-up air required to support combustion.

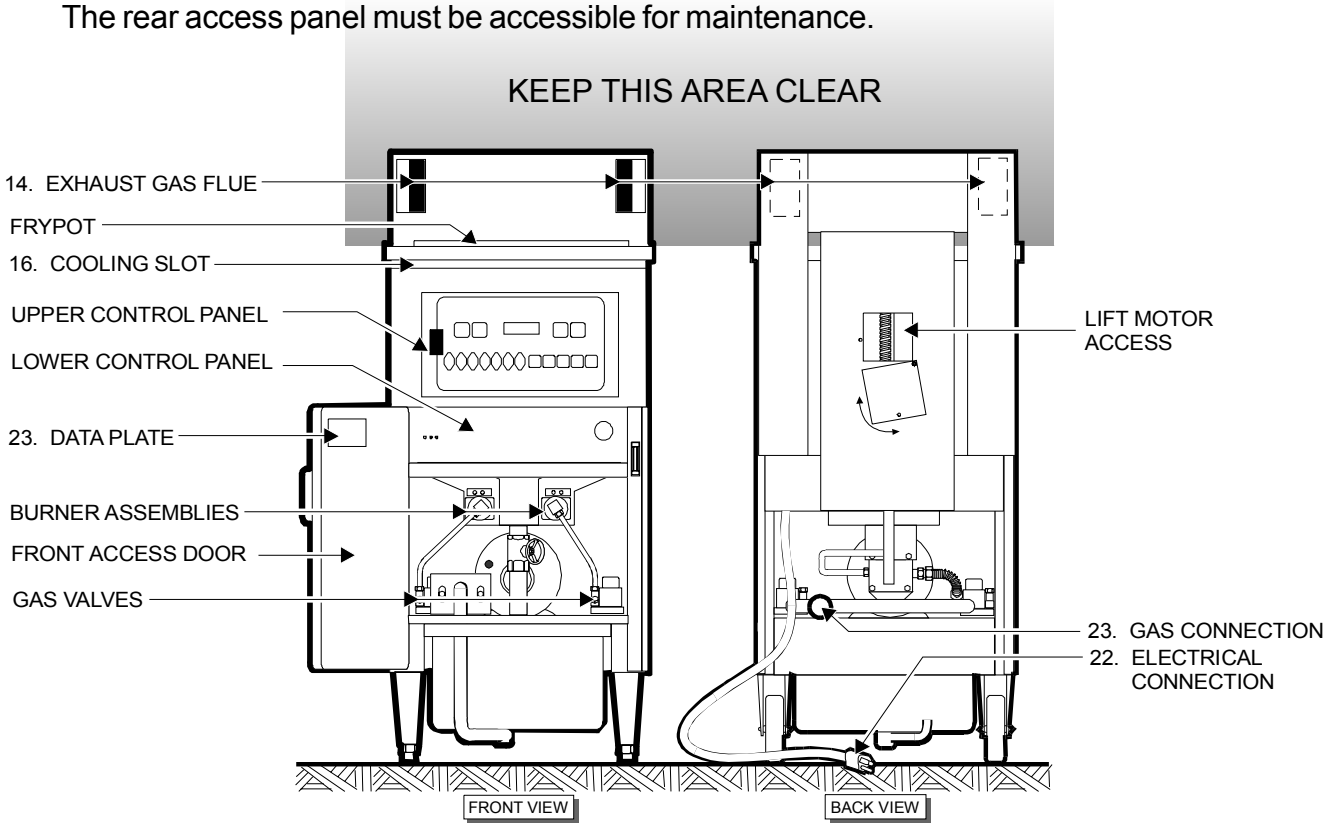
2. Setup the FRYER only on a firm, level surface. Clearances from all combustible and non-combustible construction is 1" minimum. The area around the fryer must be kept clear of flammable and combustible materials.

3. LEVELING: Verify that the fryer sits firmly ON BOTH CASTERS AND ON BOTH LEGS. With a spirit level, check that the fryer is level front-to-back and side-to-side. With the adjustable legs, adjust as required to level the fryer.

4. DO NOT obstruct the flow of the two exhaust flues (item 14) at the top rear of the fryer. It is especially critical that gas supply piping and electrical supply cord and/or receptacle be routed away from the path of the hot combustion fumes.

5. This fryer must be installed and operated under a ventilation hood conforming to all applicable local codes. Combustion fumes must be vented in accordance with local codes.

6. Cooking and cleaning functions require unobstructed access. The frypot, control panels, cooling slot (item 16) and front access door must be maintained free from obstructions. The rear access panel must be accessible for maintenance.

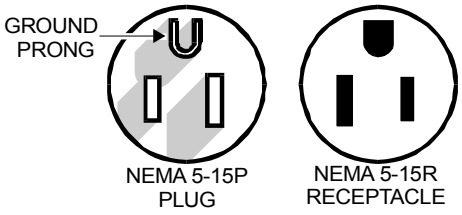


B. ELECTRICAL INSTALLATION

1. The fryer is equipped with a three-prong grounding plug (NEMA 15-5P) for your protection against shock hazard. The fryer must be plugged directly into a properly grounded three-prong receptacle (NEMA 15-5R).

CAUTION - ELECTRICAL SHOCK HAZARD

DO NOT CUT OR REMOVE THE GROUNDING PRONG FROM THE PLUG.
Ungrounded electrical equipment cause personal injury
and property damage.



2. The installation of this fryer must conform to local codes. In the absence of local codes, the installation of this fryer must conform with the National Electrical Code (ANSI Z223.1). In Canada, CSA C22.2 is applicable.

3. DO NOT obstruct the flow of the two exhaust flues (item 14) at the top rear of the fryer. It is especially critical that gas supply piping and electrical supply cord and/or receptacle be routed away from the path of the hot combustion fumes.

4. Because the fryer draws less than 8 amps, two fryers may be plugged into the same 15 amp circuit if required.

C. GAS PLUMBING INSTALLATION AND SET-UP

DANGER

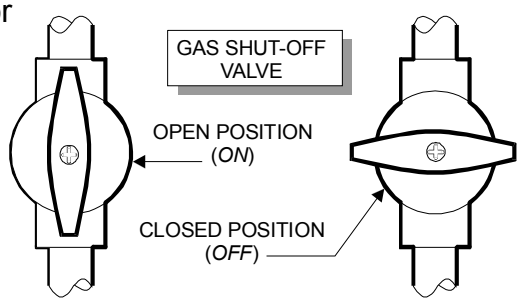
FIRE AND EXPLOSION HAZARD

GAS CONNECTIONS AND GAS ADJUSTMENTS MUST BE MADE BY A LICENSED PLUMBER, CERTIFIED IN GAS INSTALLATION

A gas explosion will cause death or serious injury.

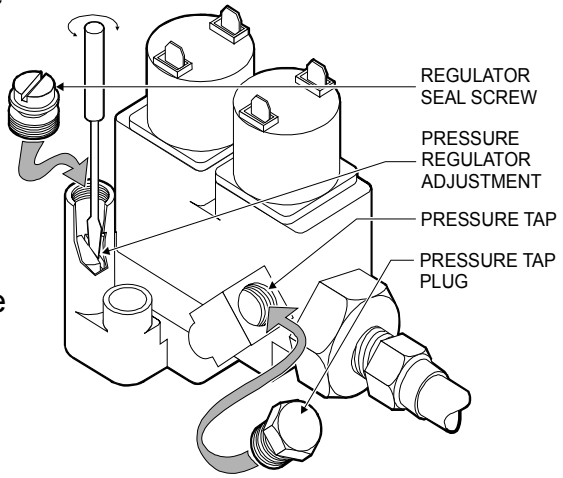
1. The installation of this fryer must conform to local codes. In the absence of local codes, the installation of this fryer must conform with the National Fuel Gas Code (ANSI Z223.1). In Canada, the National Gas Installation Code (CAN/CGAB149.2) is applicable.

2. The fryer must be isolated from municipal gas pressure or LP/propane tank pressure by a gas pressure regulator. In any instance where gas line pressure is in excess of 15" of water column (1/2 psi or 3.45kP), as during gas line testing or regulator maintenance, the fryer must be isolated from the supply piping by *closing* its ***two*** individual manual shut-off valves (item 20).
IMPORTANT: Failure to isolate the fryer from excessive pressure will damage the gas valves and allow raw gas to leak into the room.



3. This fryer requires specific gas pressure (at the burner orifice) for proper operation:
   Natural gas @ 3.5" of water column; or,
   LP/propane @ 10" of water column.
   The gas valve is rated for a maximum of 15" of water column incoming line pressure.

4. Gas pressure must be checked for ***BOTH*** burner systems, while the fryer is in operation. This pressure is measured by connecting a manometer to the pressure tap on the gas control valve (pressure tap is threaded 1/8" NPT) :
   a. Press the power switch to *OFF*. Turn the gas shut-off valve for that side *OFF*.
   b. Remove the pressure tap plug and insert an appropriate manometer.
   c. Turn the gas shut-off valve *ON*, and press the power switch to *FRYER.*
   d. Read the manometer while the gas control valve is energized.

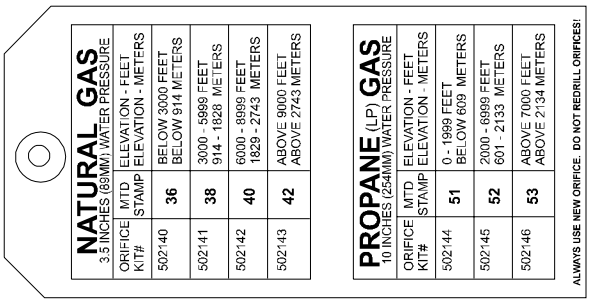


5. If adjustment is necessary, remove the regulator seal screw and, using a small, flat-blade screw driver, turn the adjusting screw (inside).

6. Be sure to turn the gas shut-off valve *OFF* prior to removing the manometer. Replace the regulator seal screws and pressure tap plugs for **BOTH** gas valves before turning the gas shut-off valves *ON*.

