OPERATION, INSTALLATION, SERVICE AND PARTS MANUAL

G18FB & G24FB

Frymaster®

A **WELBILT** Company

8700 Line Avenue
P.O. Box 51000
Shreveport, Louisiana 71135-1000
(318) 865-1711 TELEX 6822010 FAX (318) 868-5987
SERVICE HOTLINE
1-800-551-8633
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PARTS ORDERING/SERVICE INFORMATION

Parts orders must be placed directly with your local Frymaster Parts Distributor. To help speed up your order the following information is required: (This information may be found on the A.G.A. rating plate attached to the door inside the cabinet.)

. Model Number: _____
2. Serial Number: _____
3. Voltage: _____
4. Item Part Number: _____
5. Quantity Required: _____

Note: A list of Frymaster Parts Distributors was included with the fryers when shipped from the factory. If you do not have access to this list, please contact The Frymaster Customer Service Department, at (800) 551-8633 or (318) 865-1711.

Service information may be obtained by calling your local Authorized Frymaster Service Center (see your Authorized Service Center listing).Service information may also be obtained by calling The Frymaster Customer Service Department. When calling please have the following information available: (This information may be found on the A.G.A. rating plate attached to the door inside the cabinet.)

1. Model Number: _____
2. Serial Number: _____
3. Voltage: _____
4. Nature of service problem and symptoms.

PARTS ORDERING/SERVICE INFORMATION CANADA Garland Commercial Ranges, Ltd., 1177 Kamato, Mississauga, Ontario, L4W 1X4

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

WARNING:FOR YOUR SAFETY DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

POST IN A PROMINENT LOCATION THE INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE USER SMELLS GAS. THIS INFORMATION CAN BE OBTAINED BY CONSULTING WITH THE LOCAL GAS SUPPLIER.

I. INSTALLATION INSTRUCTIONS

A. PROPER INSTALLATION IS ESSENTIAL FOR TROUBLE FREE OPERATION, ANY ALTERATIONS TO THE EQUIPMENT VOIDS THE FRYMASTER WARRANTY.

Before installing the newly arrived equipment, inspect the equipment carefully for visible and concealed damage.

What to do if equipment arrives damaged:

1. VISIBLE LOSS OR DAMAGE-Be sure to note any visible loss or damage on the freight or express receipt. The receipt must be signed by the delivery person.

2. FILE FOR DAMAGES IMMEDIATELY-Regardless of extent of damage.

3. CONCEALED LOSS OR DAMAGE-If damage is undetected when your equipment is unpacked, notify the freight company immediately, and file a "concealed damage claim". This must be done within (15) days of delivery date. Be sure to retain the shipping container for inspection.

FRYMASTER DOES NOT ASSUME RESPONSIBILITY FOR LOSS OR DAMAGE INCURRED IN TRANSIT.

NOTICE

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

The fryer installation area must allow for a 6 inch (150mm) clearance at both sides and back adjacent to combustible materials. A minimum of 24 inches (600mm) should be provided at the front of the fryer(s) for servicing and proper operation. Air for combustion enters the fryer(s) below the cabinet base. DO NOT BLOCK AREA AROUND THE BASE OR PLACE OBJECTS UNDER THE FRYER(S).

B. FRYERS EQUIPPED WITH CASTERS

1. Installation shall be made with a gas connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69, and Addenda Z21.69a-1983, Z21.69b-1985, and a quick disconnect device that complies with the Standard for Quick-Disconnect Devices for the use With Gas Fuel, ANSI Z21.41-1978, and Addenda, Z21.41a-1981 and Z21.41b-1983.

2. Adequate means must be provided to limit the movement of the fryer(s) without depending on the connector and quick disconnect device or its associated piping to limit movement of the fryer(s).

3. Fryers equipped with casters and internal drain lines must be installed so that the drain lines slope downhill toward the drain pan.

C. NATIONAL CODE REQUIREMENTS

Frymaster Gas Fryers are manufactured to use the type gas specified on the rating plate located on the fryer door(s). When installing fryers in the **UNITED STATES,** the installation must conform with National Fuel Gas Code, ANSI Z223.1-1984. Installation operations must also comply with all local codes.

In **CANADA,** installation must conform with the following standards:
CAN/CGA-B149.1 Natural Gas Installation Code
CAN/CGA-B149.2 Propane Installation Code
These standards apply to all gas burning appliances and equipment. Again installations operations must conform with all local codes.

In **AUSTRALIA**, this appliance must be installed by an authorized person, in accordance with the manufacturer's instructions, local gas and electrical regulations, and requirements of AGA601, "Installation Requirements for Gas Burning Appliances."

D. GAS CONNECTIONS AND PIPE SIZE

The size of the fryer gas supply pipe(s) is very important. If the pipe is too small, the gas pressure and volume at the burner manifold will be low. This will cause a slow recovery time and delayed ignition. A single fryer requires a standard gas pipe size of 3/4 in. (19mm) I.D. when the distance of the run between the main gas pipe and the fryer is less than 20 ft. (6m) and no more than four fittings or elbows are used in the run. The size of the gas pipe must be increased to 1 - 1 1/4 in. (24 - 32mm) I.D. for fryers in batteries of 2 to three fryers. For a pipe run over 20 ft. (6m), increase the pipe one pipe size. For gases with heating values of less than 800 BTU per cubic foot, increase the pipe by one pipe size. For L.P. gases, the next smaller pipe size may be used. BATTERIES OF 2-3 FRYERS WITH COMMON GAS CONNECTION WILL NOT OPERATE PROPERLY UNLESS THE CONNECTION IS AT LEAST 1 in. (25mm) I.D.

If in doubt about the supply pipe being large enough, consult the local gas supplier.

CAUTION: Before connecting new pipe to the G18FB & G24FB series flat bottom fryers, the pipe must be blown out thoroughly to remove all foreign particles. Foreign particles in the burner and controls may cause improper and dangerous operation.

When using thread compound to seal pipe threads, use very small amounts and only on male threads. Use a pipe thread compound that is not affected by the chemical action of L.P. gases. To prevent clogging of the orifices and control valve, **DO NOT** apply compound to the first two threads of any pipe. All plumbing must be checked for leaks using a soap solution. **DO NOT** use matches, candles, or other ignition materials.

1. The fryers and individual gas shut off valves must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig. (3.45kPa) (13.84 in. W.C.).

2. The fryers must be isolated from the gas supply piping system by closing the manual shut off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig. (3.45kPa), (13.84 in. W.C.).

E. ELECTRICAL REQUIREMENTS

WARNING

1. All electrically operated appliances must be electrically grounded in accordance with local codes, or in the absence of local codes, with the NATIONAL ELECTRICAL CODE, ANSI/NFPA No. 70-1987, in CANADA, with CSA C22-1 CANADIAN ELECTRICAL CODE PART 1.

A WIRING DIAGRAM IS LOCATED ON THE FRYER DOOR. Power requirements can be determined by referring to this diagram. In the UNITED STATES and CANADA, the electrical power supply must be 120 VAC, 60 Hz. In other countries, check the rating plate on the fryer door.

2. This appliance is equipped with a three prong 120 volt (grounding) plug for your protection against electrical shock hazard and must be plugged directly into a properly grounded three prong receptacle. DO NOT CUT OFF OR REMOVE THE GROUNDING PRONG FROM THIS PLUG.

3. This appliance requires electrical power for operation and the gas control valve must be turned to the OFF position during prolonged power outage. This will prevent the fryer coming on when unattended.

DO NOT ATTEMPT TO USE THE FRYER(S) DURING POWER OUTAGE.

F. AFTER FRYER(S) HAVE BEEN POSITIONED UNDER FRY STATION EXHAUST HOOD:

CAUTION: Do not connect fryer(s) to gas supply before completing the following steps 1 through 4.

1. Test exhaust hood electrical power system as follows:
   a. Plug fryer electrical power cord into any fry station electrical receptacle.
   b. Open fryer door and press fryer power switch to the ON position.
   c. The POWER and HEATING indicator lights should light and the combustion air blower should run.
   d. Press the fryer power switch to the OFF position.
   e. This completes the exhaust hood electrical test.

2. Level fryers - the fryer casters cannot be adjusted; therefore the fryer must be installed on a level floor for the internal drain lines to drain properly.

3. Check the rating plate on the fryer door to determine if the fryer burner is set up for the proper type of gas before connecting the quick disconnect hose or piping from the building gas supply.
   a. Minimum incoming gas pressure NATURAL GAS - 6.5 in. W.C. (1.61kPa).
   b. Minimum incoming gas pressure L.P. GAS - 11 in. W.C. (2.7kPa).
   c. Maximum incoming gas pressure NATURAL GAS - 14 in. W.C. (3.48kPa).
   d. Maximum incoming pressure L.P. GAS - 14 in. W.C. (3.48kPa).

4. Test all piping for leaks. A soap solution should be used for this purpose.

DO NOT USE A FLAME.

5. Connect the quick disconnect hose or pipe from the building gas supply to the fryer.

WARNING: If gas odors are detected, the fryer gas supply must be shut off at the main shut off valve and the local gas company or authorized service agency contacted for service.

6. Close the fryer drain valve(s) and prepare to boil out the frypot(s).

7. To start the fryer(s), refer to the LIGHTING INSTRUCTIONS, page 4 and BOIL OUT INSTRUCTIONS.

8. Burner operating gas pressure can be checked at this time.
   a. Burner manifold pressure NATURAL GAS must be 4 in. W.C. (0.75kPa).
   b. Burner manifold pressure L.P. GAS must be 10 in. W.C. (2.4kPa)

NOTE: The burner manifold pressure should be checked by the local gas company or authorized service agency.

9. To check the thermostat knob calibration refer to THERMOSTAT CALIBRATION in Section V of this manual.

G. OPERATING INSTRUCTIONS

WHEN USING THE FRYER(S) FOR THE FIRST TIME, the frypot(s) must be boiled out according to instructions found in this manual.

1. To light the fryer(s), follow LIGHTING INSTRUCTIONS, page 4 or LIGHTING INSTRUCTIONS on the fryer door(s).

2. Close the drain valve(s) and season with solid shortening to prevent sucking.

CAUTION: All droplets of water must be removed from the frypot(s) before filling with shortening.

BOILING OUT THE FRYPOT(S)

Each frypot must be boiled out every three (3) months to eliminate harmful carbon deposits that build up on the sides and bottom surface.

CAUTION: Always wear inner and outer heat resistant gloves during this process.

Clean new frypots as follows before filling with shortening:

1. Before operating the burners, close the drain valve(s); pour one gallon (3.79 liters) of boil-out solution into frypot(s) and add water to the OIL LEVEL LINE at the rear wall of frypot.
2. To light the fryer(s), follow LIGHTING INSTRUCTIONS, this page, or LIGHTING INSTRUCTIONS on the fryer door(s).
3. Set the thermostat knob to 225°F.
4. Boil the solution for one hour. Add water as required to maintain a minimum depth of 2 inches (51mm) in the frypot.

CAUTION: DO NOT LEAVE THE FRYER(S) UNATTENDED because solution could foam up and overflow. To control this condition, press the switch to the OFF position. Add water as required to keep a minimum of 2 inches (0.79mm) in the frypot(s). During the boil out, frequently scrub the sides and bottom with a long-handle, natural fiber bristle brush to remove deposits. BE CAREFUL not to splash any solution into frypots containing shortening.

5. After the solution has boiled for one hour, press the power switch to the OFF position and allow the solution to cool.
6. Add two gallons (7.57 liters) of cold water. Drain the solution and clean the frypot(s) thoroughly. Close the drain valve(s) and fill the frypot(s) with clean water. Rinse the frypot(s) twice, drain and wipe dry with clean, dry paper towels.

H. FILLING WITH SHORTENING

Shortening capacity of the G18FB & G24FB series fryers is 48 pounds (22kg.) and 64 pounds (29kg.) respectively. This will fill the frypots to a depth of 3.5" (89mm). See oil level mark at rear of frypot. Never operate the fryer with less than a 3.25" (57.15mm) oil depth.

NOTE: The fryer control panel is equipped with a melt switch, which can be used to initially melt solid shortening and prevent scorching.

I. LIGHTING INSTRUCTIONS

CAUTION: The frypot(s) must be filled with shortening or water before lighting. See FILLING WITH SHORTENING this page.

