HENNY PENNY™

Global Foodservice Solutions

Henny Penny Pressure Fryer Model 680 KFC

SERVICE MANUAL

HENNY PENNY 8 HEAD GAS PRESSURE FRYER
Model 680 Gas Fryer

SPECIFICATIONS

Height	60" (152.4 cm)
Width	24" (61 cm)
Depth	41½" (106 cm)
Floor Space	Approximately 7 sq. ft. (.65 sq. m.)
Pot Capacity	8 Head of chicken (24 lbs.)(10.9 Kg.) 95 lbs. shortening (40.86 Kg.)
Electrical	120 VAC, 1 Phase, 50/60 Hz, 10 Amp, 3 Wire Service
Heating	Propane or Natural Gas; 100,000 BTU/Hr.(29.3 Kw)
Pressure	12 PSI operating pressure (827 mbar) 14.5 PSI safety relief pressure (999 mbar)
Shipping Weight	Approximately 800 lbs. (360 Kg.)
Accessories Shipped	Five 1/2 size pan racks and carrier.

NOTE

A data plate, located on the right side panel, gives the information of the type of fryer, serial number, warranty date, and other information pertaining to fryer.

WARNING

This manual should be retained in a convenient location for future reference.

Wiring diagram for this appliance is located on the inside access door below the control panel.

Post in a prominent location, instructions to be followed in event user smells gas. This information shall be obtained by consulting the local gas supplier.

FOR YOUR SAFETY

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

Keep appliance area free and clear from combustibles.

Do not obstruct the flow of combustion and ventilation air. Adequate clearance must be left all around appliance for sufficient air to the combustion chamber.

NOTE

The Model 680 Fryer is not equipped with a continuous pilot. But Fryer can not be operated without electric power. Fryer will automatically return to normal operation when power is restored.

WARNING

WARNING: Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

LIMITED WARRANTY FOR HENNY PENNY APPLIANCES

Subject to the following conditions, Henny Penny Corporation makes the following limited warranties to the original purchaser only for Henny Penny appliances and replacement parts:

NEW EQUIPMENT: Any part of a new appliance, except lamps and fuses, which proves to be defective in material or workmanship within two (2) years from date of original installation, will be repaired or replaced without charge F.O.B. factory, Eaton, Ohio, or F.O.B. authorized distributor. To validate this warranty, the registration card for the appliance must be mailed to Henny Penny within ten (10) days after installation.

REPLACEMENT PARTS: Any appliance replacement part, except lamps and fuses, which proves to be defective in material or workmanship within ninety (90) days from date of original installation will be repaired or replaced without charge F.O.B. factory, Eaton, Ohio, or F.O.B. authorized distributor.

The warranty for new equipment and replacement parts covers only the repair or replacement of the defective part and does not include any labor charges for the removal and installation of any parts, travel or other expenses incidental to the repair or replacement of a part.

EXTENDED FRYPOT WARRANTY: Henny Penny will replace any frypot that fails due to manufacturing or workmanship issues for a period of up to seven (7) years from date of manufacture. This warranty shall not cover any frypot that fails due to any misuse or abuse, such as heating of the frypot without shortening.

0 TO 3 YEARS: During this time, any frypot that fails due to manufacturing or workmanship issues will be replaced at no charge for parts, labor, or freight. Henny Penny will either install a new frypot at no cost or provide a new or reconditioned replacement fryer at no cost.

3 TO 7 YEARS: During this time, any frypot that fails due to manufacturing or workmanship issues will be replaced at no charge for the frypot only. Any freight charges and labor costs to install the new frypot as well as the cost of any other parts replaced, such as insulation, thermal sensors, high limits, fittings, and hardware, will be the responsibility of the owner.

Any claim must be represented to either Henny Penny or the distributor from whom the appliance was purchased. No allowance will be granted for repairs made by anyone else without Henny Penny's written consent. If damage occurs during shipping, notify the sender at once so that a claim may be filed.