D. NATURAL GAS / LP GAS (PROPANE) CONVERSION

1. This fryer is orificed at the factory for natural gas at a pressure of 3.5" of water column. The installed orifice is suitable for use at -280 to 2999 feet (-85 to 914 meters) elevation. It is the responsibility of the installer to install the factory recommended orifice and pressure regulator kit suitable for the fuel type and elevation at the final installation site.
2. The red tag (p/n 301217) attached to the gas connection provides pressure settings and part numbers for conversion kits applicable to various fuels and altitudes.



NATURAL GAS 3.5 INCHES (89MM) WATER PRESSURE

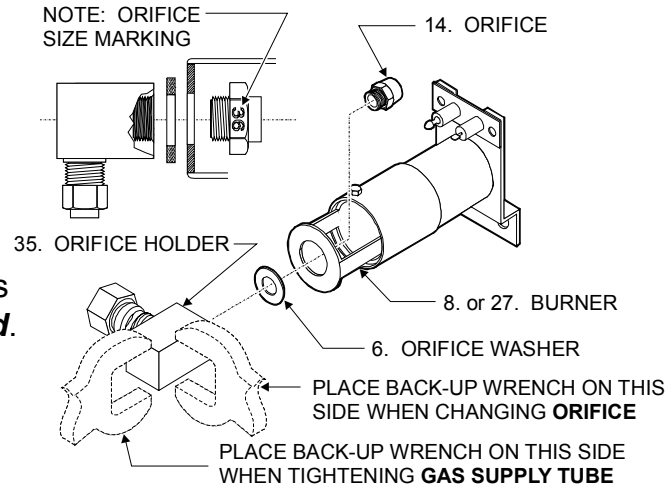
ORIFICE KIT#	MTD STAMP	ELEVATION - FEET ELEVATION - METERS
502140	36	BELOW 3000 FEET BELOW 914 METERS
502141	38	3000 - 5999 FEET 914 - 1828 METERS
502142	40	6000 - 8999 FEET 1829 - 2743 METERS
502143	42	ABOVE 9000 FEET ABOVE 2743 METERS

PROPANE (LP) **GAS** 10 INCHES (254MM) WATER PRESSURE

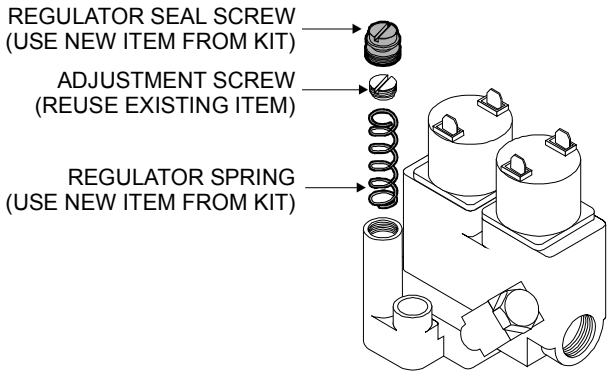
ORIFICE KIT#	MTD STAMP	ELEVATION - FEET ELEVATION - METERS
502144	51	0 - 1999 FEET BELOW 609 METERS
502145	52	2000 - 6999 FEET 601 - 2133 METERS
502146	53	ABOVE 7000 FEET ABOVE 2134 METERS

ALWAYS USE NEW ORIFICE. DO NOT REDRILL ORIFICES!

3. The natural gas altitude conversion kit contains two orifices. ***Both orifices must be changed***. ***Be sure to use a back-up wrench when changing orifices to avoid bending the orifice bracket on the burner tube.*** Be sure to check operating pressures on both burner systems after the orifices have been changed.



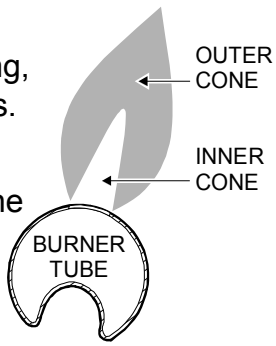
4. The LP gas (propane) conversion set contains two orifices and two gas valve regulator kits. ***Both orifices must be changed, and both gas valve regulators must be converted***. Complete instructions are included in the regulator conversion kits. Be sure to check and adjust operating pressures on both burner systems after the orifices have been changed and the regulators have been converted.



NOTE: Failure to install proper orifices can potentially cause burner and flue system failure. Damaged caused by improper orifice installation is NOT covered by warranty.

E. FLAME ADJUSTMENT

1. A proper flame will have a bright blue, well defined inner cone, and a strong, light blue outer cone with only a very little yellow along the outermost edges.
2. Too much yellow indicated a rich flame. Adjust by opening the shutter or decreasing the orifice size (see tag p/n 301217 for proper orifice size for the installation altitude).
3. No yellow and a very small inner cone indicates a lean flame. Adjust by closing the shutter or increasing the orifice size (see tag p/n 301217 for proper orifice size for the installation altitude).



OPERATION

A. HEATING INSTRUCTIONS

IMPORTANT: Never press the POWER SWITCH to *FRYER* unless the frypot is filled with shortening. Check shortening level marker inside the frypot for proper shortening level.

NOTE: The fryer is designed to be used with LIQUID SHORTENING only. Lard and solid shortening will solidify in the filter pump, causing pump failure.

1. Program MENU KEY times and temperatures (see *IOM Manual*, p/n 301198).
2. Press POWER SWITCH to *FRYER* position.
   a. The controller will energize the GAS CONTROL VALVES and the IGNITORS.
   b. The GAS CONTROL VALVES will remain energized for 4 seconds while the flame sensor proves the flame.
   c. At the end of the 4 second period, if flame has not been sensed, the gas valve will de-energize for 30 seconds. The controller will attempt three times to establish a flame.
   d. If flame cannot be established in three tries, the controller will lock out. The power switch must be pressed to *OFF*, then back to *FRYER* to release the lock out.
   e. If flame is sensed within the 4 second proving period, the GAS CONTROL VALVES will remain energized and the burners will continue to heat until the shortening has reached the programmed temperature. The readout will display “PRE” and “HEAT” and the selected MENU KEY, and the HEAT indicator will be lit until the shortening has reached temperature.
3. When the readout displays “00:00”, the fryer is ready to begin cooking.

B. COOKING INSTRUCTIONS

1. Load frozen product into the BASKET. Using the plastic-coated handles, set the BASKET on the LIFT CRADLE. Press the “BASKET” KEY followed by the “DOWN ARROW” KEY. When the cradle if fully lowered, press the desired MENU KEY.

2. For fresh product, lower the basket and hand drop product just above the oil level to prevent splashing.

IMPORTANT: Different products contain different amounts of moisture, which will cause the hot oil to foam. Determining the maximum safe load size that will prevent hazardous overflow and splatter of hot oil. This can be accomplished by starting with a small load, and gradually increasing the load size until the maximum load which can be cooked without the oil foaming over the top of the frypot is reached.

3. At the completion of the timed cycle, the cradle will rise and the sonalert will sound.

The BASKET and the cooked product will be hot.
Contact with hot cooked product can cause serious injury.

4. Use the plastic-coated handles to remove the BASKET and dump the cooked product into a suitable tray or container.

TROUBLESHOOTING OPERATIONAL PROBLEMS

NOTE: The fryer has two independent burner systems, whose only common components are in the control system (CONTROLLER, TEMPERATURE PROBE and HI-LIMIT THERMOSTAT). Troubleshooting efforts should isolate a problem to either: an individual burner system; or, to the control system.

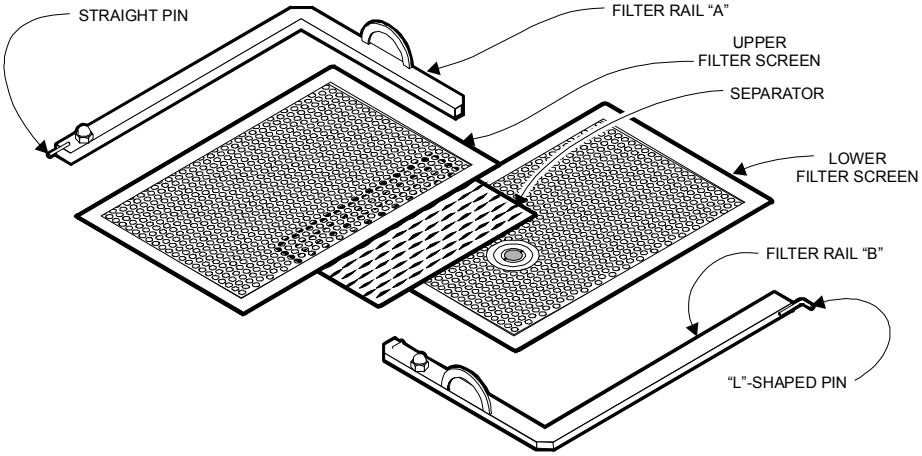
PROBLEM	POSSIBLE CAUSE	SOLUTION
READOUT not lit (Fryer not operating)	POWER SWITCH not in *FRYER* position	Press POWER SWITCH to *FRYER* position
	Circuit breaker *OFF* or tripped	Reset circuit breaker
	Service wiring problem	Correct service wiring
(Fryer operating norm.)	Controller connection faulty	Check / replace connector
	CONTROLLER defective	Replace CONTROLLER
HEAT LIGHT not lit (READOUT lit and Cooking oil cold)	Programmed temperature	Raise programmed temperature too low / select another MENU KEY
	CONTROLLER defective	Replace CONTROLLER
	HI-LIMIT THERMOSTAT TRIPPED	Allow oil to cool Reset HI-LIMIT
COOKING OIL COLD (HEAT light lit)	BURNER SYSTEM problem	Correct burner problem
	Wiring problem / loose connection	Correct wiring problem
	Defective PROBE CONTROLLER defective	Replace PROBE Replace CONTROLLER
CRADLE LIFT won't lower	Improper key strokes	Press"BASKET" then "DOWN ARROW"
	BASKET "DOWN" RELAY defective	Replace RELAY
	LIFT MOTOR defective	Replace LIFT MOTOR
	Wiring problem / loose connection	Correct wiring problem
	CONTROLLER defective	Replace CONTROLLER
CRADLE LIFT won't raise	READOUT not "00:00" or "PAUSE"	Press "PAUSE" + "UP ARROW"
	BASKET "UP" RELAY defective	Replace RELAY
	LIFT MOTOR defective	Replace LIFT MOTOR
	Wiring problem / loose connection	Correct wiring problem
	CONTROLLER defective	Replace CONTROLLER
BUZZER does not sound	Buzzer programmed *OFF*	Contact factory for instructions
	BUZZER defective	Replace BUZZER
	Wiring problem / loose connection	Correct wiring problem
	CONTROLLER defective	Replace CONTROLLER
BUZZER not loud enough	BUZZER SHUTTER closed	Open SHUTTER
MENU KEY does not operate	MENU KEY not programmed	Program MENU KEY
	CONTROLLER defective	Replace CONTROLLER
FUNCTION KEY does not operate	Improper KEY ENTRY	Consult OWNERS MANUAL for proper usage
	CONTROLLER defective	Replace CONTROLLER