1. Open the fryer door and press the POWER ON/OFF SWITCH to the OFF position.
2. Turn the gas valve knob to the OFF position. See **figure 1.**
3. **Set the thermostat knob to normal frying temperature, or 225°F to boilout frypot(s).**

NOTE: When using solid shortening, the built in Melt Cycle Feature should be used to prevent scorching.

4. **Press the Melt Switch to the ON position.**
5. **Turn the fryer gas valve to the ON position. See figure 1.**
6. **Press the fryer POWER ON/OFF SWITCH to the ON position,. The burners and the combustion air blower will now operate in a Melt Cycle Mode until the fryer reaches a temperature of 180° F (83°C). (The burners and combustion air blower will come on for 6 seconds and then off for 24 seconds) When the shortening melts and heats to 180°F (83°C), the thermostat will automatically take over and heat the shortening to the temperature set on the thermostat dial. The melt switch can be left on with no problem or turned off at any time after the shortening has reached 180°F (83°C).**

NOTE: Never turn off the melt switch until the bottom of the frypot is covered with at least 1" (25.4mm) of liquefied shortening.

NOTE: The first time the unit is turned on, there may be a considerable amount of air in the gas line. This may cause the trouble light to come on and shut the unit down. This is called "lock-out". Lock-out is a built in safety sequence. To restart the unit, turn the power switch to the off position and return it to the on position. This procedure should be repeated as necessary. If the unit sits overnight or for an extended period of time, one or two lock-outs may also occur the first time the unit is turned on again.

7. The thermostat knob calibration can be checked at this time. Please refer to Section V of this manual for this procedure.

CAUTION: The fryer must be left completely shut down for at least five minutes before lighting or relighting.

J. SHUTTING FRYER OFF FOR SHORT PERIODS

1. Open the fryer door(s) and press the POWER ON/OFF SWITCH to the OFF position.

2. Place the frypot cover(s) in place if so equipped.

K. SHUTTING FRYER(S) OFF WHEN CLOSING STORE

1. Open fryer door(s) and press the POWER ON/OFF SWITCH to the OFF position.

2. Rotate the fryer gas valve knob(s) to the OFF position. See figure 1 .

3. Place frypot cover(s) in place if fryers are so equipped.

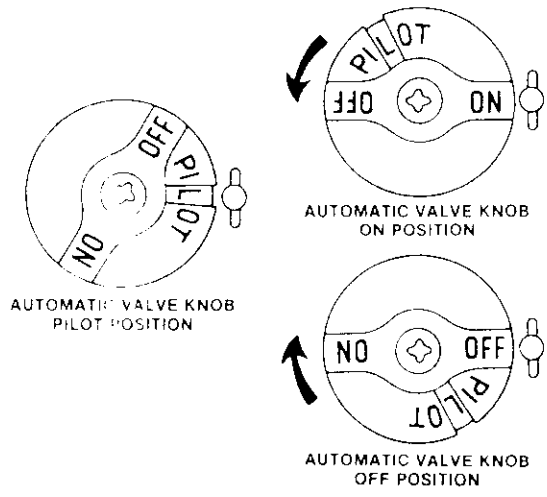


FIGURE 1

II. VENTILATION AND CLEARANCE

A. IMPORTANT VENTILATION FACTORS TO BE CONSIDERED FOR EFFICIENT FRYER OPERATION

1. The fryer(s) must be installed so that products of combustion are removed efficiently and the kitchen ventilation system does not produce draft that may interfere with proper burner operation. The fryer flue opening(s) must not be placed too close to the intake of the exhaust hood fan.

2. The fryer flue(s) must never be extended in a "chimney like" fashion. This changes the combustion characteristics of the burners. This will cause the fryer to have a slow recovery and will frequently cause delayed ignition.

3. To provide air flow necessary for good combustion and burner operation, the areas surrounding the fryer front(s), sides, and rear must be kept clear and unobstructed.

WARNING: Do not store objects of any kind inside the fryer cabinets. Always keep the area around this and all other gas fired appliances free and clear of combustibles.

4. The fryer(s) must be installed in an area with adequate air supply and ventilation.

5. The duct system, the exhaust hood, and the filter bank must be cleaned on a regular basis to avoid a build-up of grease. The finest ventilation system will break down if it is not maintained properly.

7. Adequate distances must be maintained between the flue outlet of the fryer(s) and the lower edge of the filter bank. Filters should never be installed in the horizontal position. Filters should be installed on a 45 degree angle, and a drip tray should be located at the lowest edge. For U.S. installations, NFPA Standard No. 96 state that "A minimum of 18 inches (450mm) should be maintained between the flue outlet(s) and the lower edge of the exhaust hood filters".

8. Frymaster recommends that the minimum distance be 24 inches (600mm) from the flue outlet(s) to the lower edge of the filters when the appliance consumes more than 120,000 btu per hour.

9. Information on the construction and installation of ventilating hoods can be found in NFPA Standard No. 96. A copy of this standard may be obtained from the National Fire Protection Association, Battery March Park, Quincy, Massachusetts, 02269 .

III. DRAINING AND FILTERING INSTRUCTIONS

CAUTION: Draining and filtering of the shortening MUST be accomplished with care to avoid the possibility of serious burns caused from careless handling.

FILTERING: If you are using a filter machine other than what was provided with your fryer, consult the manufacturer's instructions for recommended filtering procedure. Instructions for use of the Filter Magic System are included in the Operator's Manual with your Filter Magic unit.

The following is a recommended procedure to drain and filter your shortening when no filter machine is available:

1. Screw the drain pipe provided with your fryer into the drain valve. Assure that you have firmly attached the drain pipe and that the curved end portion is pointing "down".

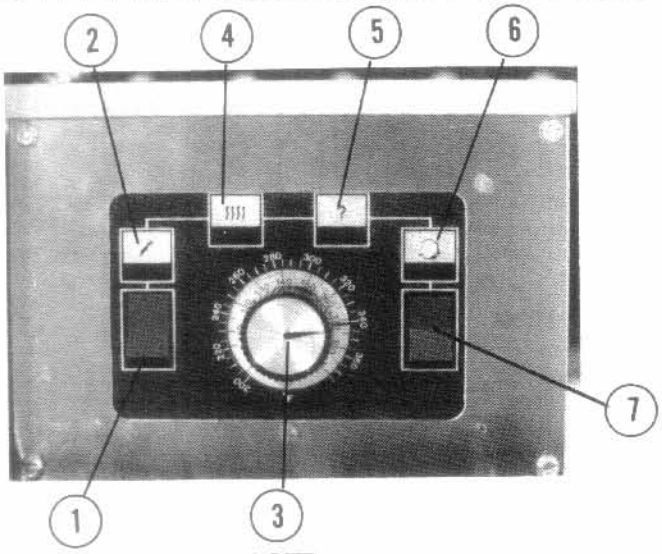
2. Position the stock pot or other container under the drain pipe. The stock pot or other container must be of sufficient design to withstand the heat generated by the hot shortening and must also be able to hold liquids. It is recommended that where no filter machine is available, the Frymaster Filter Cone Holder and Cones be used. If you are using the Frymaster Filter Cone Holder and Cones, be sure that the Cone Holder rests securely on the stock pot or other container.

3. Open the drain valve slowly to avoid splattering. However, since splattering may occur anyway, extreme caution should always be employed.

4. If the valve becomes clogged with food particles you may wish to use the FRYERS' FRIEND (poker-like tool). This tool must be used from the inside of the frypot only and caution should be employed that the tool is gripped by the user as far as possible from the hot shortening in the frypot. Do not hammer on the drain valve as damage to the ball inside the valve will cause it to leak. NEVER use this tool or any other tool to unclog the valve from the front of the valve. If the clog comes loose, hot shortening could pour out rapidly so beware of splattering in this event.

5. We recommend that the drained shortening be allowed to cool to 100° F or lower before transporting the stock pot or other container, removing the drain pipe, or removing the Frymaster Filter Cone Holder and Cones.

IV. SOLID STATE THERMOSTAT CONTROL PANEL



1. Power ON/OFF Switch - Switches fryer ON and OFF.
2. Power ON Light - Indicates fryer ON.
3. Thermostat Knob - Sets Frying Temperature.
4. Heating Light - Indicates Burners ON.
5. Trouble Light - Indicates ignition system lockout or Hi-limit thermostat tripped out..
6. Melt Cycle Light - Indicates melt cycle ON.
7. Melt Cycle Switch - Switches melt cycle ON.

• **NOTE:** To reset controller, press ON/OFF switch to the OFF position for 30 seconds, then ON.

V. THERMOSTAT CALIBRATION

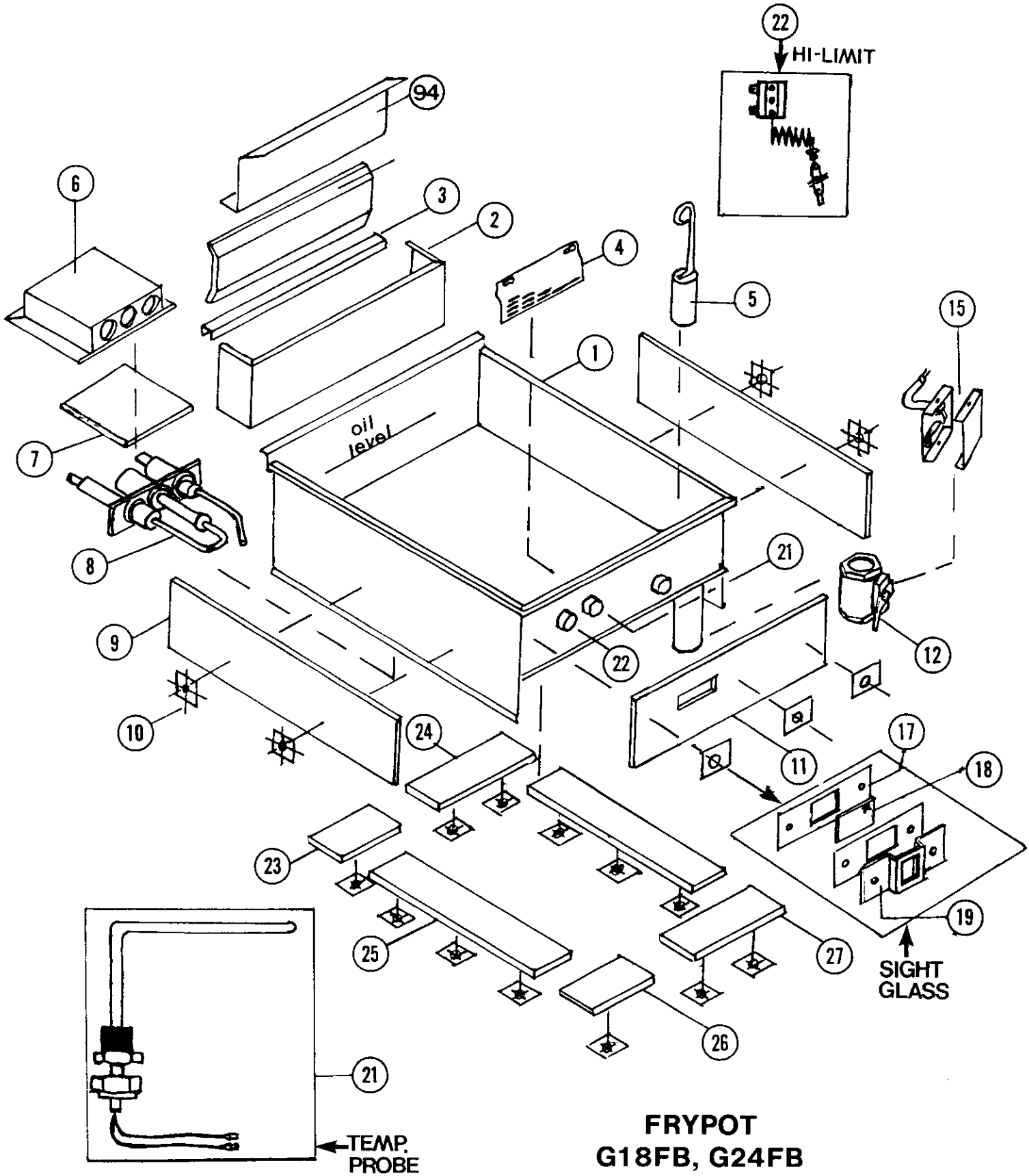
1. Insert a good grade mercury thermometer, pyrometer or temperature probe from the timer into the frypot near the temperature sensing probe 2 to 3 inches (5 to 7.5cm) deep.
2. Turn the thermostat knob to frying temperature.
3. Allow the burners to operate until the frying temperature is reached. Stir if necessary to ensure the shortening temperature is uniform through-out the frypot.
4. After the frying temperature is reached, allow the burners to cylce ON and OFF 3 times before attempting to calibrate the thermostat knob.
5. When the burners come on for the fourth time, the thermometer or pyrometer should indicate within 5°F plus or minus 2°C of the thermostat knob setting. If not, calibrate as follows:
   a. Loosen set screw in thermostat knob.
   b. Rotate knob without moving the shaft until knob index line aligns with the marking which corresponds to the thermometer or pyrometer reading.
   c. Tighten the knob set screw.
   CAUTION: DO NOT OVERTIGHTEN.
   d. Recheck the thermometer or pyrometer reading and thermostat knob setting next time the burners come on automatically.
   e. Repeat steps 5a through 5d until the thermometer or pyrometer reading and thermostat knob setting agree within 5°F, plus or minus 2°C.
   f. If calibration cannot be accomplished for any reason, call your Authorized Service Center.
6. Remove the thermometer or pyrometer from frypot and return fryer to cooking operation after calibration is complete.