THE ABOVE LIMITED WARRANTY SETS FORTH THE SOLE REMEDY AGAINST HENNY PENNY FOR ANY BREACH OF WARRANTY OR OTHER TERM. BUYER AGREES THAT NO OTHER REMEDY (INCLUDING CLAIMS FOR ANY INCIDENTAL OR CONSQUENTIAL DAMAGES) SHALL BE AVAILABLE.

The above limited warranty does not apply (a) to damage resulting from accident, alteration, misuse, or abuse; (b) if the equipment's serial number is removed or defaced; or (c) for lamps and fuses. THE ABOVE LIMITED WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS, AND ALL OTHER WARRANTIES ARE EXCLUDED. HENNY PENNY NEITHER ASSUMES NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT ANY OTHER OBLIGATION OR LIABILITY.

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SECTION 1. INTRODUCTION

1-1. PRESSURE FRYER

The Henny Penny Pressure Fryer is a basic unit of food processing equipment. It has found wide application in institutional and commercial food service operations.

P-H-T

A combination of Pressure, Heat, and Time is automatically controlled to produce the optimum in a tasty, appealing product.

PRESSURE

Pressure is basic to this method of food preparation. The pressure is developed from the natural moisture of the food. The patented lid traps this moisture and uses it as steam. Because the steam builds rapidly, the greater part of the natural juices are retained within the food. An operation valve vents excess steam from the pot and maintains constant live steam pressure.

HEAT

Heat generated is another important factor of the pressure fryer. Energy savings is realized due to the unit's short frying time, low temperature, and heat retention of the stainless steel cookpot.

TIME

Time is important because the shorter time involved in frying foods results in additional economies for the user. Foods are table ready in less time than it would take to fry them in a conventional open-type fryer.

1-2. PROPER CARE

As in any unit of food service equipment, the Henny Penny Pressure fryer does require care and maintenance. Requirements for the maintenance and cleaning are contained in this manual and must become a regular part of the operation of the unit at all times.

1-3. ASSISTANCE

Should you require outside assistance, just call 1-800-417-8405, or 937-456-8405.

1-4. SAFETY

The Henny Penny Pressure Fryer has many safety features incorporated. However, the only way to ensure a safe operation is to fully understand the proper installation, operation, and maintenance procedures. The instructions in this manual have been prepared to aid you in learning the proper procedures. Where information is of particular importance or safety related, the words DANGER, WARNING, CAUTION, and NOTE are used. Their usage is described below.

The word DANGER indicates an imminent hazard which will result in highly serious injury such as second or third degree burns, loss of sight, and other permanent injuries.

WARNING

The word WARNING is used to alert you to a procedure, that if not performed properly, might cause personal injury, such as burns and/or loss of sight, and damage to the fryer.

CAUTION

The word CAUTION is used to alert you to a procedure that, if not performed properly, may damage the fryer, or product.

NOTE

The word NOTE is used to highlight especially important information.

SECTION 2. INSTALLATION

2-1. UNPACKING INSTRUCTIONS

1. Cut and remove the metal bands from the carton.
2. Remove the carton lid and lift the main carton off the fryer.
3. Remove corner packing supports (4).
4. Cut and remove the metal bands holding the fryer to the pallet.

WARNING

Do not unlatch the lid before completion of steps 5, 6, and 7.

5. Remove the fryer from the pallet. See page 2-3.

WARNING

The fryer weighs approximately 600 lbs. (270 Kg). Extreme care should be taken when moving the fryer to prevent personal injury.

6. Remove rear cover.

NOTE

The weights for the counterweight are shipped in a separate box under the unit.

7. Load the Counterweight Assembly. See page 2-4.
8. Replace rear cover.
9. Cut warning tags from the lid assembly. The lid may now be unlatched.
10. Prepare the deadweight valve for operation.

CAUTION

The metal shipping support is placed inside the deadweight valve housing to protect the orifice and weight during shipment. This support must be removed prior to installation and start-up.