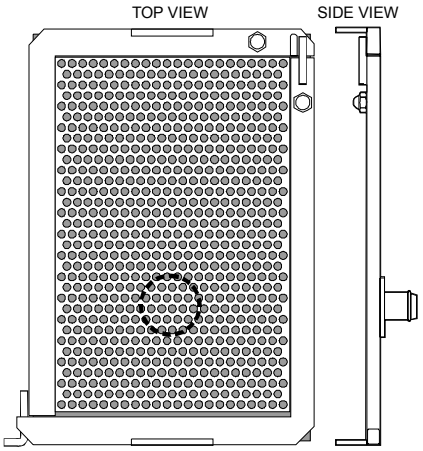
OIL FILTERING INSTRUCTIONS

DANGER

OIL MUST BE FILTERED WHILE HOT (300ºF AND HIGHER)
Contact with hot oil can cause serious injury including death.
Always wear protective clothing and insulated gloves
when filtering the cooking oil.

1. Refer to the *Installation, Operation and Maintenance Manual* (p/n 300007) for complete operating instructions for the filter system. Make certain the FILTER LEAF is properly assembled and installed.





2. The cooking oil must be hot (minimum of 300º F.) in order to filter properly. Cold oil will not flow through the filter leaf. Place the POWER SWITCH to the *FILTER* position. DO NOT turn the pump *ON* for more than 10 sec. without oil flowing.

3. Open the DRAIN LEVER. Use the "T"-SHAPED SCRAPER to push crumbs and breading from the frypot sides down into the bottom of the FRYPOT. The WOOD DOWEL may be used to unplug the drain hole if necessary.

4. While draining the oil, press the POWER SWITCH to *FILTER*. Pour the FILTER POWDER into the oil at the point where it is being drawn down the drain.

5. After all the oil has drained from the FRYPOT, use the HI-TEMP BRUSH to push breading crumbs and other debris down the drain.

6. After 5 minutes of oil circulation, close the DRAIN VALVE and allow the FRYPOT to fill with the freshly filtered oil. When all the oil has returned to the FRYPOT, turn *OFF* the FILTER SWITCH. Turn the POWER SWITCH to the *OFF* position until starting to use the fryer again.

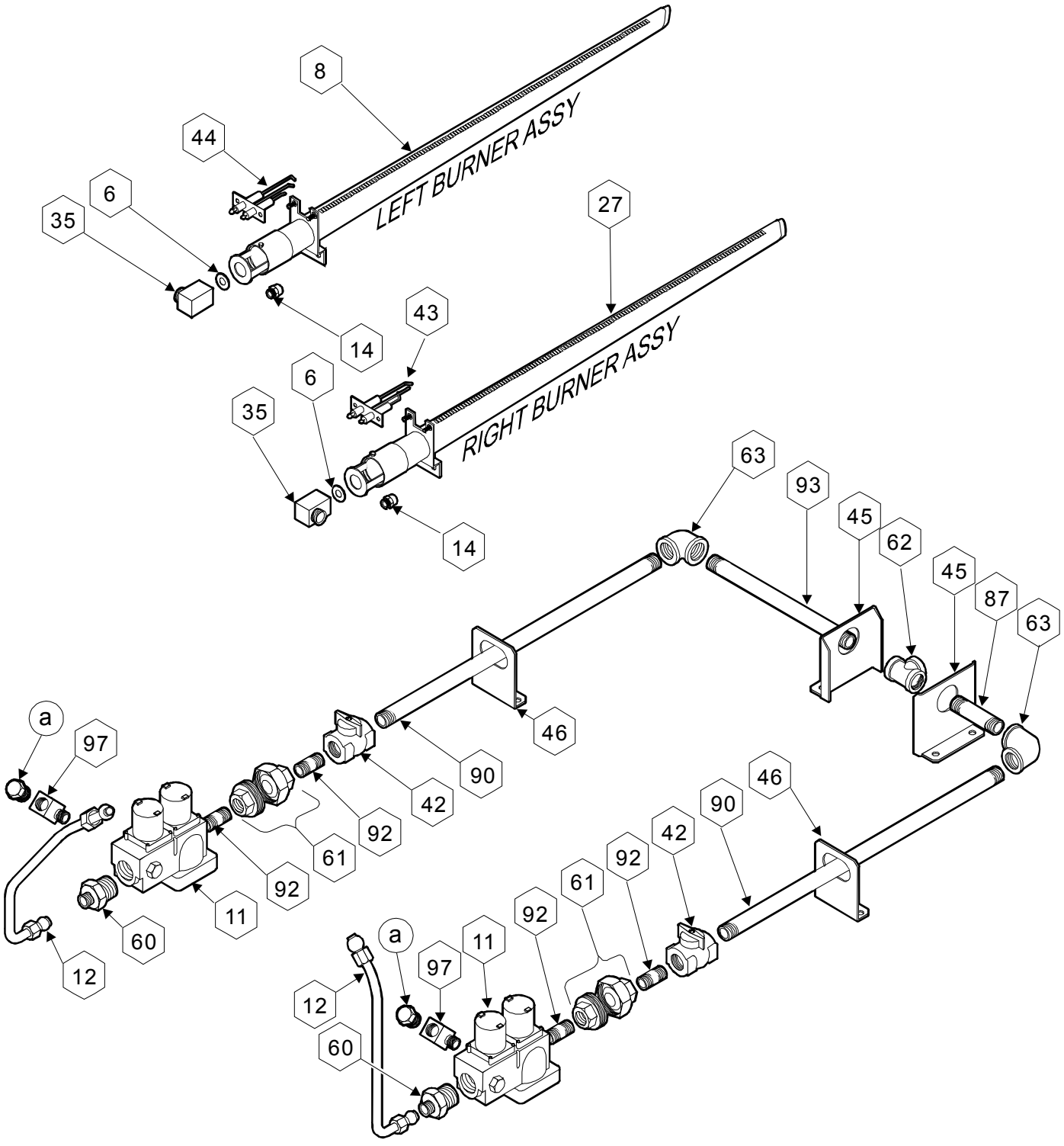
7. Allow the FILTER RESERVOIR to cool before servicing. Refer to the *IOM Manual* (p/n 300007) for complete FILTER RESERVOIR maintenance instructions.

NOTE: Refrain from using soap in the FRYPOT or FILTER RESERVOIR. Soap residue will cause the cooking oil to breakdown rapidly.

TROUBLE SHOOTING - OIL FILTERING PROBLEMS

PROBLEM	POSSIBLE CAUSE	SOLUTION
FILTER PUMP won't run	POWER SWITCH not in *FILTER* position	Press POWER SWITCH to *FILTER* position
	PUMP MOTOR OVERLOAD tripped	Allow motor to cool, then press red RESET button on back of PUMP MOTOR
	Defective POWER SWITCH	Replace SWITCH
PUMP will not pump cooking oil	SUCTION TUBE not seated in SUCTION RECEPTACLE	Make sure FILTER RESERVOIR is properly installed
	SUCTION TUBE O-RING missing or damaged	Replace O-RING with one of the three spares in groove
	Damaged SUCTION TUBE or SUCTION RECEPTACLE	Replace damaged components
	FILTER LEAF clogged	Scrape crumbs and other debris from FILTER LEAF Service FILTER RESERVOIR at next opportunity.
	PUMP CHECK VALVE plugged or reversed	Clean CHECK VALVE Install CHECK VALVE properly
PUMP pumps lots of bubbles in cooking oil	SUCTION TUBE not seated in SUCTION RECEPTACLE	Make sure FILTER RESERVOIR is properly installed
	SUCTION TUBE O-RING missing or damaged	Replace O-RING
	Insufficient oil entering or in FILTER RESERVOIR	Incrementally open DRAIN VALVE and/or clear crumbs and other debris from DRAIN
PUMP MOTOR tripped won't reset	PUMP jammed with debris	Unjam PUMP
	Defective PUMP HEAD	Replace PUMP HEAD
	Defective PUMP MOTOR	Replace MOTOR only
Oil is not being filtered completely	FILTER LEAF O-RING missing, damaged or LEAF mis-installed	Properly install FILTER LEAF
	FILTER LEAF surface clogged with debris	*AFTER OIL COOLS* remove FILTER LEAF, disassemble and clean.