VI. TROUBLE SHOOTING CHART

PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
TROUBLE LIGHT FLASHES MOMENTARILY, THEN HEATING LIGHT COMES ON WHEN CONTROLLER CALLS FOR HEAT.	A. Normal operation.	A. None.
POWER SWITCH ON, POWER LIGHT OFF, NO HEAT. (Interface board 12 volt LED OFF 24 volt LED ON.)	A. Defective 12 volt transformer. B. Fryer wire harness plugs loose. C. No 12 volt power to controller.	A. Replace 12 volt transformer. B. Plug all fryer wire harness plugs firmly into receptacles. C. Check output voltage from 12 volt transformer in control box. Replace if no output voltage.
POWER SWITCH ON, POWER LIGHT ON, TROUBLE LIGHT ON, HEAT LIGHT OFF, NO HEAT. (Interface board 12 volt LED ON 24 volt LED ON.)	A. Temperature knob set below frying temperature. B. Defective controller. C. Controller wire harness plugs loose. D. Defective centrifugal switch.	A. Set knob to frying temperature and recycle ON/OFF switch. B. Replace controller. C. Plug controller wire harness plugs firmly into receptacles. D. Replace blower.
POWER SWITCH ON, POWER LIGHT ON, TROUBLE LIGHT ON HEAT LIGHT OFF, NO HEAT. (Interface board right AL LED ON.)	A. Defective temperature probe. B. Loose connection in temperature probe wires. C. Defective fryer gas valve. D. Defective ignitor plug. E. Defective ignition module. F. Fryer gas valve turned OFF.	A. Replace temperature probe. B. Locate and correct loose connection(s). C. Check for 24 volts AC at gas valve "M" terminal when fryer is first turned ON. Replace gas valve if 24 volts is available. D. Check for spark on electrode end of ignitor plug. If no spark is available, replace ignitor plug. E. Check for 24 volts at "VALVE" terminal of ignition module as soon as ON/OFF switch is turned ON. If 24 volts is NOT available replace module. F. Turn gas valve knob ON.
POWER SWITCH ON, POWER LIGHT ON, HEATING LIGHT OFF, TROUBLE LIGHT ON, NO HEAT. (Interface board right "S" LED OFF.	A. Oil temperature above 410°F (210°C). 1. Temperature knob out of calibration. 2. Defective controller. 3. Defective temperature probe. B. Defective Hi-Limit thermostat. C. Drain valve open or drain switch defective. D. Defective ignition module. E. Defective Hi-Limit thermostat. F. Drain valve safety switch open. G. Defective K-2 latch relay on interface board.	A. Allow oil to cool below cooking temperature. 1. Recalibrate temperature knob. 2. Replace controller. 3. Check resistance of probe, Pins 13 & 10 of J7 on the interface board. If no resistance is read replace probe. B. Check continuity of Hi-Limit, pins 7 & 8 of J7 on the interface board. (Drain valve must be fully closed.) If no continuity, replace Hi-Limit. C. Ensure drain valve is closed and check continuity of drain valve safety switch terminals "C" & "NO". If no continuity replace drain valve safety switch. D. Replace ignition module. E. Replace Hi-Limit. F. Close drain valve. G. Replace K-2 latch relay.

VI. TROUBLE SHOOTING cont.

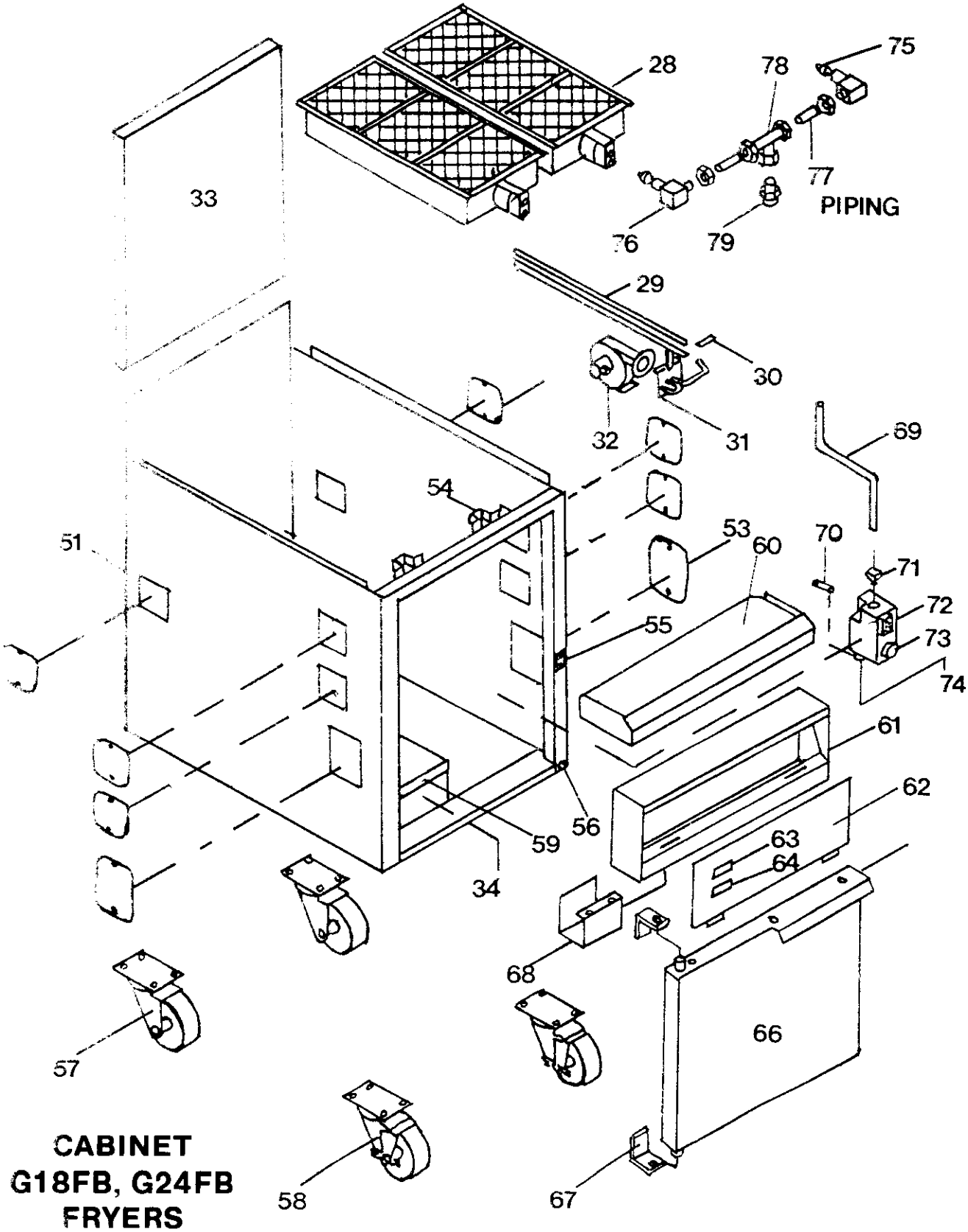
PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
FRYER SLOW TO RECOVER	A. Burner gas pressure too low.	A. Adjust regulator on gas valve. Natural gas - 4" W.C. (0.75 kPa) L.P. Gas - 10" W.C. (2.4 kPa).
	B. Incoming gas line restricted.	B. Remove restriction from gas line.
	C. Burner orifices restricted.	C. Remove and clean burner orifices being careful not to enlarge or damage holes.
DELAYED IGNITION (Popping Sound at light up)	A. Blower fan dirty.	A. Remove blower fan, clean and reinstall.
	B. Cracked ceramic insulator on ignitor plug.	B. Replace ignitor plug.
	C. Ignitor plug wire defective.	C. Replace ignitor plug wire.
	D. Ignitor plug gas orifice plugged.	D. Replace ignitor plug.
	E. Burner gas pressure too low.	E. Adjust regulator on gas valve to proper specifications.
	F. Cracked burner.	F. Replace burner.
	G. Flash over orifice tube clogged.	G. Remove burners and unclog flash over orifice tube.
POWER SWITCH ON, POWER LIGHT ON, BLOWER ON, TROUBLE LIGHT COMES ON 4 SECONDS AFTER HEAT LIGHT COMES ON	A. Defective ignition module.	A. Check for 24 volts at "VALVE" terminal of ignition module as soon as ON/OFF switch is turned ON. If 24 volts is NOT available replace module.
	B. Defective gas valve.	B. Check for 24 volts at terminal "P" & "C" of gas valve when HEAT LIGHT comes ON. If 24 volts is available, replace gas valve.
	C. Defective ignitor plug	C. Remove ignitor plug from ignitor box and check for good, hot spark at electrodes. Replace if ceramic insulation is cracked or no spark is available.
	D. Defective ignitor plug high voltage wire.	D. Remove high voltage wire from ignitor plug and check for spark at end of wire.
	E. Flame sensor wire connections defective.	E. Replace or repair flame sensor wire.
BLOWER WILL NOT RUN WHEN FRYER IS TURNED ON	A. Defective blower motor.	A. Check for 110 volts between the black & white wires inside the blower junction box when the fryer is first turned ON. If 110 volts is available, replace blower.
	B. Defective K-6 relay on interface board.	B. Check K-6 heat contacts for movement when fryer is first turned ON. If no movement is observed, replace K-6 relay.
TROUBLE LIGHT COMES ON IMMEDIATELY WHEN FRYER IS TURNED ON.	A. Defective temperature probe.	A. Check resistance of probe. If resistance reads open, replace probe.
	B. Defective K-2 latch relay on interface board.	B. Replace K-2 latch relay.