A. Unthread the top cap.

B. Remove the round weight.

2-1. UNPACKING INSTRUCTIONS (Continued)

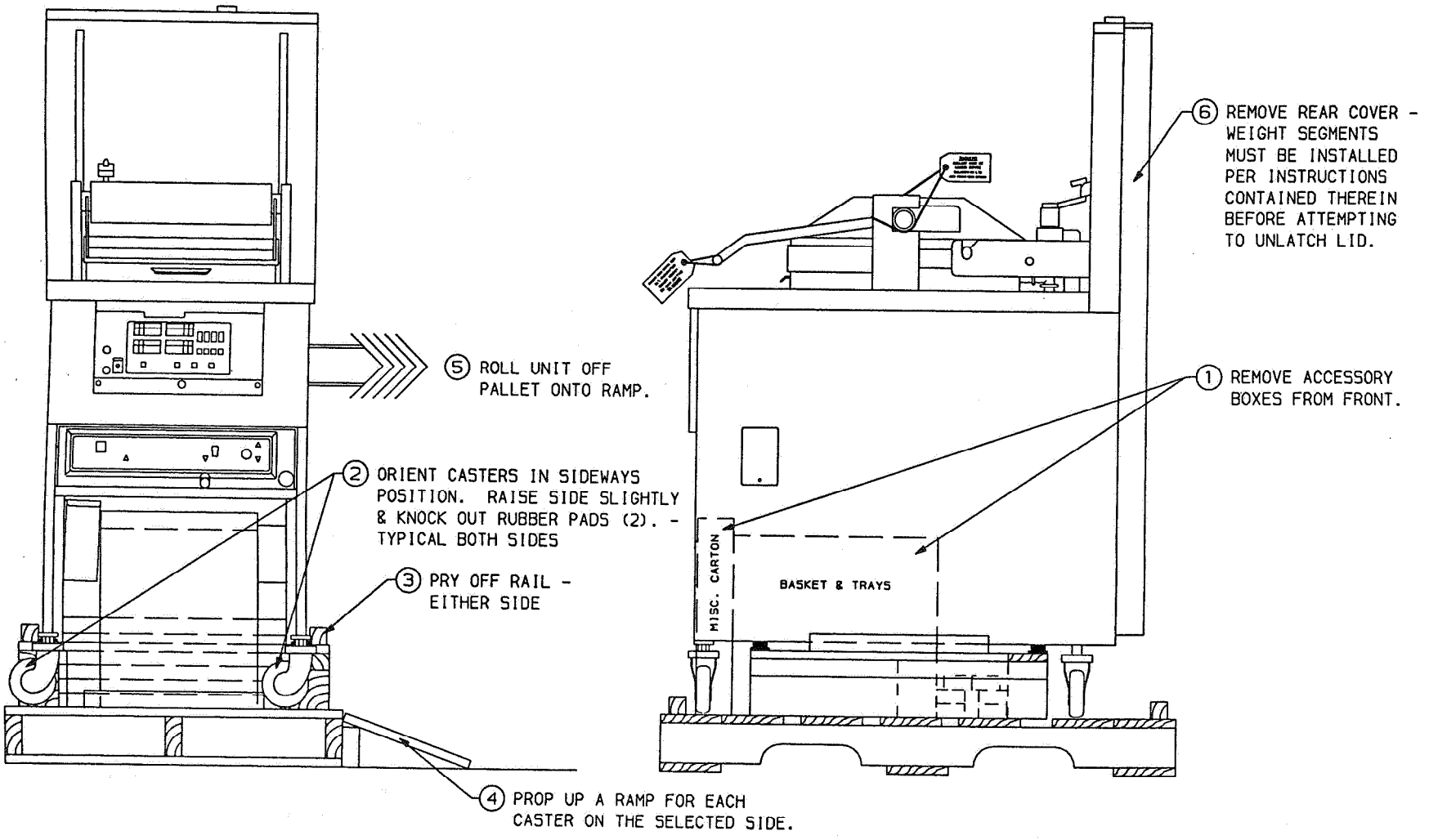
C. Remove and discard the shipping support.