SERVICING INSTRUCTIONS
GAS DISTRIBUTION AND BURNER SYSTEM

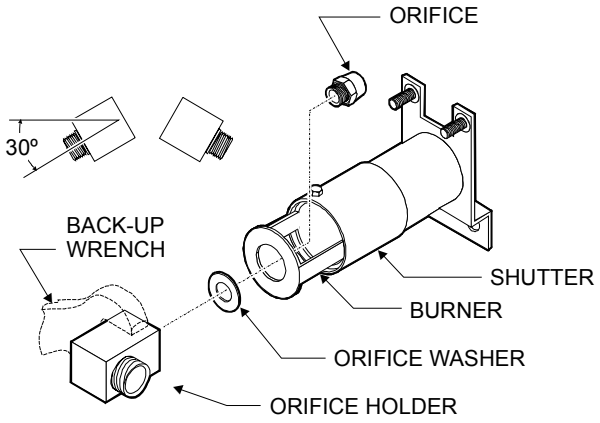


ITEM	DESCRIPTION	SERVICE PART NO.
6	WASHER, ORIFICE	
8	BURNER ASSY, LEFT	500781
11	COMBINATION GAS VALVE	500784
12	TUBE, GAS	500802
14	ORIFICE, GAS BURNER	
	NATURAL GAS, BELOW 3000 FT (2 EA, KIT)	502140
	NATURAL GAS, 3000 - 5999 FT (2 EA, KIT)	502141
	NATURAL GAS, 6000 - 8999 FT (2 EA, KIT)	502142
	NATURAL GAS, ABOVE 9000 FT (2 EA, KIT)	502143
	PROPANE, BELOW 2000 FT (2 EA, KIT)	502144
	PROPANE, 2000 - 6999 FT (2 EA, KIT)	502145
	PROPANE, ABOVE 7000 FT (2 EA, KIT)	502146
27	BURNER ASSY, RIGHT	500980
35	ELBOW, ORIFICE HOLDER	
42	VALVE, GAS SHUT-OFF	501592
43	IGNITOR ASSY, RIGHT	501198
44	IGNITOR ASSY, LEFT	501197
45	BRACKET, REAR	
46	BRACKET, SIDE	
60	ADAPTER, 1/2" NPT x 1/4" COMP.	
61	UNION, 1/2" NPT	
62	"TEE", 1/2" NPT	
63	ELBOW, 90º 1/2" NPT	
87	NIPPLE, 1/2" NPT x 2"	
90	NIPPLE, 1/2" NPT x 15"	
92	NIPPLE, 1/2" NPT x CLOSE	
93	NIPPLE, 1/2" NPT x 7"	
97	ELBOW, STREET 90º 1/8" NPT BRASS	
a	PLUG, 1/8"MPT	(part of 500784)

BURNER ASSEMBLY INSTRUCTIONS

A. ORIFICE INSTALLATION

1. Slide the brass ORIFICE through the ring on the end of the BURNER, threaded end pointing out.
2. Slide the ORIFICE WASHER over the threads of the ORIFICE.
3. Screw the ORIFICE HOLDER on to the ORIFICE. Tighten the orifice holder so that the compression fitting sits pointing toward the outside and down at a 30º angle.
4. Always use a back-up wrench when tightening the orifice to avoid bending the orifice bracket.



B. SHUTTER ADJUSTMENT

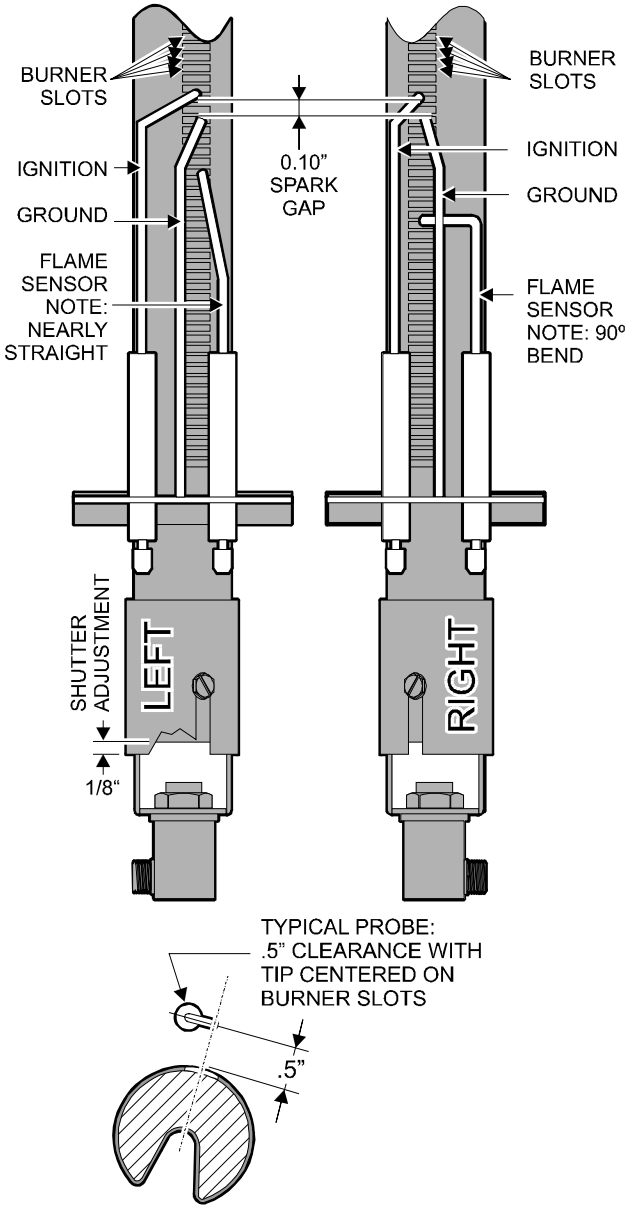
1. This is an initial adjustment. Final adjustment will be made while the burner is in operation.
2. Loosen the holding screw. Set the shutter so that 1/8" of the shutter is exposed. Tighten the screw.

C. BURNER TUBES

1. BURNER TUBES are handed right and left. Visually, the row of burner slots point up and slightly inward. Also, the tops of the rear mounting tabs slant toward the center.

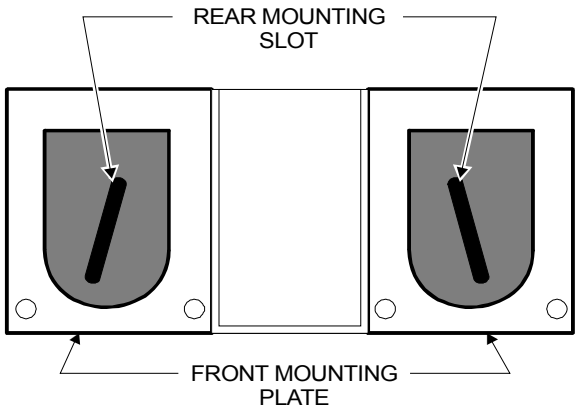
D. IGNITOR ASSEMBLY

1. IGNITORS are handed right and left. Visually:
   a. Right: The flame sensor (right probe) is bent at a 90º angle;
   b. Left: The flame sensor (right probe) is nearly straight.
2. When properly assembled, all three probes will lay on a line drawn from the center of the burner tube through the center of the burner slots.
3. All three probes should be .5" from the outer surface of the burner slots.
4. The gap between the ignitor and ground probes must be .10".
5. To insure proper ignition, the gap between the ignitor and ground probes must be directly in the gas stream.
6. To insure proper flame detection, the tip of the flame sensor probe must be directly in the gas stream.