FRYPOT
G18FB, G24FB
FRYERS

VII. PARTS LIST, FRYPOT, G18FB, G24FB

ITEM	PART NO.	DESCRIPTION
1	806-3862	Frypot Complete w/Burners Nat., G 18 FB
1	806-3882	Frypot Complete w/Burners L.P., G 18 FB
1	806-3852	Frypot Complete w/Burners Nat., G 24 FB
1	806-3883	Frypot Complete w/Burners L.P., G 24 FB
1	823-0940	Frypot ONLY, No Burners, G 18 FB
1	823-0941	Frypot ONLY, No Burners, G 24 FB
*	826-0903	Frypot Insulation Kit, Complete, G 18 FB
*	826-0905	Frypot Insulation Kit, Complete, G 24 FB
2	910-6751	Flue Cap, G 18 FB
2	910-6752	Flue Cap, G 24 FB
3	910-3804	Flue Channel, G 18 FB
3	910-6761	Flue Channel, G 24 FB
4	910-1038	Thermostat Probe Guard
5	823-1002	Drain Plug
8	816-0054	Ignitor Box Insulation
8	810-0521	Ignitor, Nat.
9	810-0608	Ignitor, L.P.
10	930-0474	Retainer, Insulation
11	816-0049	Insulation, Pot Front
12	810-0041	Insulation, Pot Front
12	810-0597	Drain Valve, 1 1/4 inch
13	900-3939	Flue Deflector, G 18 FB
13	900-6865	Flue Deflector, G 24 FB
14	806-3851	Drain Valve Switch
15	900-1037	Cover, Drain Valve Switch Box
16	826-0907	Harness, Drain Valve Switch Box
17	816-0053	Sight Glass Insulation
18	814-0048	Sight Glass
19	900-1031	Sight Glass Bracket
20	810-0510	Burner Crossover Tube
21	806-3851	Temperature Probe
22	810-0458	Hi-Limit Thermostat
23	816-0051	Rear Ignitor Insulation
24	816-0046	Rear Insulation
25	816-0052	Insulation, Pot Btm. Side
26	816-0050	Insulation, Pot Btm. Front, G 18 FB
26	816-0044	Insulation, Pot Btm. Front, G 24 FB
27	816-0072	Insulation, Pot Btm. Front Valve, G 24 FB
94	823-1124	Guard, Flue Splash
94	823-1125	Guard, Flue Splash



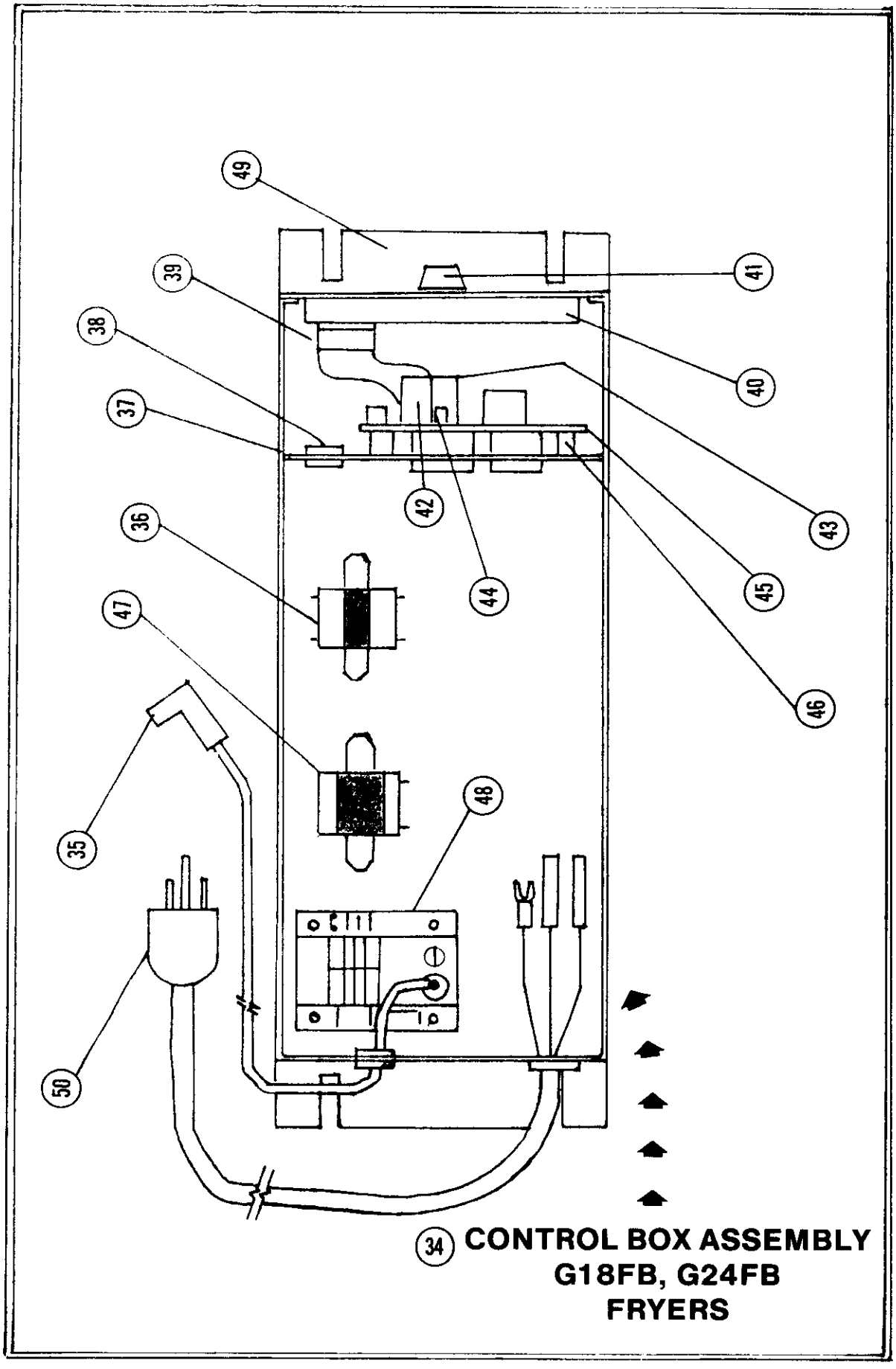
CABINET
G18FB, G24FB
FRYERS

VIII. PARTS LIST, CABINET, G18FB, G24FB

ITEM	PART NO.	DESCRIPTION
28	810-0455	Burner, Natural Gas
28	810-0477	Burner, L. P. Gas
29	816-0055	Burner Hold Down Insulation
30	816-0056	Blower Bracket Insulation
31	823-0944	Blower Assembly Mount
32	806-3840	Blower Assembly
33	816-0047	Cabinet Back Insulation
33	816-0048	Cabinet Back Insulation
34	806-3857	Control Box Assembly
51	823-0962	Enamel Cabinet, G 18 FB
51	823-0963	Enamel Cabinet, G 24 FB
52	900-0889	Cabinet Hole Cover, 4x4 in.
53	900-0890	Cabinet Hole Cover, 4x6 in.
54	900-1021	Pot Hold Down Bracket
55	900-0048-1	Sticker Plate
56	814-0032	Door Recess Bumper
57	810-0356	Caster, 5 in. W/out Brake
58	810-0357	Caster, 5 in. With Brake
59	824-0174	Control Box Cover
60	823-1157	Topcap 24 Single
60	823-1158	Topcap 18 single
62	806-3855	Control Panel, G 18 FB
62	806-3856	Control Panel, G 24 FB
63	807-0495	Light, Split-Red & White
64	807-0515	Trouble Light, Red
65	916-3672	Door Handle
66	806-3853S	Door, 18 in.
66	806-3854S	Door, 24 in.
*	900-0734	Door Hinge Pin
*	809-0266	Door Handle Screw
*	810-0066	Magnetic Door Catcth
*	810-0274	Retainer Ring for Hinge Pin
*	810-0275	Spring, Hinge Pin
67	900-0734	Door Hinge
68	900-1035	Hi-Limit Thermostat Bracket
69	900-3809	Gas Line Tubing, Burner to Manifold, G 18 FB
69	900-3810	Gas Line Tubing, Burner to Manifold, G 24 FB
70	813-0257	Incoming Gas Line 3/4 in. x 24 1/2 in.
71	810-0463	Male Fitting, 1/2 in. - 1/2 in.
72	810-0457	Gas Valve, Natural Gas
72	810-0464	Gas Valve, L. P. Gas
73	807-1156	Gas Valve Knob
74	823-0956	Gas Valve Mounting Bracket
75	810-0465	Burner Orifice, Nat. Gas 3.05 mm
75	810-0466	Burner Orifice, L. P. Gas 2.05 mm
76	807-1158	Burner Orifice Holder
77	900-1039	Burner Manifold Tubing
78	810-0462	Male Tee Fitting, 3/8 in.
79	810-0461	Female Fitting, 1/2 in. - 3/8 in.

Not Illustrated:

806-3859	Cable, Panel/Sensor/Hi-Limit	812-0626	Tubing - 1/8"
813-0004	Elbow, 1/8"	813-0016	Nipple, Close 1/8"
813-0340	Fitting, 1/8" Tube to 1/8" Pipe	813-0154	Plug, 1/8"
900-1041	Bracket, Crossover Tube	813-0338	Cross Tee, 1/8"
810-0512	Orifice, L.P. Gas	809-0271	Screw, 1/4 - 20 x 1 1/2"
810-0511	Orifice, Nat. Gas	809-0071	Nut, Hex 1/4 - 20
812-0630	Tubing - 1/8"	823-1139	Angle, Air Adjustment
		809-0025	Screw, Sheet Metal #7



34 CONTROL BOX ASSEMBLY
G18FB, G24FB
FRYERS

IX. PARTS LIST, CONTROL BOX ASSEMBLY, G18FB, G24FB

ITEM	PART NO.	DESCRIPTION
34	806-3857	Control Box Assembly
35	807-1112	Ignition Cable
36	807-0855	Transformer, 120/12 VAC 20VA
37	900-1029	Support Bracket, Interface Board
38	807-0125	Heyco Bushing
39	806-2071	Wire Harness
40	806-3839	Controller
41	810-0387	Thermostat Knob
42	807-0833	Relay, Gas Valve/Blower
43	807-0834	Relay, Trouble Light
44	807-1121	Relay, Latch
45	806-4307	Interface Board
46	809-0349	Spacer, 4.0 mm x 6.0 mm
47	807-0800	Transformer, 120/24 VAC 50VA
48	807-1006	Ignition Module
49	823-0958	Control Box
50	806-3858	Cordset, 120 VAC

X. SERVICE PROCEDURES

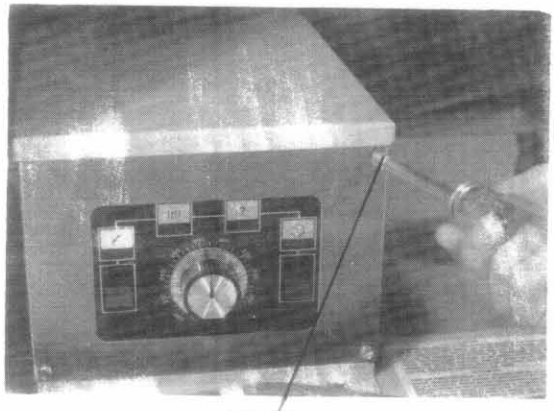
CAUTION: Before performing any maintenance on your Frymaster fryers, you must disconnect the electrical power supply and gas supply line.

When disconnecting internal electrical wires, it is recommended that markings be applied to the wires to facilitate reconnection.

PROCEDURE #1: To Replace or Remove Controller.

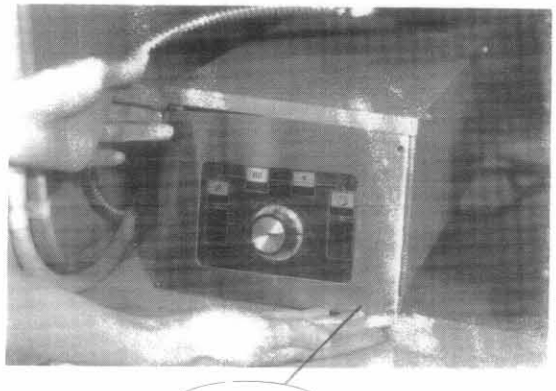
1. Open the fryer door to gain access to the controller.

2. Remove four (4) hex head screws from the controller face.

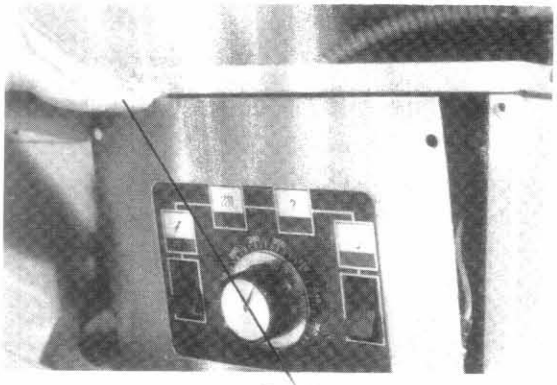


STEP 2

3. Pull bottom of controller out and down to remove from component box.



STEP 3

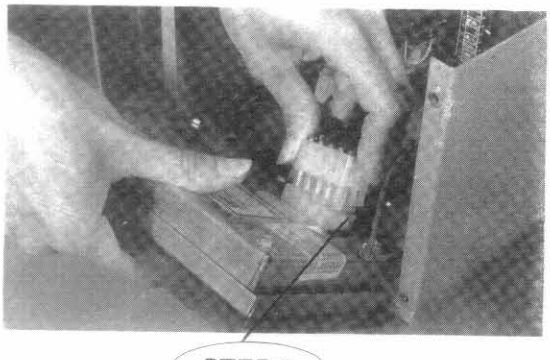


STEP 4

4. Lift controller out of component box after it clears front lip of box cover.

CAUTION: Exercise care to prevent damage to the controller electrical connector when pulling the controller out of the component box.