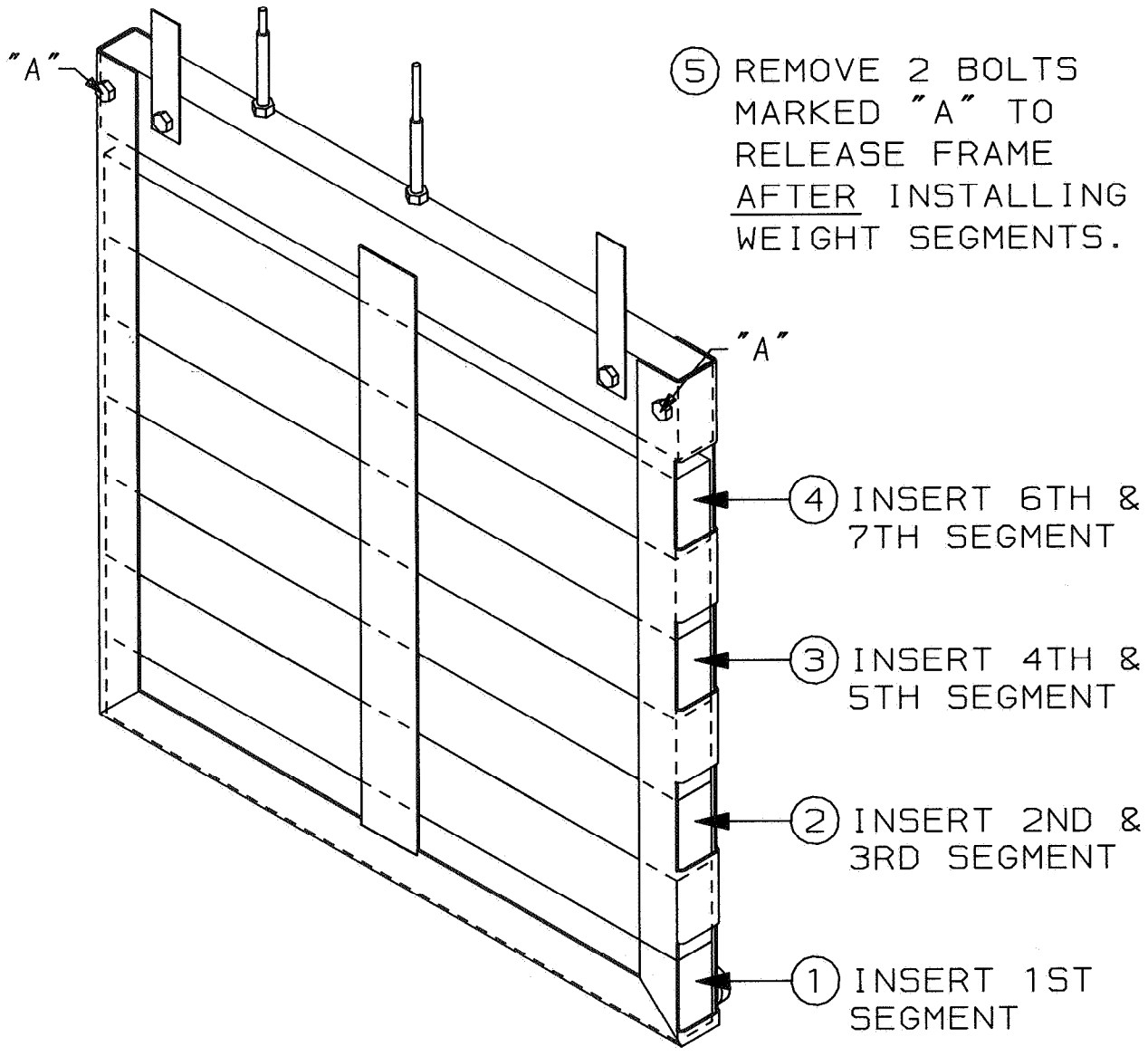
D. Clean the orifice with a dry cloth.