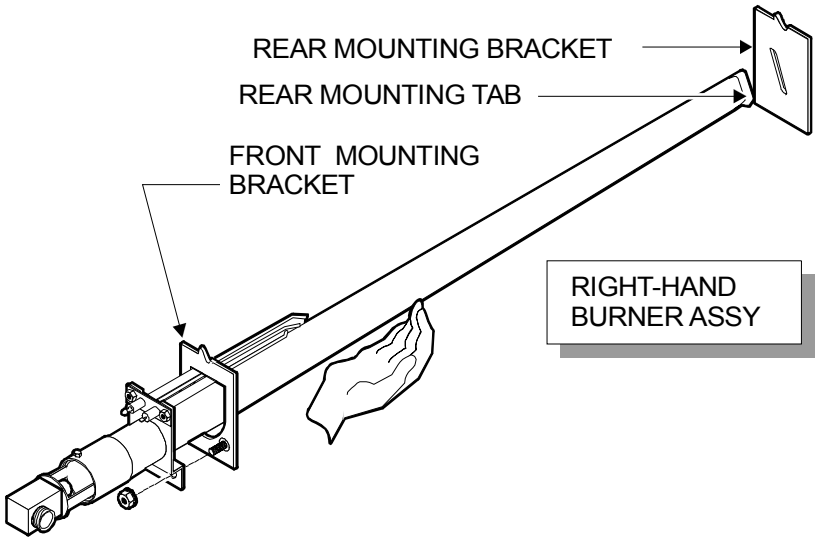


E. BURNER INSTALLATION

1. Insert each BURNER TUBE through its respective mounting plate.

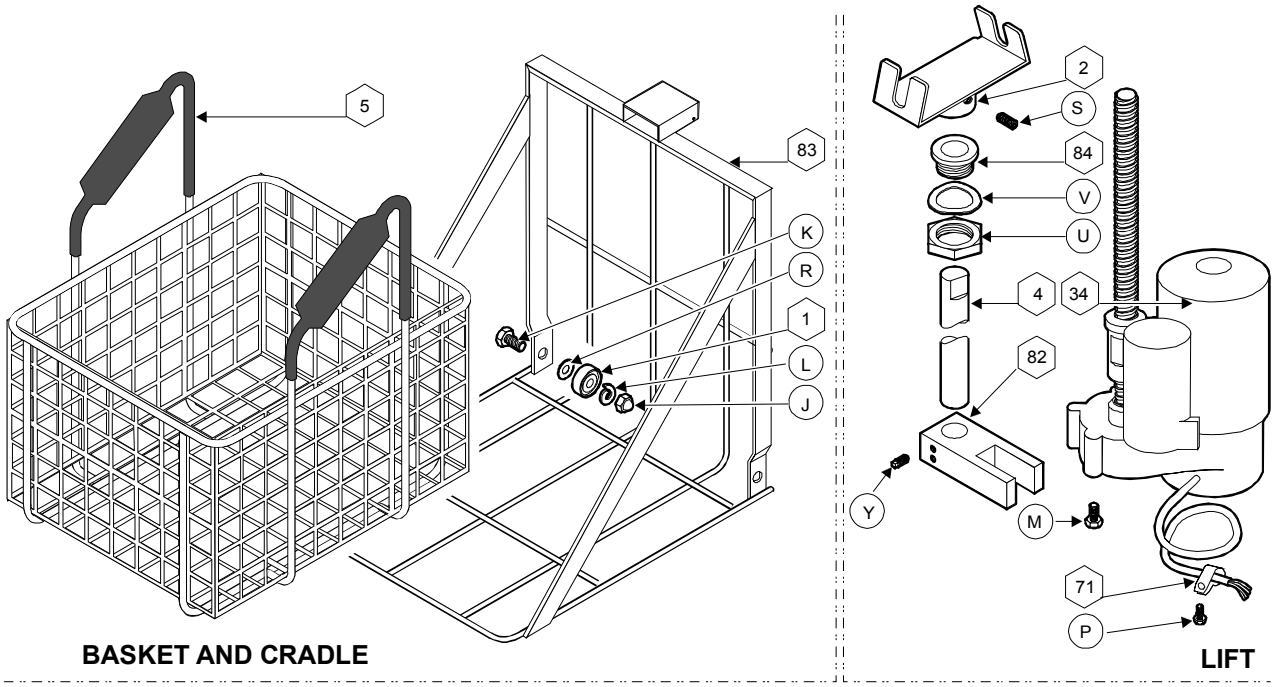


2. CAREFULLY reach inside the unit, just above the filter pump heat shield, to guide the rear mounting tab of the burner tube into the slot in the rear mounting bracket.



3. Slide the the burner assembly over the front mounting studs, thread on nuts and tighten.

CRADLE LIFT ASSEMBLY



ITEM	DESCRIPTION	SERVICE PART NO.
1	BEARING, ROLLER .75OD x .25ID (pk6)	500031
2	CRADLE PIVOT ASSEMBLY	
4	ROD, LIFT	
5	BASKET, FRYER	22441
34	ACTUATOR, LIFT	69812
71	CLAMP, PLASTIC 3/8” DIA.	
82	YOKE, ROD LIFT	
83	BASKET CRADLE LIFT ASSEMBLY	
84	BUSHING, LIFT ROD	69972
J	NUT, ACORN 1/4-20 SS	
K	BOLT, HEX 1/4-20 x 34” SS	
L	LOCK WASHER 1/4” SS	
M	BOLT, HEX 1/4-20 x 1/2” SS	
P	SCREW, HEX 3-32 x 1/2”	
R	WASHER .265 ID x .50 OD SS	
S	SET SCREW, 1/4-20 x 5/16”	
U	JAM NUT, 1”-14 UNF	
V	WAVE WASHER, 1”	
Y	SET SCREW, 1/4-20 x 5/8”	

LIFT MOTOR / LIFT ROD
ASSEMBLY INSTRUCTIONS

A. LIFT ROD BUSHING

1. The top bushing assembles through the TOP PANEL and FRAME. The WAVE WASHER and JAM NUT go *BELOW* top part of frame.
2. The bottom bushing assembles through the top hole in the FRAME BACK PANEL.

B. LIFT MOTOR

1. Apply voltage to the *BLACK* and *WHITE* wires of the motor until the screw stops turning. This is the *full-down* position. Turn the BRASS NUT until the distance from the top of the nut to the top of the screw is 10-1/4” to 10-3/8”.
2. Assemble the LIFT MOTOR to the MOTOR MOUNT PLATE with four bolts and threadlock.

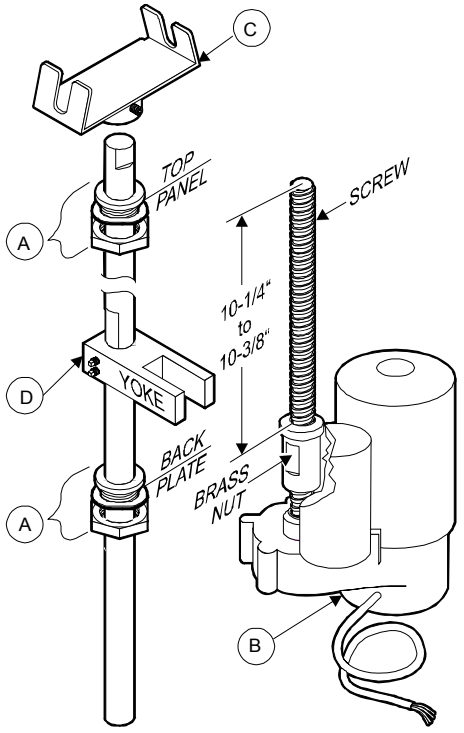
C. CRADLE PIVOT

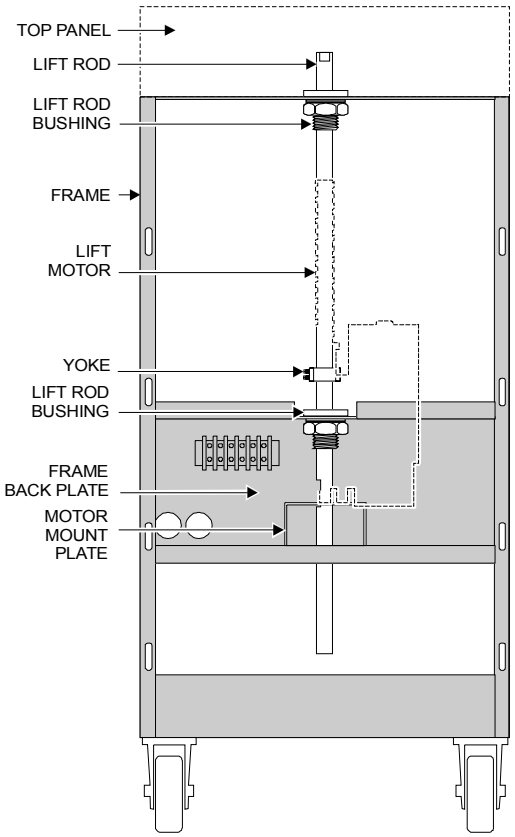
1. Assemble the CRADLE PIVOT to the LIFT ROD.
2. The SET SCREW on the PIVOT COLLAR must be centered on the flat on the LIFT ROD.

D. LIFT ROD YOKE

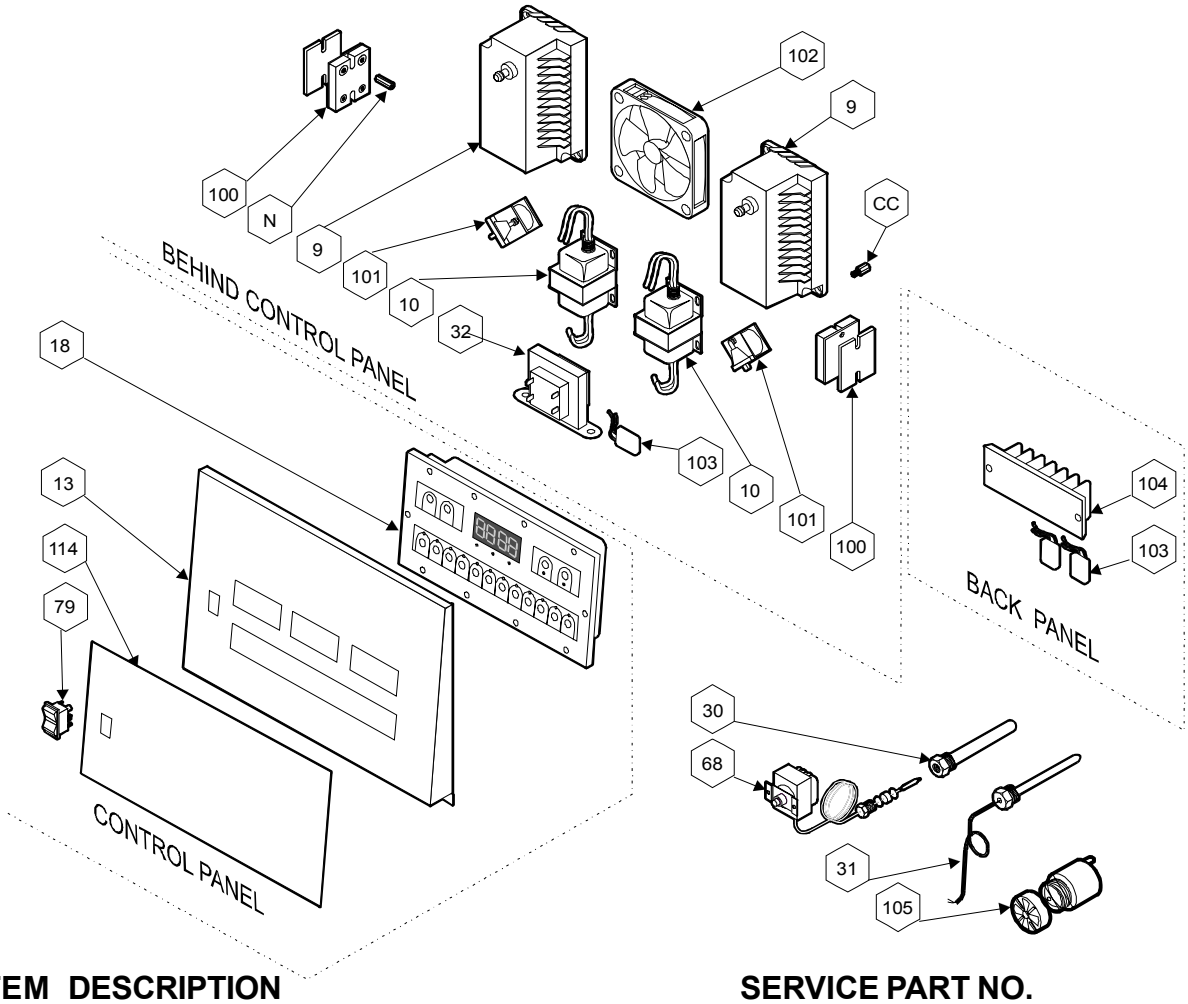
1. Slide the fingers of the YOKE over the flats of the BRASS NUT. The set screws must be on the side *away* from the motor.
2. Slide the PIVOT / LIFT ROD through the top BUSHING, YOKE, bottom BUSHING and LIFT ROD GUARD. The CRADLE PIVOT must be parallel to the rear portion of the TOP PANEL, with the downturned lip of the PIVOT toward the *front* of the fryer.
3. Center the YOKE on the flats of the BRASS NUT, then tighten the YOKE SET SCREWS on the *flat* on the LIFT ROD.