5. Disconnect the electrical connector from the controller.

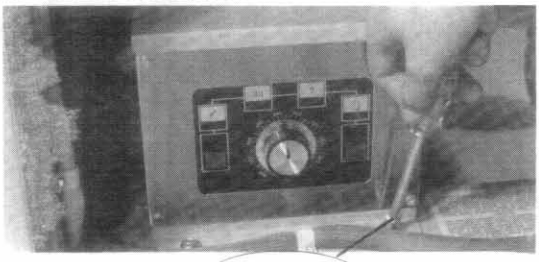


STEP 5

6. Reverse the preceding steps to install controller.

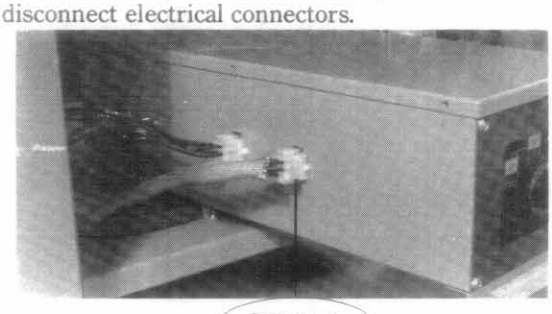
PROCEDURE #2: To Remove Controller and Component Box.

1. Remove hold down screws from mounting flange at front base of component box. Disconnect ignition wire first — or the ignition may be damaged if the ignition cable is pulled on. Then, slide component box out and disconnect.



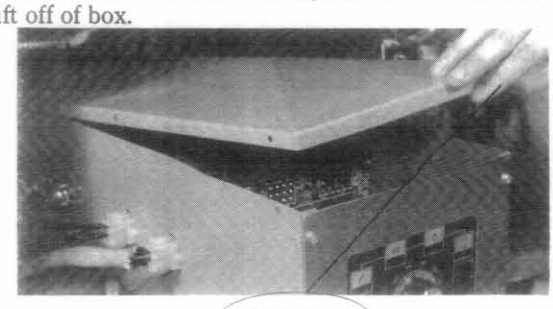
STEP 1

2. Slide component box out of fryer cabinet and disconnect electrical connectors.



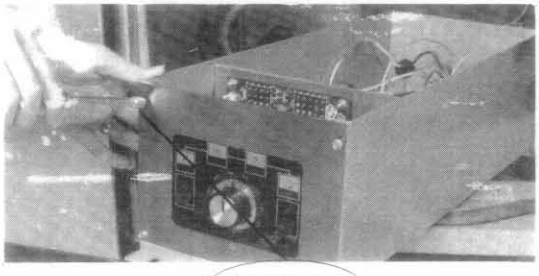
STEP 2

3. Remove screws from component box cover and lift off of box.



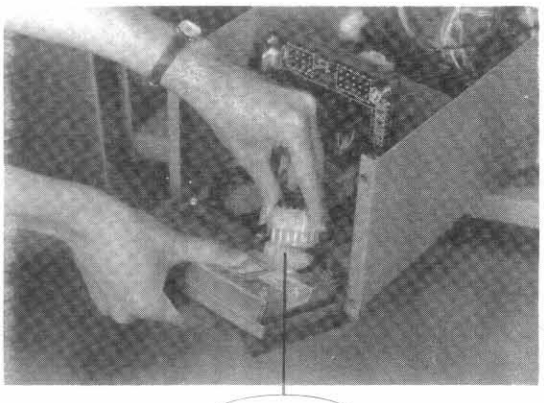
STEP 3

4. Remove screws from face of controller.



STEP 4

5. Pull controller away from component box and disconnect electrical connector.

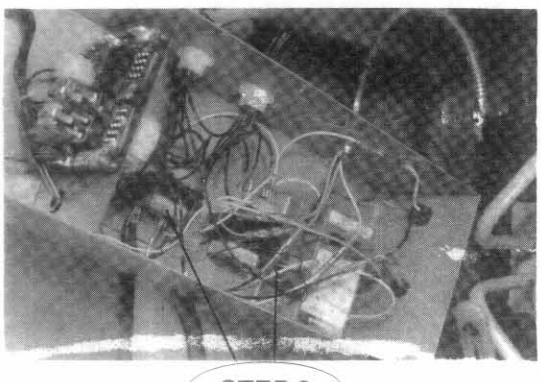


STEP 5

6. Reverse the preceding steps to reinstall controller and component box in fryer cabinet. Ensure the rear component box hold down screws engage with slots in rear mounting flange at rear base of box when installing the box in fryer cabinet. Make sure that no wiring has been trapped under the component box.

PROCEDURE #3: To Replace Components in Component Box

1. Comply with steps 1, 2 & 3 of Service Procedure #2.
2. Disconnect wires from component to be replaced. Mark wires to facilitate reconnection.



STEP 2

3. Remove mounting screws from component to be replaced and lift component out of the component box.

4. Reverse the preceding steps to reassemble and reinstall.

PROCEDURE #4: To Replace Combustion Air Blower.

1. Comply with steps 1, 2 & 3 of Service Procedure #2.

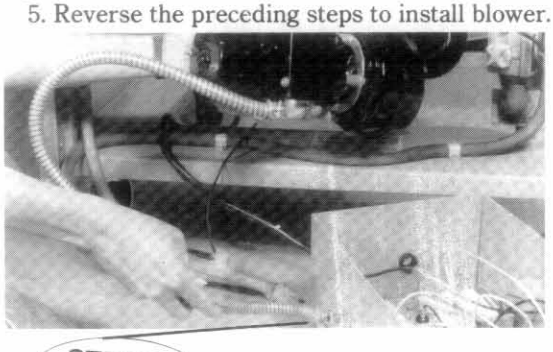
2. Remove three (3) hex head bolts from blower mounting bracket.

STEP 2

3. Remove blower from cabinet and disconnect electrical wires from terminal block inside component box. Mark wires for ease of reconnection.

4. Remove electrical conduit from side of component box and pull wires through conduit mounting hole.

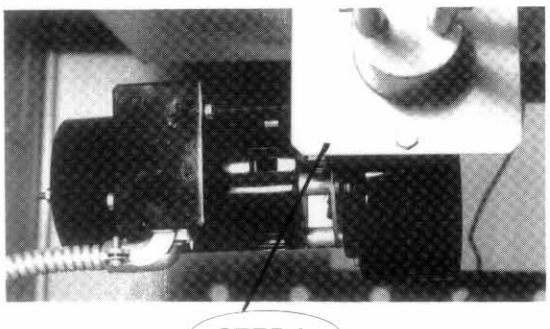
5. Reverse the preceding steps to install blower.



STEP 4

PROCEDURE #5: To Remove Blower Air Wheel For Cleaning.

1. Comply with steps 2 & 3 of Service Procedure #4 EXCEPT DO NOT disconnect blower wires and conduit from component box.



STEP 1

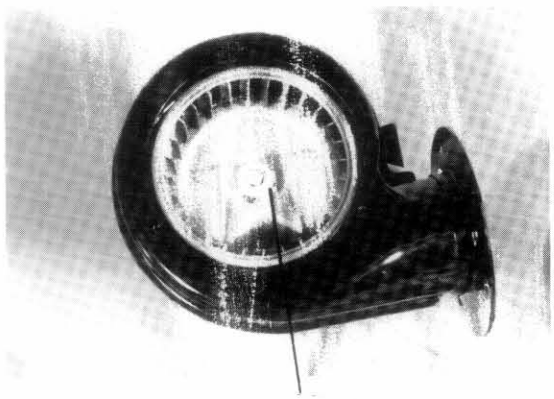
2. Using a ⅛ inch allen wrench, loosen two (2) allen screws inside blower wheel.

3. Pull blower wheel out of blower housing.

4. Clean blower wheel with soap solution or non-toxic solvent. Rinse thoroughly after cleaning.

5. Reinstall blower wheel on motor shaft inside blower housing ensuring that the allen screws align with the flat surface on the motor shaft before tightening.

NOTE: The blower wheel must not rub the blower housing.



STEP 2

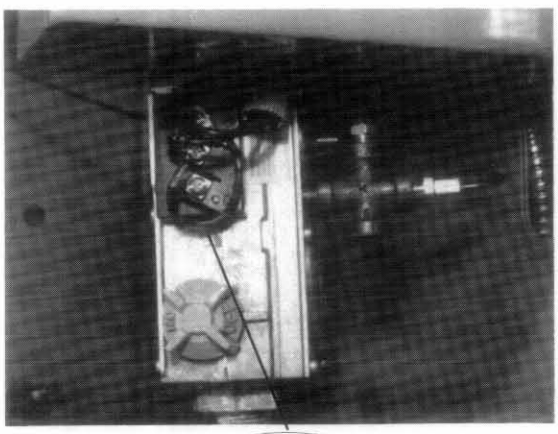
6. Tighten the allen screws against the motor shaft.

7. Reverse Service Procedure #4 to reinstall blower in fryer cabinet.

PROCEDURE #6: To Replace Automatic Gas Valve.

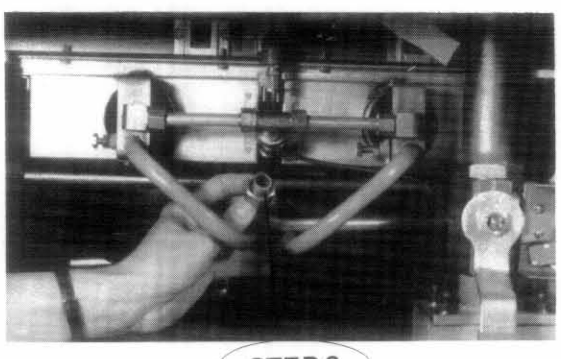
1. Turn OFF the fryer gas and electrical power supply.

2. Disconnect electrical wires from gas valve. Mark wires for ease of reconnection.



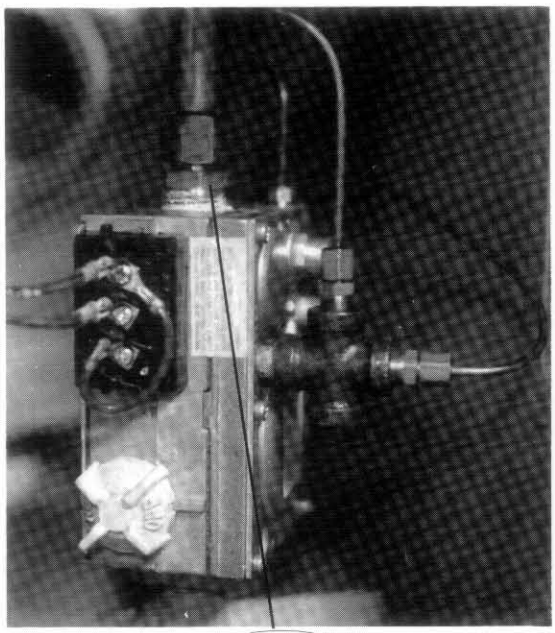
STEP 2

3. Remove gas tube from burner orifice manifold and top of gas valve.



STEP 3

4. Remove small 1/8" gas tube from the TEE fitting at right side of gas valve.



STEP 5

5. Unscrew gas valve from gas input manifold pipe.

NOTE: Observe position of gas valve before removing. The replacement gas valve must be assembled to the same position.

6. Remove all fittings from the old gas valve and install on replacement valve.

NOTE: Use teflon tape or a suitable pipe thread compound on fitting threads before installing in replacement valve. **DO NOT** use excessive amounts of thread compound.