E. Replace the weight and secure the top cap.

11. Open lid and remove packing and racks from inside of cookpot.

12. Remove the protective paper from the fryer cabinet. It is necessary to clean exterior surface with a damp cloth.


⑤ ROLL UNIT OFF PALLET ONTO RAMP.
② ORIENT CASTERS IN SIDEWAYS POSITION. RAISE SIDE SLIGHTLY & KNOCK OUT RUBBER PADS (2). - TYPICAL BOTH SIDES
③ PRY OFF RAIL - EITHER SIDE
④ PROP UP A RAMP FOR EACH CASTER ON THE SELECTED SIDE.
⑥ REMOVE REAR COVER - WEIGHT SEGMENTS MUST BE INSTALLED PER INSTRUCTIONS CONTAINED THEREIN BEFORE ATTEMPTING TO UNLATCH LID.
① REMOVE ACCESSORY BOXES FROM FRONT.
MISC. CARTON
BASKET & TRAYS



WARNING!

* EACH WEIGHT SEGMENT WEIGHS APPROXIMATELY 18 LBS. (8.1 KG) - HANDLE WITH CARE.
* ALL SEGMENTS ARE IDENTICAL.
* ALL SEGMENTS MUST BE INSTALLED AND SECURED IN THE FRAME BEFORE ATTEMPTING TO UNLATCH LID.

2-2. SELECTING THE FRYER LOCATION

The proper location of the fryer is very important for operation, speed, and convenience. Choose a location which will provide easy loading and unloading without interfering with the final assembly of food orders. Operators have found that frying from raw to finish, and holding the product in warmer provides fast continuous service. Landing or dumping tables should be provided next to at least one side of the fryer. Keep in mind the best efficiency will be obtained by a straight line operation, i.e. raw in one side and finish out the other side. Order assembly can be moved away with only a slight loss of efficiency.

To properly service the fryer, 24 inches of clearance is needed on all sides of the fryer. Access for servicing can be attained by removing a side panel. Also, at least 6 inches around the base of the unit is needed for proper air supply to the combustion chamber.

CAUTION

The gas Model 680 Fryer is design certified by A.G.A. and C.G.A. for installation on combustible floors and adjacent to combustible walls. Fryer must be installed with minimum clearance from all combustible and non-combustable materials, 6 inches from side and 6 inches from back.

NOTE

The fryer should be installed in such a way as to prevent tipping or movement causing splashing of hot shortening. This may be accomplished by the location of the fryer, or by restraining ties.

2-3. LEVELING THE FRYER

For proper operation, the fryer must be level from side to side and front to back. Using a level placed on the flat areas around the frypot collar, adjust the leveling bolt or casters until the unit is level.

Failure to follow these leveling instructions can result in shortening overflowing the cookpot which could cause serious burns, personal injury, fire and/or property damage.

2-4. VENTILATION OF FRYER

The fryer should be located with provision for venting into adequate exhaust hood or ventilation system. This is essential to permit efficient removal of the steam exhaust and frying odors. Special precaution must be taken in designing an exhaust canopy to avoid interference with the operation of the fryer. Make certain the exhaust hood is designed high enough to allow for proper opening of the fryer lid. We recommend you consult a local ventilation or heating company to help in designing an adequate system.

NOTE

Ventilation must conform to local, state, and national codes. Consult your local fire department or building authorities.

2-5. GAS SUPPLY

The gas fryer is factory available for either natural or propane gas. Check the data plate on the right side panel of the cabinet to determine the proper gas supply requirements.

Do not attempt to use any gas other than that specified on the data plate. Conversion kits can be installed by your distributor if required. Incorrect gas supply could result in a fire or explosion resulting in severe injuries and/or property damage.