4. Apply voltage to the motor leads and carefully observe the end points of the up-and-down motion. The yoke must clear the bushings: adjust by loosening the yoke set screws and “bumping” the lift motor as required by applying voltage momentarialy to the appropriate motor leads. Tighten the set screws and re-test for proper up-and-down operation.



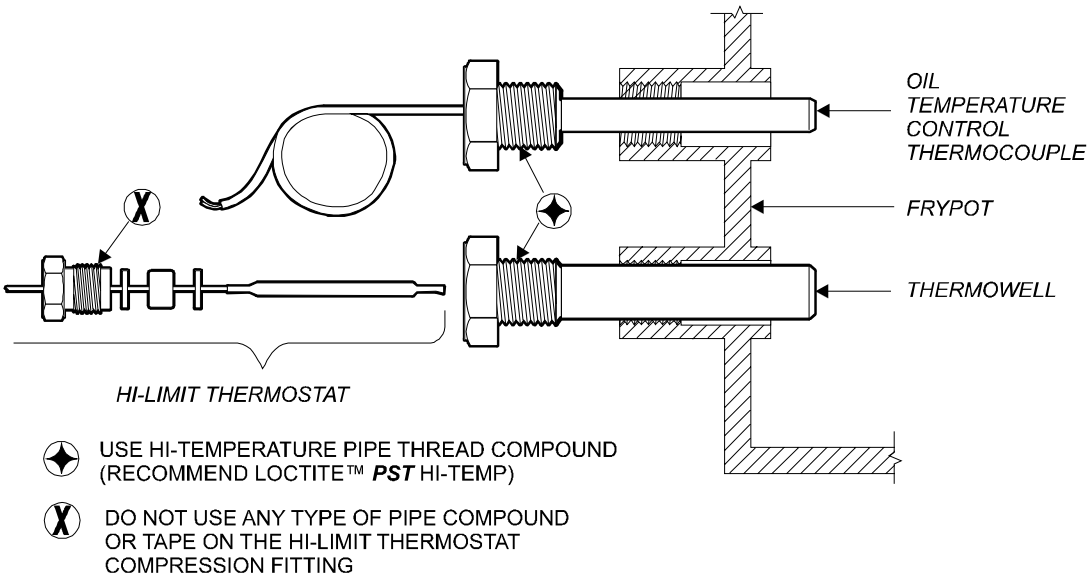


ELECTRICAL COMPONENTS



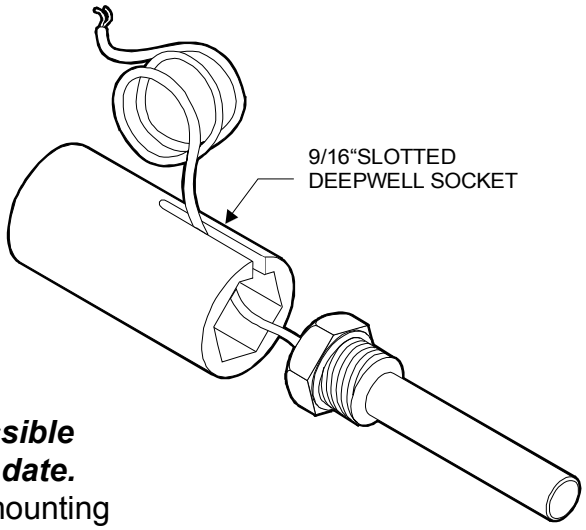
ITEM	DESCRIPTION	SERVICE PART NO.
9	IGNITION CONTROL, DIRECT SPARK	500782
10	TRANSFORMER, 120V - 240V	500783
13	PANEL, UPPER CONTROL	
18	CONTROLLER, RED LED's	500830
30	THERMOWELL, HI-LIMIT	501158
31	"J" THERMOCOUPLE	501199
32	TRANSFORMER, CONTROLLER 120V - 24V	501201
68	THERMOSTAT, HI-LIMIT	502469
79	SWITCH, POWER *FRYER-OFF-FILTER*	69550
100	SOLID STATE RELAY	501200
101	RELAY, 24V	501204
102	COOLING FAN	503131
103	SPARK QUENCHER	500688
104	TERMINAL BLOCK, 6P	50578
105	SONALERT	500974
114	FACEPLATE, WELLS	502417
N	NUT, ALUMINUM 8-32 x 7/8"	
CC	ADAPTER, 6-32M x 6-32F	

ELECTRICAL COMPONENTS INSTALLATION INSTRUCTIONS



A. HI-LIMIT THERMOSTAT

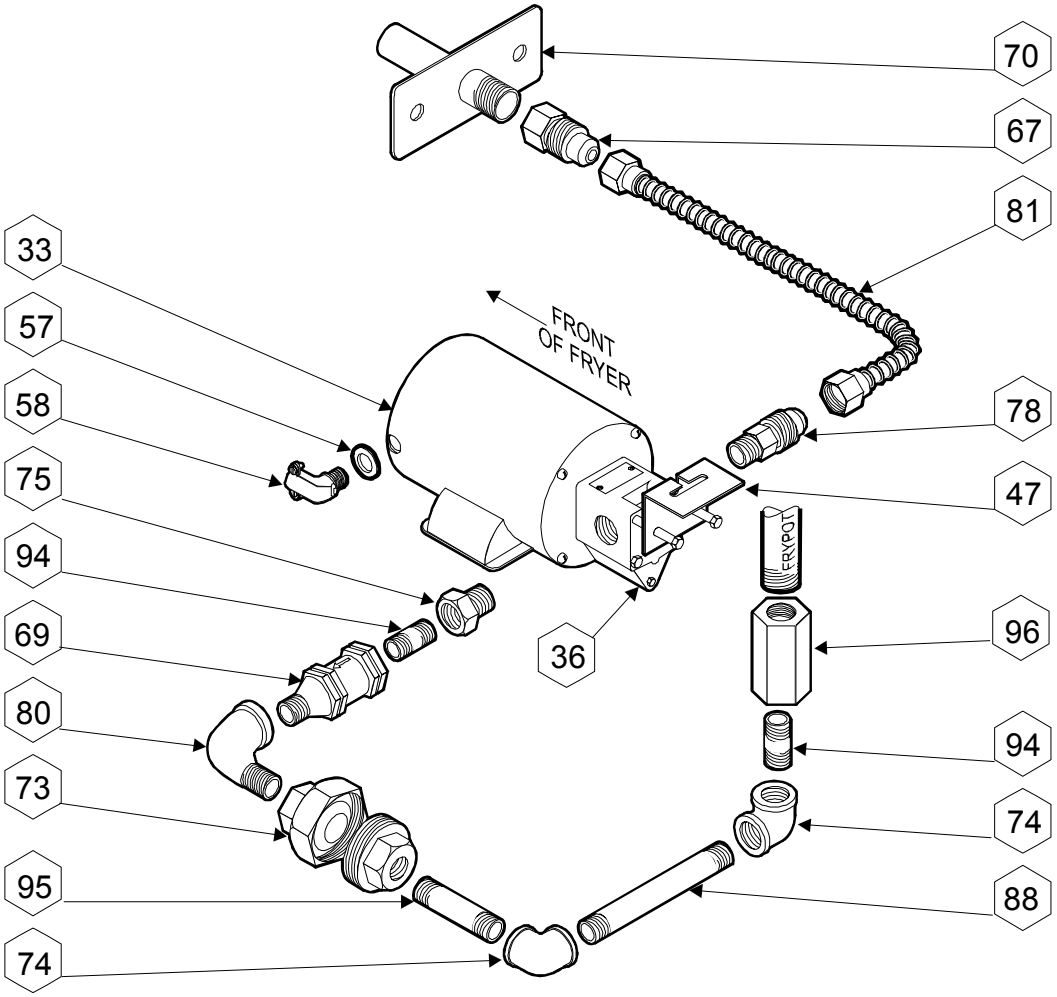
1. Install THERMOWELL in lower threaded hole in frypot. Use hi-temperature pipe thread compound.
2. Insert HI-LIMIT THERMOSTAT thermobulb into THERMOWELL. *DO NOT*use any type of pipe thread compound or tape. Thread the compression fitting into THERMOWELL and tighten ***finger-tight*** only.
   NOTE: The thermobulb sits in the thermowell, and not directly in the hot oil. Thus it is not necessary to over-tighten the compression fitting. ***Wrench tightening this fitting will make it impossible to remove should service be required at a later date.***
3. Attach body of HI-LIMIT THERMOSTAT to the left mounting bracket below the control panel and connect wiring.