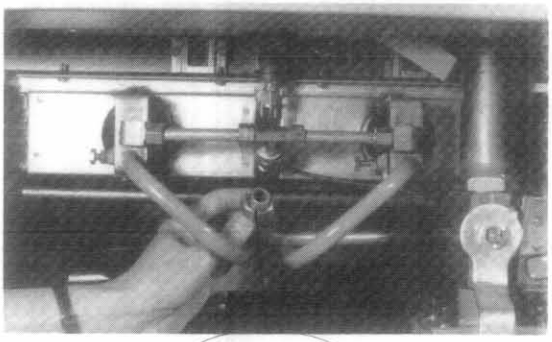
7. Reverse the preceding steps to install replacement gas valve.

PROCEDURE #7: To Replace Fryer Burners.

1. Turn OFF the fryer gas and electrical power supply.

2. Remove the gas tube from the burner orifice manifold and gas valve. (See Procedure #6.)

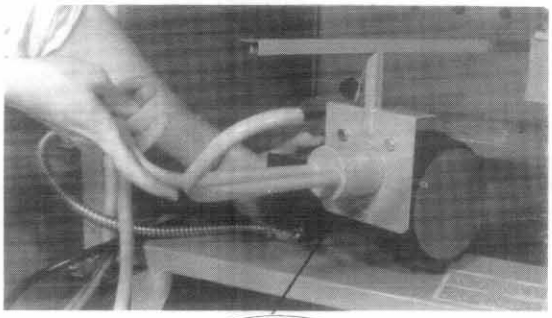
3. Remove the burner orifice manifold tubes from burner orifice fittings between burners.



STEP 3

4. Remove blower mounting bracket and blower with nut driver.

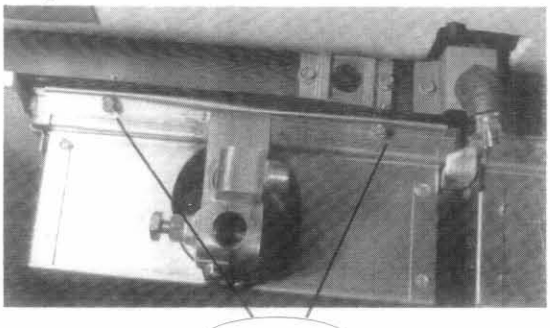
NOTE: Blower mounting bracket must be pulled forward and lowered after retaining screw is removed between burners.



STEP 5

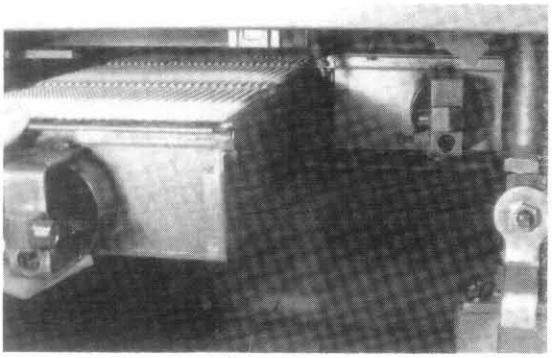
5. Lay blower and mounting bracket in bottom of fryer cabinet.

6. Remove two (2) screws at front of left burner, using 6" crescent wrench.



STEP 6

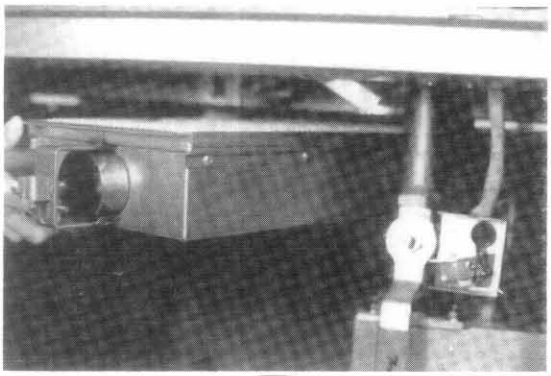
7. Lower front of left burner and pull forward to clear bottom of frypot.



STEP 7

8. Remove two (2) screws at front of right burner.

9. Lower front of right burner and pull forward toward left side of frypot to clear drain valve.



STEP 9

NOTE: When installing new or old burners, new insulation seals must be used to re-seal burner combustion chamber.

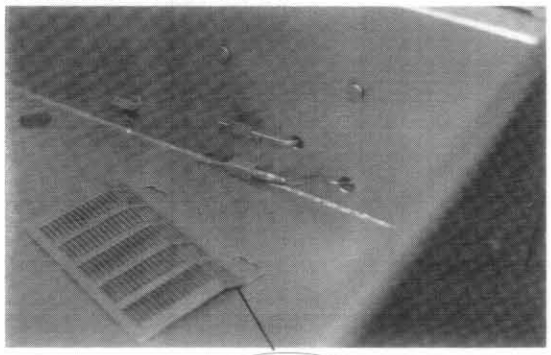
10. For ease of burner installation, install the right burner first. Ensure rear flange of burner is inside the rear burner retaining strip before raising front of burner.

11. Reverse preceding steps to install burners.

PROCEDURE #8: To Replace Temperature Probe or Hi-Limit Thermostat.

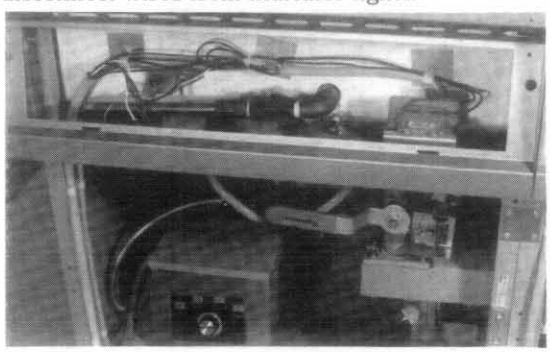
1. Turn the fryer power switch OFF and drain all shortening from frypot.

2. Remove the temperature probe guard from inside front wall of frypot.



STEP 2

3. Remove control panel from front of fryer and disconnect wires from indicator lights.



STEP 3

4. Cut wire harness tiewraps.

5. Unplug quick connect splices from wires of temperature probe or Hi-Limit thermostat, depending on which is to be replaced.

6. To remove the temperature probe, loosen (with fingers) the outer ferrule nut, then remove the inner packing gland nut from bushing in the frypot.

NOTE: Once the temperature probe is removed, it must be replaced with a new unit.

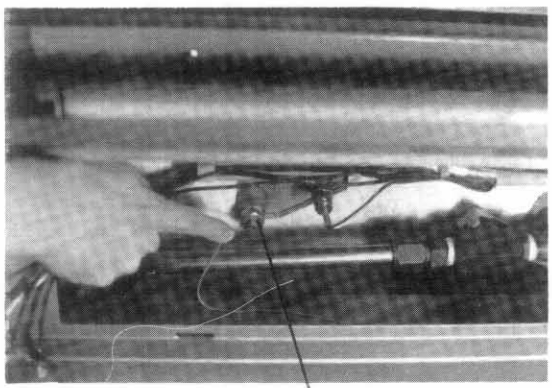
7. Carefully remove the temperature probe from frypot.

8. To remove the Hi-Limit thermostat, loosen (with fingers) the outer packing nut located on the capillary tube.

9. Remove the inner packing nut from fitting in frypot.

10. Remove the Hi-Limit bulb from its fitting (in frypot).

NOTE: Be careful. Do not bend the capillary tube as you remove the Hi-Limit bulb.



STEP 6

11. Remove wires from Hi-Limit thermostat terminals.

12. Remove Hi-Limit thermostat from mounting bracket.

13. Reverse the preceding steps to install temperature probe or Hi-Limit thermostat.

CAUTION: When installing Hi-Limit thermostat, be very careful to prevent sharp bending or kinking of the capillary tube. THE BULB MUST BE PLACED IN THE SAME LOCATION AS THE ORIGINAL USING A NEW OR THE OLD HOLD DOWN BRACKET.

PROCEDURE #9: To Replace Drain Valve Safety Switch.

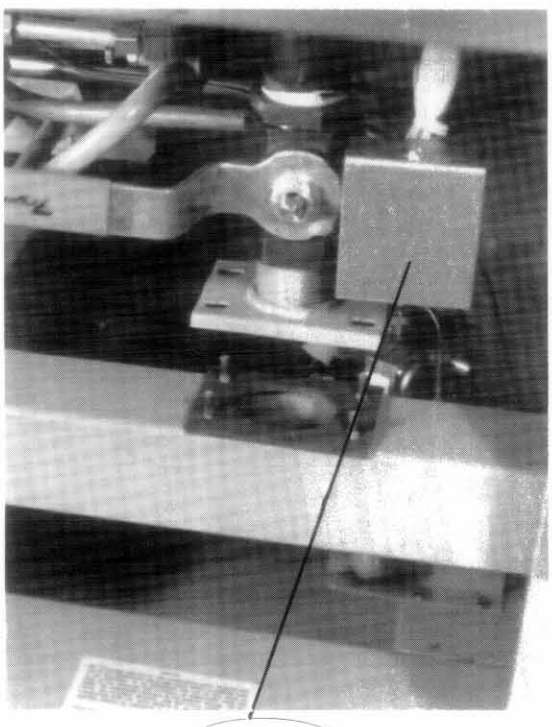
1. Remove cover from drain valve safety switch box.

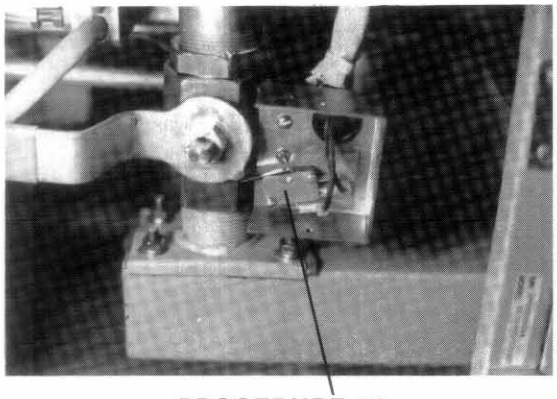
2. Disconnect wires from drain valve safety switch and mark for ease of reconnection.

3. Remove drain valve safety switch mounting screws while holding nuts at back of switch box with a small wrench.

4. Remove the switch from box.

5. Reverse the preceding steps to install drain valve safety switch.





PROCEDURE #9

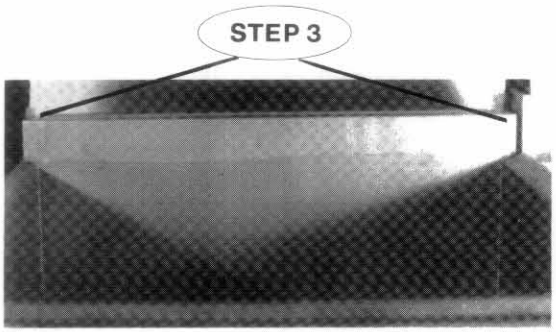
PROCEDURE #10: To Replace Frypot

1. Disconnect fryer from gas and electrical power supply lines.

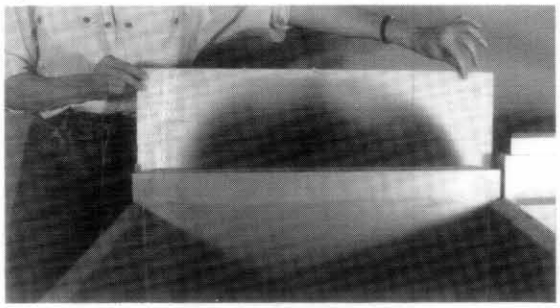
2. Remove screws from flue back insulation. Hold down channel and lift insulation out of cabinet.

NOTE: Exercise extreme care when removing the back insulation. It is very fragile.