2-6. GAS PIPING

Please refer below for the recommended hookup of the fryer to main gas line supply.

WARNING

To avoid possible serious personal injury:

- Installation must conform with American National Standard Z223.1-(the latest edition) National Fuel Gas Code and the local municipal building codes. In Canada, installation must be in accordance with Standard CGA B149-1 & 2, Installation Codes - Gas Burning Appliances and local codes.
- The fryer and its individual shutoff valve 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 (3.45 kPa).

2-6. GAS PIPING (Continued)

- The fryer must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 PSIG (3.45 kPa).
- A standard 3/4 inch, black steel pipe and malleable fittings should be used for gas service connections.
- Do not use cast iron fittings.
- Although 3/4 inch size pipe is recommended, piping should be of adequate size and installed to provide a supply of gas sufficient to meet the maximum demand without undue loss of pressure between the meter and the fryer. The pressure loss in the piping system should not exceed 0.3 inch water column.

Provisions should be made for moving the fryer for cleaning and servicing. This may be accomplished by:

1. Installing a manual gas shut off valve and disconnect union, or
2. Installing a heavy duty design A.G.A. certified connector which complies with standard connectors for moveable gas appliances. ANSI Z21.69 (the latest edition) or CAN 1 6. 1OM88. Also, a quick disconnect coupling which complies with the Standard for Quick Disconnect Devices for use with Gas Fuel, ANSI 21.41 (the latest edition) or CAN 1 6.9M79. Also, adequate means must be provided to limit the movement of the fryer without depending on the connector and any quick-disconnect device or it's associated piping to limit the fryer movement.
3. See the illustration on the following page for the proper connections of the flexible gas line and cable restraint.

2-7. GAS LEAK TEST

NOTE

Prior to turning the gas supply on, be sure the gas dial cock on the fryer gas valve is in the OFF position.

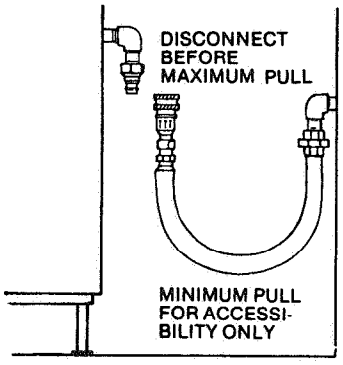
After the piping and fittings have been installed, check for gas leaks. A simple checking method is to turn on the gas brush all connections with a soap solution. If bubbles and occur, it indicates escaping gas. In this event, the piping connection must be redone.

Never use a lighted match or open flame to test for gas leaks. Escaping gas could cause an explosion resulting in severe personal injury and/or property damage.

GAS PIPING (continued)

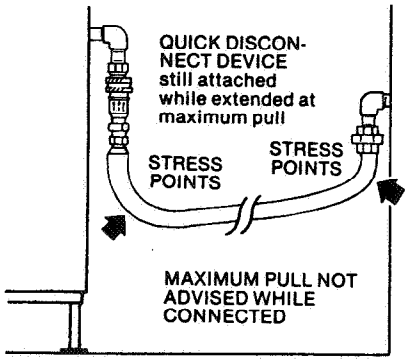
RIGHT

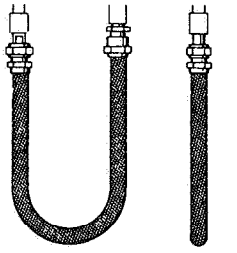
MINIMUM PULL of equipment away from wall permissible for accessibility to Quick Disconnect Device.



WRONG

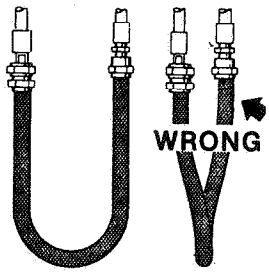
AVOID SHARP BENDS AND KINKS when pulling equipment away from wall. (Maximum pull will kink ends, even if installed properly, and reduce Connector life.)