B. TEMPERATURE CONTROL THERMOCOUPLE

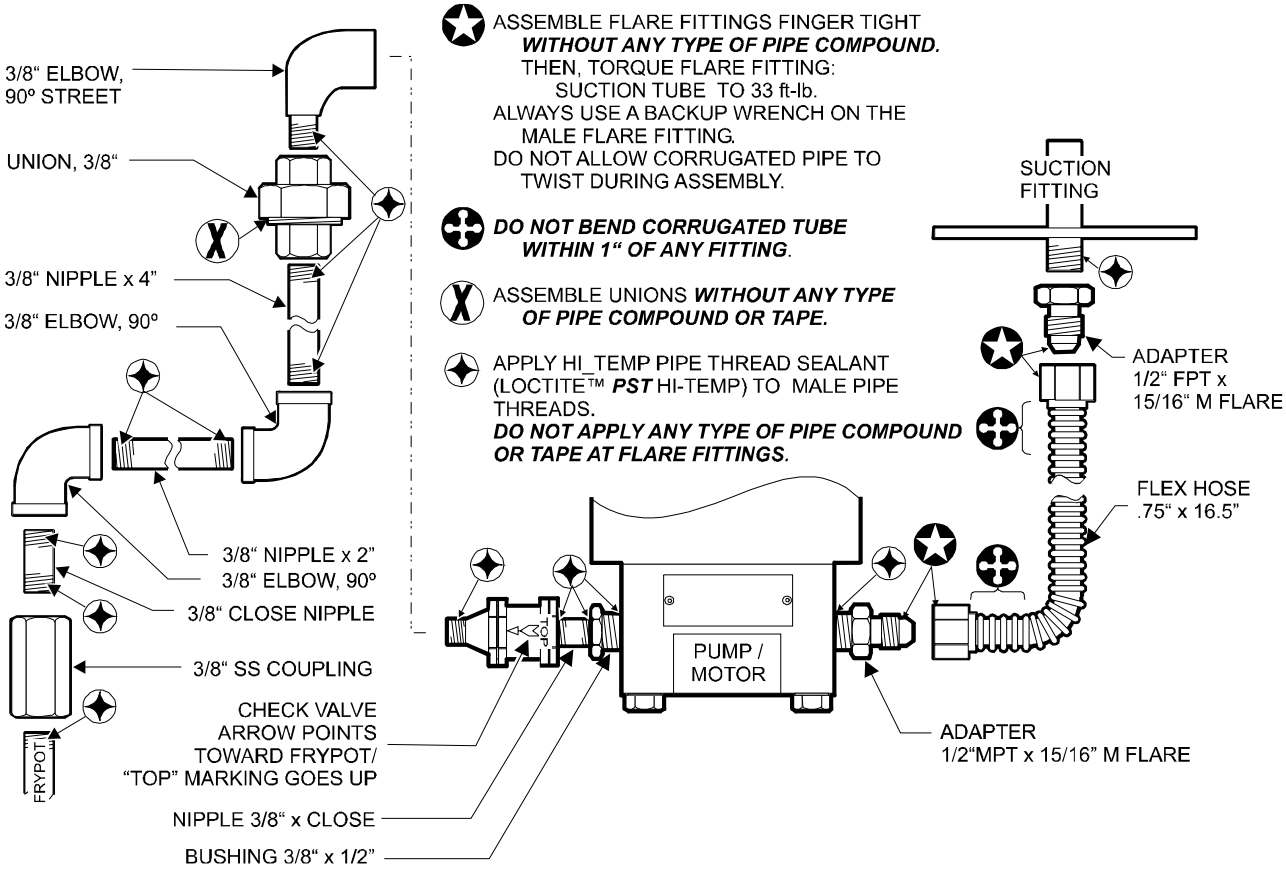
1. Install THERMOCOUPLE in upper threaded hole in frypot. Use hi-temperature pipe thread compound.
2. Tighten using a slotted 9/16" deepwell socket or offset flare nut wrench, ***taking care to not damage the thermocouple leads.***
3. Connect thermocouple leads to controller terminals 2 (white or +) and 3 (red or -).

FILTER PUMP ASSEMBLY



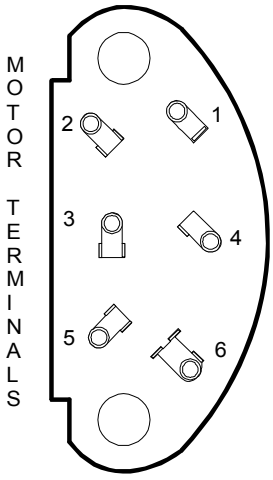
ITEM	DESCRIPTION	SERVICE PART NO.
33	MOTOR, FILTER PUMP	501205
36	PUMP, FILTER PUMP	501231
47	BRACKET, HEAT SHIELD	
57	WASHER, FIBER	
58	CONDUIT FITTING, 90º	
67	ADAPTER, I/2" FPT x 15/16M FLARE	
69	CHECK VALVE	66692
70	SUCTION LINE FITTING	66720
73	UNION, 3/8" NPT	
74	ELBOW, 3/8" NPT 90º	
75	REDUCER, 1/2" NPT x 3/8" NPT	
78	ADAPTER, 1/2" MPT x 15/16M FLARE	
80	ELBOW, 3/8" NPT 90º STREET	
81	FLEX TUBE, 3/4" O.D. x 16.5"	
88	NIPPLE, 3/8" NPT x 4"	
94	NIPPLE, 3/8" NPT x CLOSE	
95	NIPPLE, 3/8" NPT x 2"	
96	COUPLING, 3/8" NPT SS	

FILTER PUMP / MOTOR ASSEMBLY INSTRUCTIONS



CAUTION: New style motor is a dual voltage rated unit, and must be field wired to match the electrical service supply voltage. Motor may be shipped wired for either 230V or 125V. Verify the supply voltage and the motor voltage configuration. If necessary, rewire motor, at the terminal block in the end of the motor, per the table shown below. Also, see diagram on motor.

WARNING: Failure to correctly wire the motor will result in permanent damage to the pump motor.

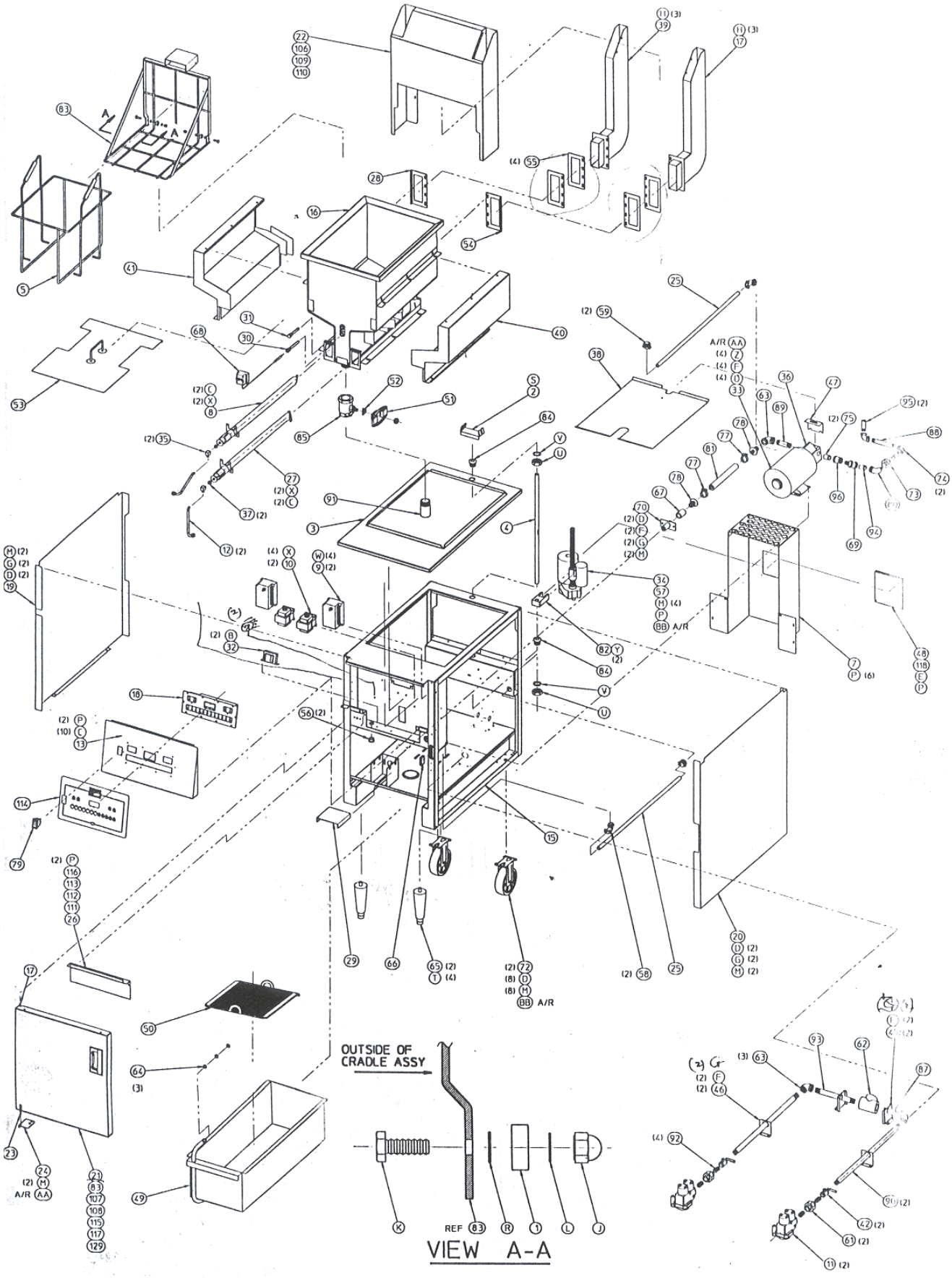


125V		230V	
1 (LINE)	YELLOW / BLACK	1(LINE)	YELLOW / BLACK
2	BLUE BLUE	2	BLUE BLUE
3	(UNUSED)	3	BROWN
4	BLACK	4	BLACK
5	BROWN ORANGE	5	WHITE ORANGE
6 (LINE)	WHITE YELLOW	6 (LINE)	YELLOW