3. Remove screws from flue cap and lift from fryer.

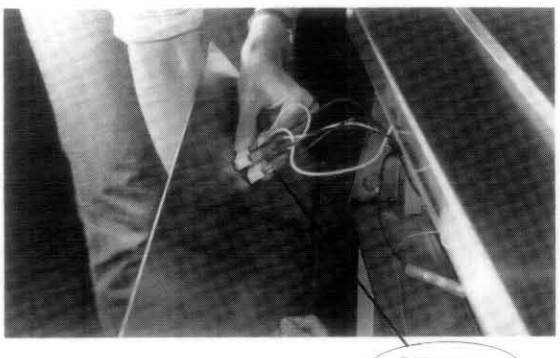


4. Remove screws from fryer top cap and lift from fryer.



PROCEDURE #10

5. Remove control panel screws, disconnect wires from indicator lights, and lift panel from fryer.

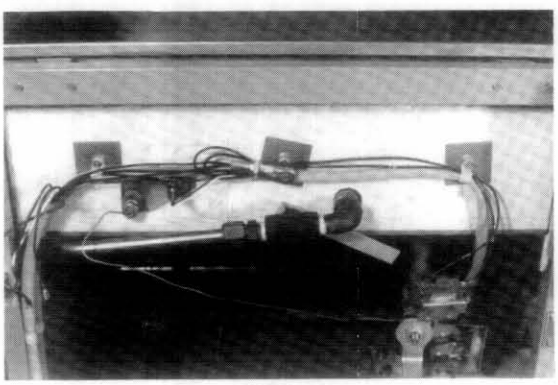


STEP 5

6. Remove screws at each end of control panel mounting frame and remove Hi-Limit thermostat mounting screws. Now the mounting frame can be lifted from the fryer.

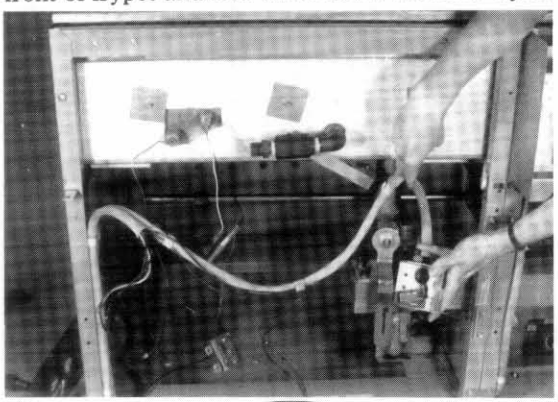
7. Compress top door hinge pin and remove door from fryer.

8. Remove frypot holddown brackets between frypot and front cabinet frame.



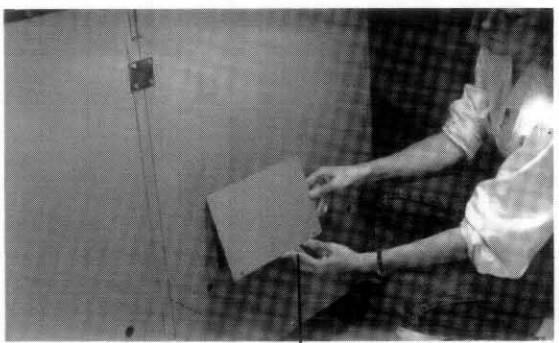
STEP 8

9. Remove Hi-Limit thermostat wire clamps from front of frypot and fold wires down inside of fryer.



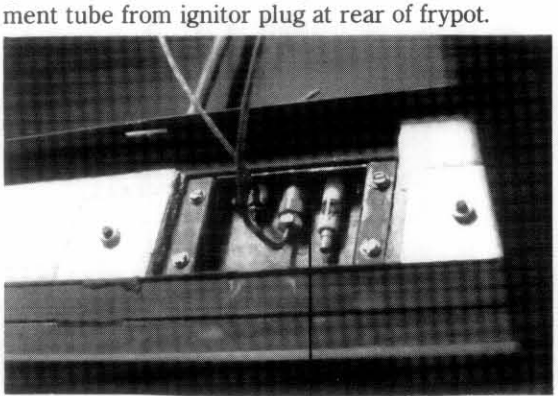
STEP 9

10. Remove access cover from cabinet back.



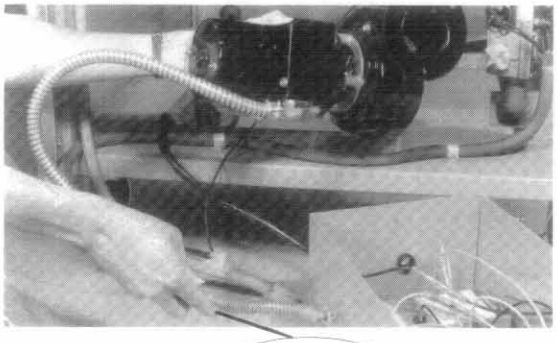
STEP 10

11. Working through the access hole, remove the ignitor cable, flame sensing wire and gas enrichment tube from ignitor plug at rear of frypot.



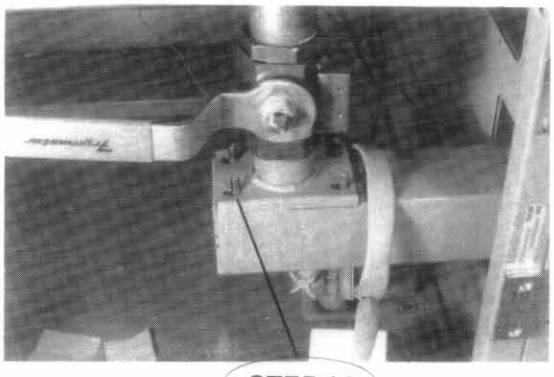
STEP 11

12. Remove combustion air blower from mounting bracket and lay back inside fryer leaving flex conduit attached. (See Procedure #7)



STEP 12

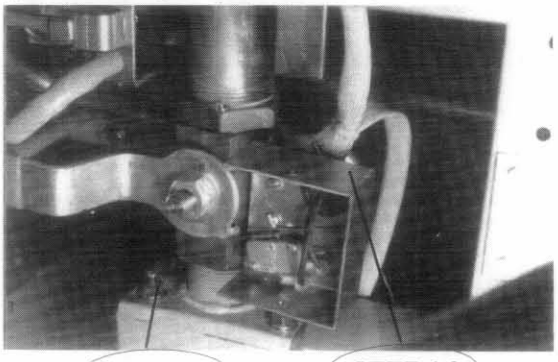
13. Remove four nuts from square drain line flange below the drain valve.



STEP 13

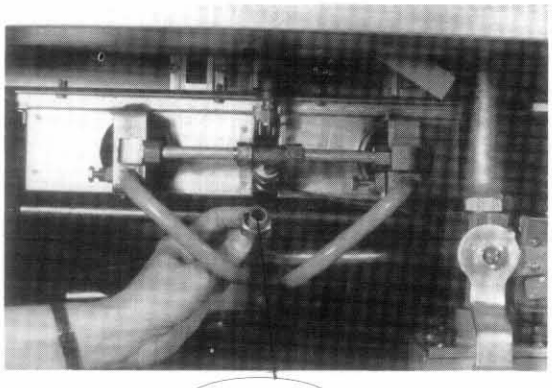
14. Remove drain valve switch box & wire harness. Remove drain valve switch box cover to gain access to switch box mounting screws.

15. Remove gas tubing from gas valve to burner gas manifold. (See Procedure #7.)



STEP 13 STEP 14

16. Remove gas enrichment tube from ignitor light over tube at front of burners. (See Procedure #7.)

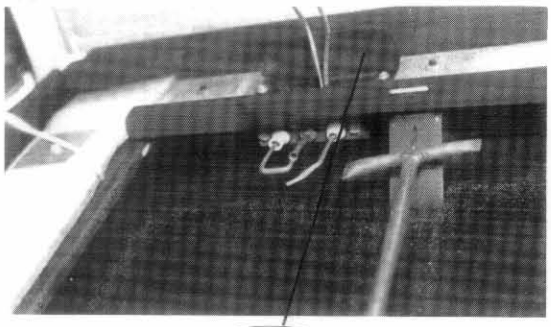


STEP 15

17. Lift frypot out of cabinet tilting rear of pot up first to prevent damage to Hi-Limit and temperature probe.

18. Remove both the Hi-Limit thermostat and temperature probe from the front of the frypot. Once removed, the temperature probe must be replaced. (See Procedure #8.)

19. Remove the spark ignitor plug box (4 screws). This part must then be installed on the new frypot.



STEP 19

20. Remove burner orifice manifold tubing from burner orifices. (See procedure #7.)

21. Remove burners, ignitor light over tube and all other hardware required on new frypot. (See Procedure #7.)

22. Install ignitor light-over tube, burners and associated hardware on new frypot. (See Procedure #7.) Assemble and install new frypot in reverse of the preceeding procedure.

XI. PREVENTATIVE MAINTENANCE

Maintenance of the fryer is a continuing process that must be performed throughout its lifetime.

A. DAILY MAINTENANCE

1. Shut fryer down.
2. Clean all detachable parts and accessories with a clean cloth soaked with dishwashing detergent. Rinse thoroughly with clean clear water.
3. Wipe all accessible metal surfaces and components inside the cabinet with a clean dry cloth to remove shortening film and dust.
4. Wipe all external cabinet surfaces with a clean damp cloth soaked with multipurpose solution. Rinse with a clean damp cloth.

B. PERIODIC MAINTENANCE

1. Check the burner manifold pressure every four (4) to six (6) months.

4.0 in. W.C. (0.75kPa) Natural Gas
10.0 in W.C. (2.4kPa) L.P. Gas

NOTE: Only qualified personnel should perform this task.

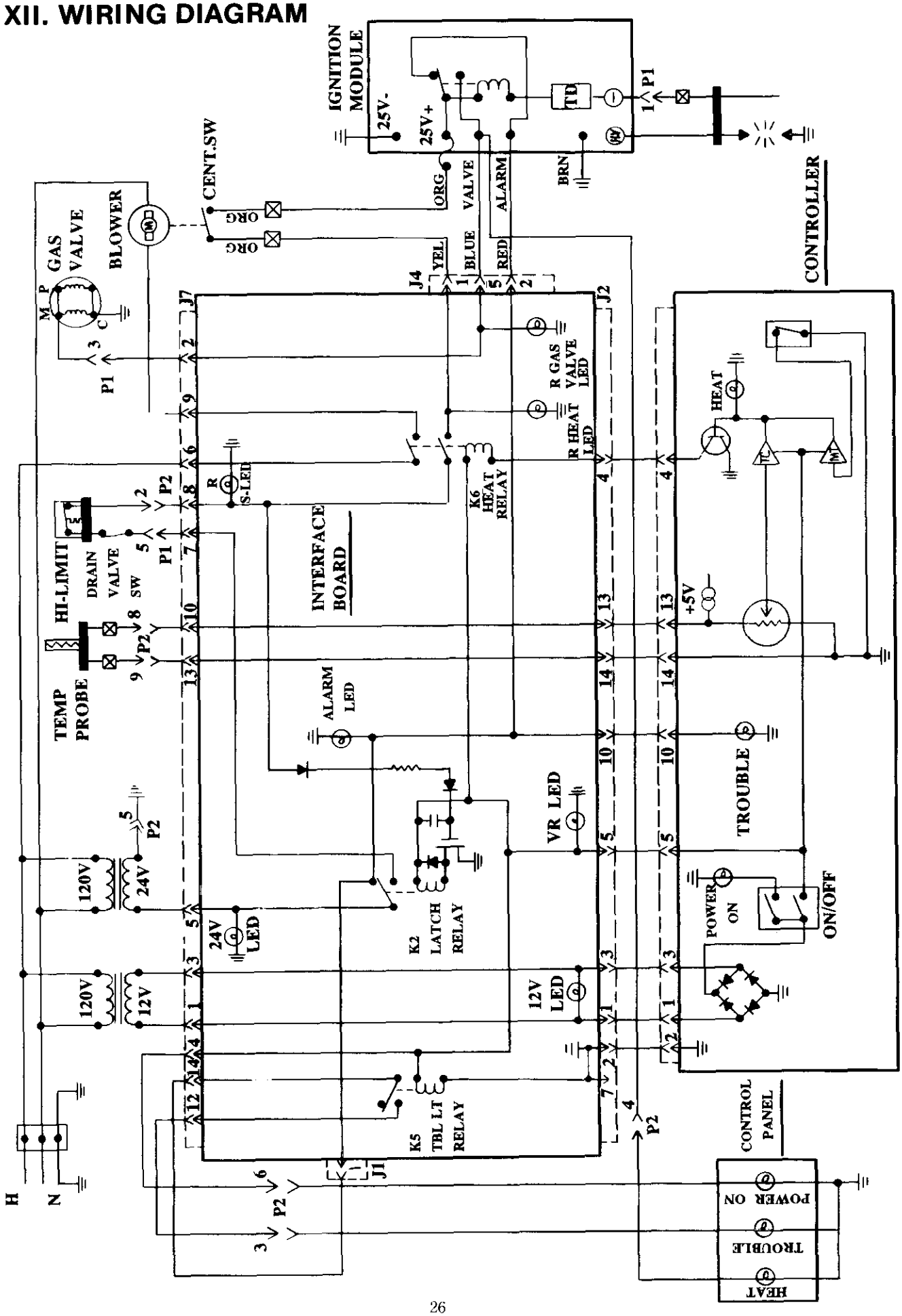
2. Check thermostat knob calibration every four (4) to six (6) months. Refer to THERMOSTAT CALIBRATION, page 7.
3. Clean combustion airblower air wheel every four (4) to six (6) months, every two (2) to four (4) months under heavier use of the fryer.