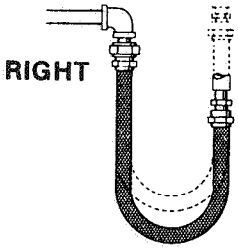




RIGHT

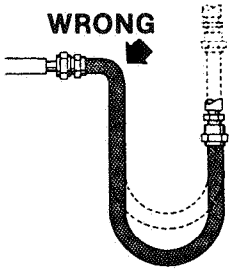
Couplings and hose should be installed in the same plane as shown at left. DO NOT OFFSET COUPLINGS—this causes torsional twisting and undue strain causing premature failure.

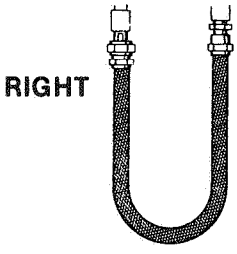




This is the correct way to install metal hose for vertical traverse. Note the single, natural loop.

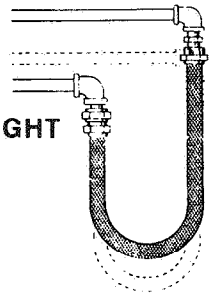
Allowing a sharp bend, as shown at right, strains and twists the metal hose to a point of early failure at the coupling.





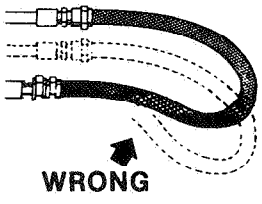
Maintain the minimum or larger bending diameter between the couplings for longest life.

Closing in the diameter at the couplings, as shown at right, creates double bends causing work fatigue failure of the fittings.



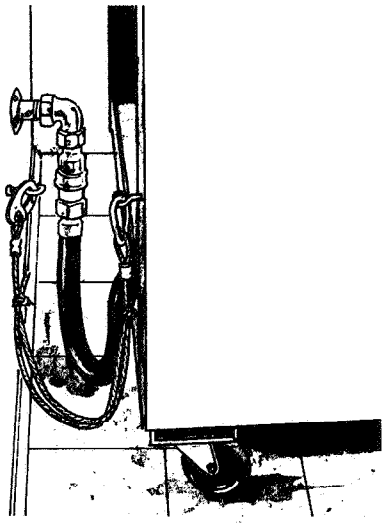
In all installations where "self-draining" is not necessary, connect metal hose in a vertical loop.

DO NOT CONNECT METAL HOSE HORIZONTALLY . . . unless "self-draining" is necessary, then use support on lower plane as shown at left.



CABLE RESTRAINT

Please refer to the illustration below when installing cable restraint on all moveable gas fryers.



I-bolt is to be secured to the building using acceptable building construction practices.

CAUTION

DRY WALL CONSTRUCTION

Secure I-bolt to a building stud. DO NOT attach to dry wall only. Also, locate the I-bolt at the same height as the gas service. Preferred installation is approximately six inches to either side of service. Cable restraint must be at least six inches shorter than flexible gas line.

CAUTION

Utilize elbows when necessary to avoid sharp kinks or excessive bending. For ease of movement, install with a "lazy" loop. Gas appliance must be disconnected *prior to maximum* movement. *(Minimum movement is permissible for hose disconnection).*

2-8. GAS PRESSURE REGULATOR SETTING

The gas pressure regulator on the automatic gas valve is factory set as follows:

Natural: 3.5 inches water column
Propane: 10.0 inches water column

Be certain gas pressure is set correctly. Failure to do so can result in shortening overflowing the cookpot, which could cause serious burns, personal injury, fire and/or property damage.

2-9. ELECTRICAL REQUIREMENTS (GAS FRYER)

The gas fryer requires 120 volt, single phase, 60 Hertz, 10 amp, 3 wire grounded service The gas fryer is factory equipped with a grounded cord and plug for your protection against shock, and should be plugged into a 3 prong grounded receptacle. Do not cut or remove grounding prong.