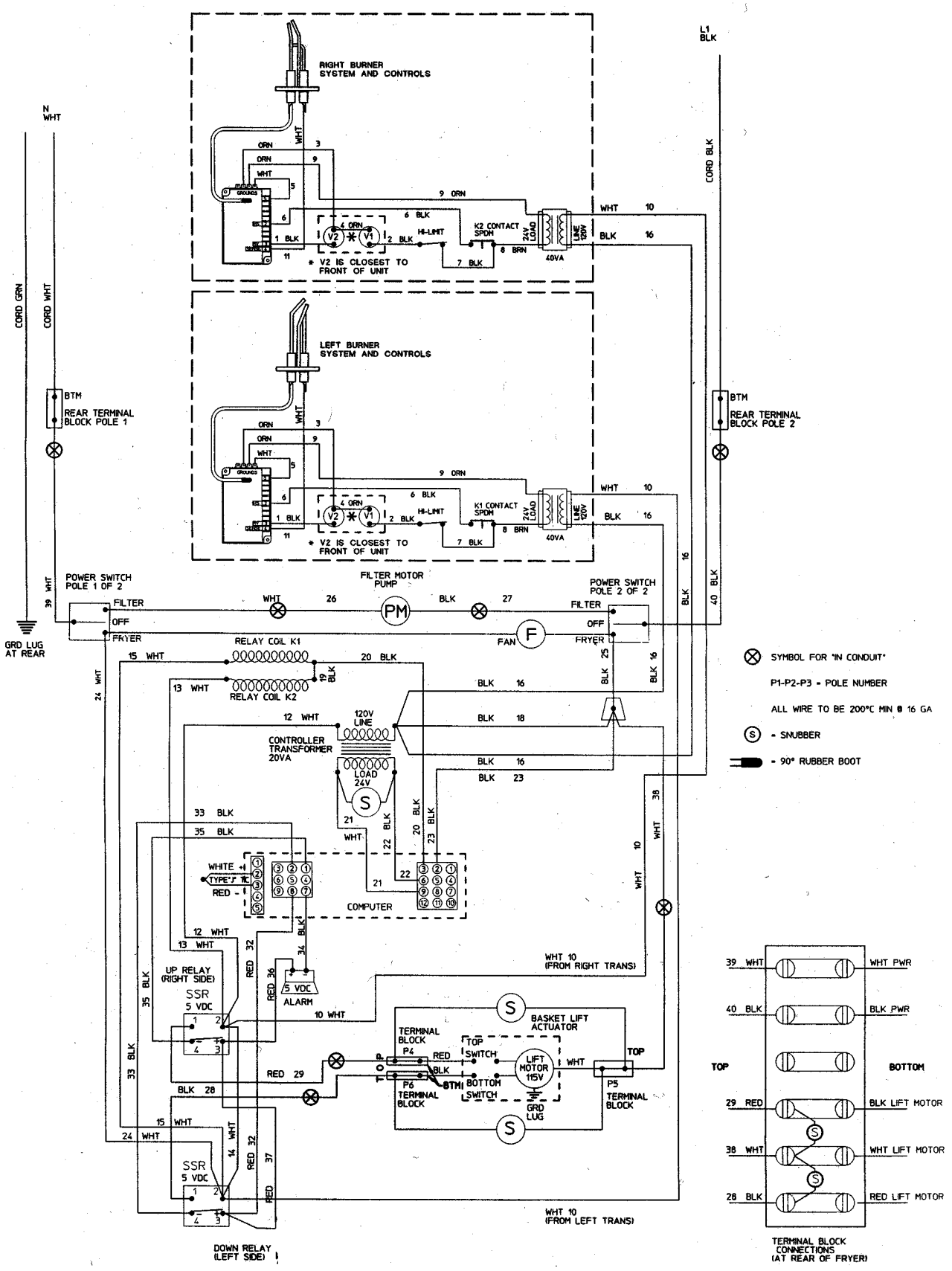
WFAE-60FS PARTS BREAKDOWN (GENERAL REFERENCE ONLY)

ITEM	DESCRIPTION
1	BEARING, ROLLER, .75 x .25
2	CRADLE PIVOT ASSY
3	PANEL, TOP
4	LIFT ROD
5	BASKET, FRYER
6	WASHER, ORIFICE
7	HOUSING, LIFT MOTOR
8	BURNER ASSY, LEFT
9	IGNITION CONTROL
10	TRANSFORMER, IGNITION
11	GAS CONTROL VALVE
12	TUBE, GAS VALVE
13	CONTROL PANEL, UPPER
15	FRAME ASSY
16	KETTLE ASSY
17	FLUE ASSY, RIGHT
18	CONTROLLER, COOK
19	PANEL, LEFT SIDE
20	PANEL, RIGHT SIDE
21	DOOR ASSY
22	ENCLOSURE, FLUE
23	PIVOT PIN, DOOR, BOTTOM
24	BRACKET, DOOR BOTTOM HINGE
25	WIRE SET
26	CONTROL PANEL, BOTTOM
27	BURNER ASSY, RIGHT
28	MOUNTING PLATE, LH FLUE
29	COVER, SUCTION LINE BRACKET
30	THERMOWELL, HI-LIMIT
31	"J" THERMOCOUPLE
32	TRANSFORMER, 120V-240V
33	MOTOR, FILTER
34	MOTOR, LIFT
35	HOLDER, ORIFICE
36	PUMP, FILTER
37	ORIFICE, #36 NATURAL
38	HEAT SHIELD
39	FLUE ASSY, LEFT
40	PLENUM ASSY, RIGHT
41	PLENUM ASSY, LEFT
42	GAS VALVE, 1/2" NPT
43	GAS IGNITOR, RIGHT
44	GAS IGNITOR, LEFT
45	BRACKET, PLUMBING MOUNTING, REAR
46	BRACKET, PLUMBING MOUNTING, SIDE
47	SUPPORT, HEAT SHIELD
48	COVER, HOUSING, LIFT MOTOR
49	RESERVOIR ASSY
50	FILTER LEAF
51	HANDLE, OVAL, VALVE
52	ADAPTER, HANDLE, DRAIN
53	COVER, KETTLE
54	PLATE, MOUNTING, RH FLUE
55	SHIM, FLUE MOUNTING
56	GROMMET, INSULATION 7/8" O.D.
57	WASHER, FIBRE
58	FITTING, CONDUIT 90º x 3/8
59	FITTING, CONDUIT STRAIGHT x 3/8
60	CONNECTOR, 1/2" NPT x 1/4" COMPRESSION
61	UNION, 1/2" NPT
62	TEE, 1/2" NPT
63	ELBOW, 1/2" NPT 90º
64	O-RING .50 x .63
65	LEG, ADJUSTABLE
66	MAGNET, DOOR
67	ADAPTER, 1/2" FPT x 15/16 FLARE
68	THERMOSTAT, HI-LIMIT
69	CHECK VALVE
70	SUCTION LINE FITTING ASSY
71	CLAMP, PLASTIC
72	CASTER, RIGID 5"
73	UNION, 3/8" NPT
74	ELBOW, 3/8" NPT 90º
75	REDUCER, 1/2" NPT x 3/8" NPT
77	HOSE CLAMP
78	ADAPTER, 1/2" MPT x 15/16 FLARE
79	SWITCH, POWER ROCKER
80	ELBOW, 3/8" NPT 90º STREET
81	FLEX HOSE ASSY, 3/4" x 16.5"
82	YOKE, ROD, LIFT MOTOR
83	CRADLE LIFT BASKET ASSY
84	BUSHING, LIFT ROD
85	VALVE, RESERVOIR
87	NIPPLE, 1/2" NPT x 2-1/2"
88	NIPPLE, 3/8" NPT x 4"
89	NIPPLE, 1/2" NPT x 2"
90	NIPPLE 1/2" NPT x 15"
91	NIPPLE, 1-1/4" NPT x 2-1/2"
92	NIPPLE, 1/2" NPTx CLOSE
93	NIPPLE, 1/2" NPT x 7"
94	NIPPLE, 3/8" NPTx CLOSE
95	NIPPLE, 3/8" NPT x 2"
96	COUPLING, 3/8" SS
97	ELBOW, 1/8" NPT 90º BRASS
100	SOLID STATE RELAY
101	RELAY, 24V
102	COOLING FAN
103	SPARK QUENCHER
104	TERMINAL BLOCK, 6P
105	SONALERT
114	FACEPLATE, CONTROL PANEL
N	HEX NUT, ALUMINUM 8-32 x 7/8"
CC	ADAPTER, 6-32M x 6-32F

WFAE-60FS PARTS BREAKDOWN (GENERAL REFERENCE ONLY)



WFGA-60FS WIRING DIAGRAM / SCHEMATIC



SERVICE PARTS LIST

IMPORTANT: Use only factory authorized service parts and replacement filters.

For a complete listing of service parts for this fryer, consult **Service Parts List AS007**.

FRYER ACCESSORIES	**PART#**
FLAVOR SAVER OIL FILTER POWDER (45 pk)	22410
BASKET, FULL SIZE	22441
WAOC-1 MOBILE OIL DISPOSAL CADDY	22470
PADDLE, STIRRING CHICKEN	22515
BRUSH, FRYPOT CLEANING	22516
SCRAPER, BREADING ASSY	501713
FILTER LEAF ASSEMBLY	501847
STAINLESS STEEL SHOVEL	501901
BASKET, 1/2 SIZE (1 ea.)	22448
BASKET, 1/2 SIZE (2 ea.)	22554
DOWEL, CLEANING	69752
CRADLE, LIFT BASKET	69961

NORMAL MAINTENANCE ITEMS	**PART #**
LUBE, MOLYDISULFIDE	(LOCAL PURCHASE)
“O” RING, FILTER LEAF	501900
“O” RING, SUCTION TUBE (pk 5)	66474

COMMON REPAIR ITEMS	**PART #**
BURNER ASSY, LEFT	500781
GAS CONTROL VALVE, REDUNDANT COMBO	500784
BURNER ASSY, RIGHT	500980
CONTROLLER, SOLID STATE	500830
LIFT MOTOR	500513
IGNITOR & SENSOR ASSY, LEFT W/LEADS	501197
IGNITOR & SENSOR ASSY, RIGHT W/LEADS	500198
"J" THERMOCOUPLE	501199
THERMOSTAT, HI-LIMIT	502469
THERMOWELL	501158

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