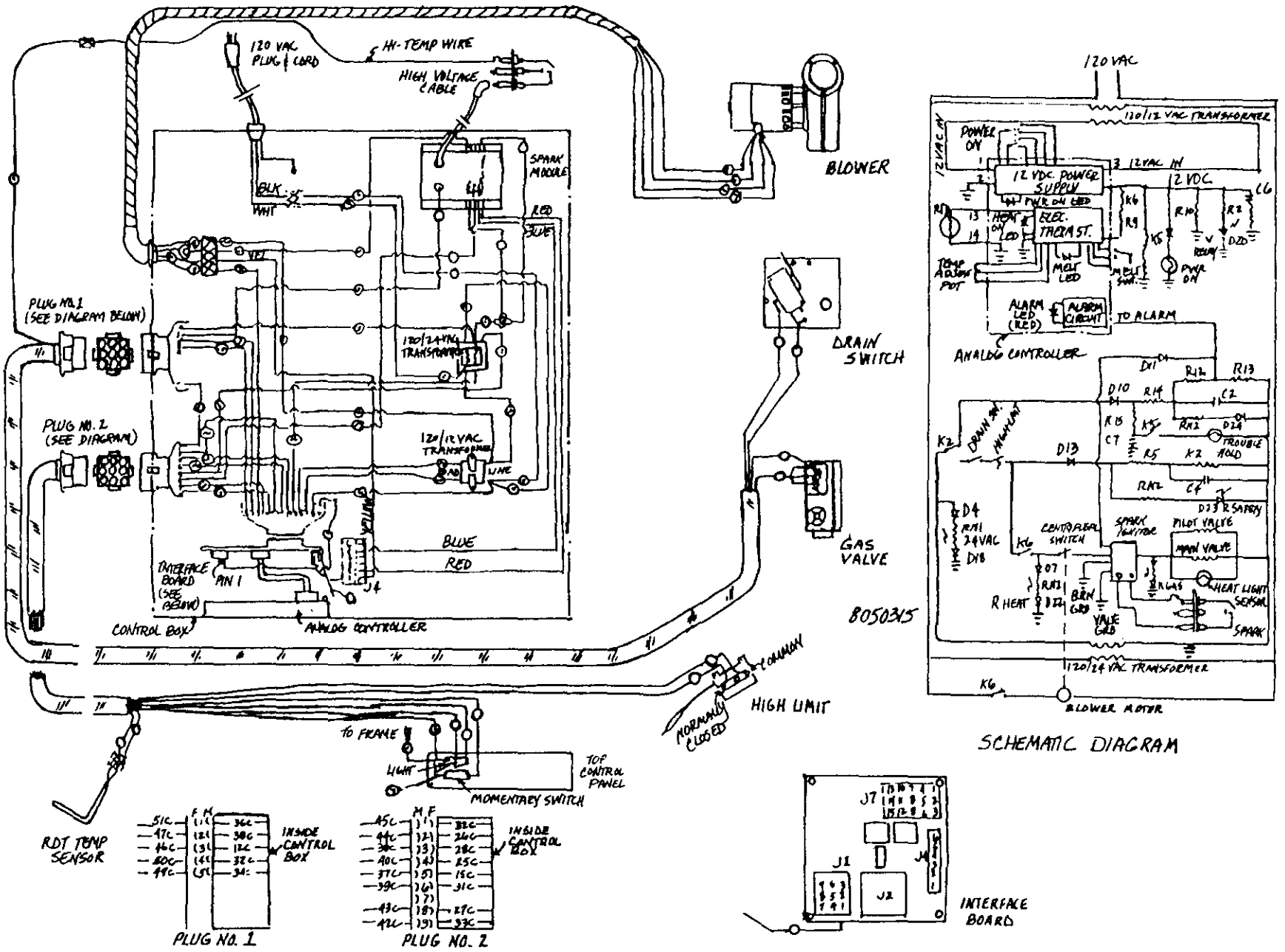
NOTE: Blower wheel should be removed from right side of blower housing for cleaning. Refer to Service Procedure #5, page 22.

ONLY qualified personnel should perform this task.

4. Clean burner air intake vent tube every two (2) to four (4) months.

XII. WIRING DIAGRAM




120 VAC PLUG & CORD
HI-TEMP WIRE
HIGH VOLTAGE CABLE
SPARK MODULE
BLK
WHT
RED
BLUE
YEL
BLOWER
DRAIN SWITCH
GAS VALVE
PLUG NO.1 (SEE DIAGRAM BELOW)
PLUG NO.2 (SEE DIAGRAM)
120/24VAC TRANSFORMER
120/12VAC TRANSFORMER
INTERFACE BOARD (SEE BELOW)
PIN 1
CONTROL BOX
ANALOG CONTROLLER
805035
HIGH LIMIT
COMMON
NORMALLY CLOSED
TO FRAME
LIGHT
MOMENTARY SWITCH
TOP CONTROL PANEL
RDT TEMP SENSOR
INSIDE CONTROL BOX
PLUG NO. 1
PLUG NO. 2
INTERFACE BOARD
120 VAC
12 VDC. POWER SUPPLY
ELEC. THERM ST.
ALARM CIRCUIT
TO ALARM
ANALOG CONTROLLER
CENTRIFUGAL SWITCH
SPARK IGNITOR
PILOT VALVE
MAIN VALVE
HEAT LIGHT SENSOR
SPARK
R HEAT
BRN GRD
VALVE GRD
120/24 VAC TRANSFORMER
BLOWER MOTOR
SCHEMATIC DIAGRAM

High Production Specialty Fryer

Excellent for battered products

Open pot design
Easy to clean

Melt cycle - Standard

Centerline thermostat quick response to loads accurate to 1°

1¼ in. (32 mm) IPS drain valve - ball type

Infrared burners for fast response

No cleaning or adjusting air shutters

G18FB (illustrated)

DESIGN FEATURES

The G18FB has a 48 lbs. (27 l.) capacity and the G24FB has a 64 lbs. (36 l.) capacity. The cooking area on the G18FB is 18 in. x 24 in. x 8½ in. The G24FB is 24 in. x 24 in. x 8½ in. This 90,000 BTU model with its clean flat bottom is perfect for liquid batter style frying and produces a more uniformly cooked product. Centerline thermostat mounting permits quick sensing of cold food placed in fryer. Solid state controls and direct spark ignition. Infrared burner has no burner tube radiants to burn out. The open flat bottom, stainless steel frypot has a large heat transfer area to fry more product per load. The open pot design allows every inch of the frypot to be cleaned and wiped down by hand.

Up to three GFB fryers can be batteried to produce a frying station.

**Five year warranty on stainless steel frypot.*

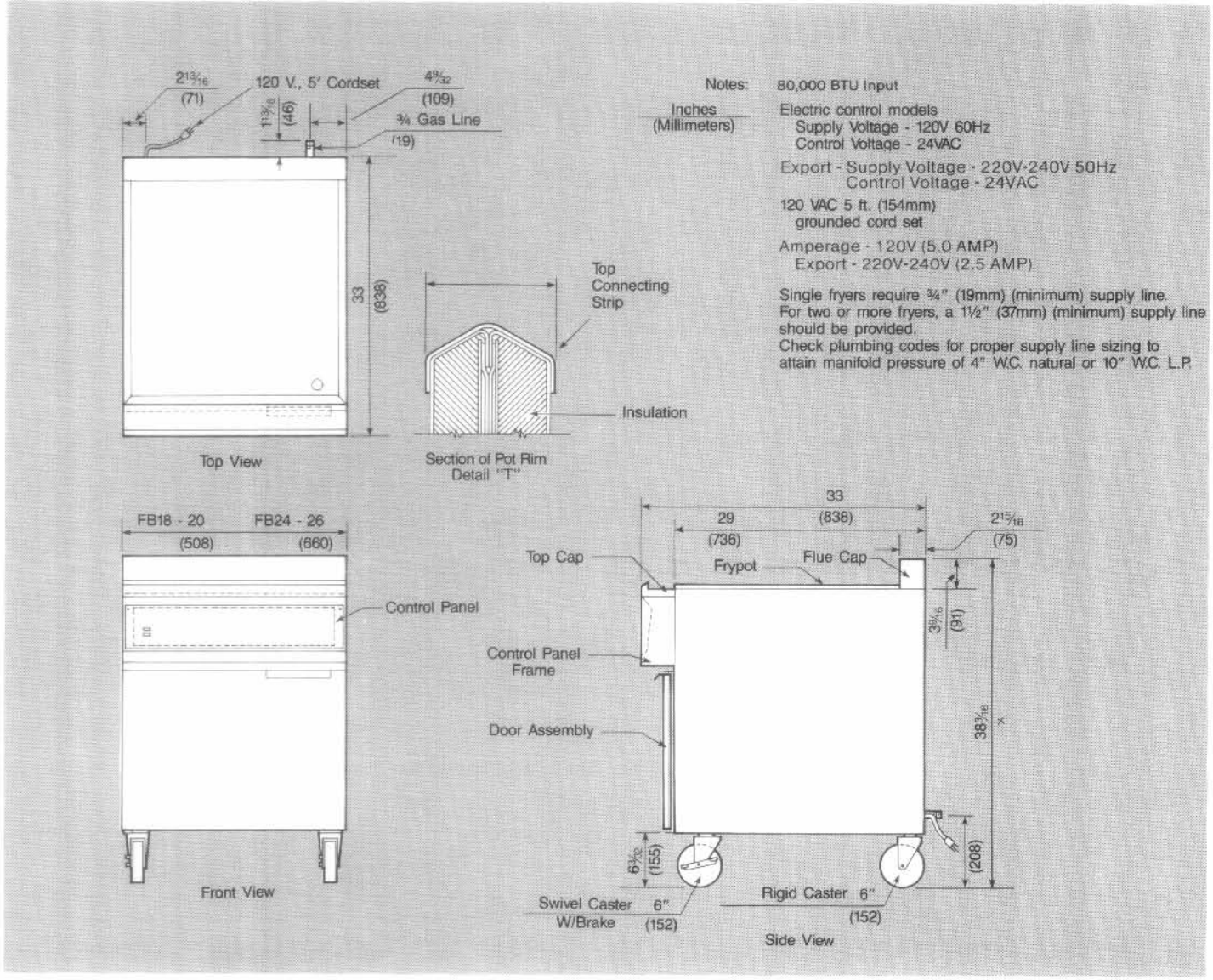
One year parts and labor warranty.

GAS FRYERS

G18FB AND G24FB

Frymaster®

A WELBILT Company



HOW TO SPECIFY

G18FB
G24FB
FMG18FB With filter
FMG24FB With filter
SD Stainless steel pot and door - enamel cabinet
SC Stainless steel pot, door and cabinet

OPTIONS AND ACCESSORIES

Filter Magic® System-Can be batteried with other Frymaster fryers when separated by the filter.
Frypot cover
Stainless steel apron drain with basket (interchangeable right or left side)
Flexible metal connector with quick-connect coupler
Spreader drain (for use between two fryers)
Casters

Basic Unit Shipping Weight 205 lbs. (92.25 kg) Class 85 for 18 in.

Basic Unit Shipping Weight 220 lbs. (99 kg) Class 85 for 24 in.

THE FRYMASTER CORPORATION

A Welbilt Company

8700 Line Avenue, P.O. Box 51000, Shreveport, Louisiana 71135-1000, 318/865-1711, Telex 6822010. Call toll free 1-800-221-4583