WARNING

DO NOT DISCONNECT THE GROUND PLUG. This fryer MUST be adequately and safely grounded or electrical shock could result. Refer to local electrical codes for correct grounding procedures or in absence of local codes, with The National Electrical Code, ANSI/NFPA No. 70-(the current edition). In Canada, all electrical connections are to be made in accordance with CSA C22.1, Canadian Electrical Code Part 1, and/or local codes.

A wiring diagram is located on the inside of access panel on the right side panel of fryer.

CAUTION

The main power switch on this appliance does not disconnect all line conductors. This appliance must be equipped with an external circuit breaker which will disconnect all ungrounded conductors.

2-10. TESTING THE FRYER

Each Henny Penny pressure fryer was completely checked and tested prior to shipment. However, it is good practice to check the unit again after installation.

BOIL-OVER PREVENTION
IN HENNY PENNY EIGHT HEAD COOKERS

FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SHORTENING OVERFLOWING THE COOKPOT WHICH COULD CAUSE SERIOUS BURNS, PERSONAL INJURY, FIRE AND/OR PROPERTY DAMAGE.

- THE SHORTENING MAY BE STIRRED **ONLY** DURING THE MORNING START UP PROCEDURE. **DO NOT STIR THE SHORTENING AT ANY OTHER TIME.**
- FILTER THE SHORTENING AT LEAST EVERY SIX ROUNDS IN GAS UNITS AND TWICE A DAY IN ELECTRIC UNITS.
- FILTER ONLY WHEN "COOL" IS DISPLAYED.
- BRUSH **ALL** CRACKLINGS FROM COOKPOT SURFACES AND THE COLD ZONE DURING THE FILTERING PROCESS.
- MAKE SURE THE COOKER IS LEVEL.
- BE CERTAIN THE SHORTENING IS NEVER ABOVE THE UPPER COOKPOT "FILL" LINE.
- BE CERTAIN THAT THE GAS CONTROL VALVE AND BURNERS ARE PROPERLY ADJUSTED. (GAS UNITS ONLY)

FOR ADDITIONAL INFORMATION ON THESE INSTRUCTIONS REFER TO THE HENNY PENNY SERVICE MANUAL AND THE KFC CONFIDENTIAL OPERATIONS MANUAL **("COM").**

FOR ASSISTANCE CALL THE HENNY PENNY SERVICE DEPARTMENT AT 1-800-417-8405.

SECTION 3. OPERATION

3-1. OPERATING CONTROLS

Power/Pump Switch	The Power/Pump Switch is a three way switch with center "OFF" position. Move the switch to the position marked "POWER" to operate the fryer. Move the switch to the position marked "PUMP" to operate the optional portable filter pump. Certain conditions must be met prior to operaton of the filter pump. These conditions are covered later in this section.
Cookpot	This reservoir holds the cooking shortening.
Cooking Rack	This stainless steel rack consists of five shelves which contain the food product during and after frying.
Lid Gasket	The lid gasket provides the pressure seal for the cookpot chamber.
Operating Valve	The dead weight style operating pressure relief valve is used to maintain a constant level of steam pressure within the cookpot. Any excess steam pressure is vented through the exhaust stack.
Safety Relief Valve	The safety relief valve is an ASME approved spring loaded valve set at 14.5 psi. In the event the operation valve becomes obstructed, this safety valve will release excess pressure, keeping the cookpot chamber at 14.5 psi. If this occurs, turn the Power/Pump switch to the "OFF" position to release all pressure from the cookpot.
Safety Relief Valve Lever	THE LEVER IS NOT TO BE PULLED.  Severe burns from the steam will result.

3-1. OPERATING CONTROLS (Continued)

Gauge

The pressure gauge indicates the pressure inside the cookpot.

Solenoid Valve

The solenoid valve is an electro-mechanical device that causes pressure to be held in the cookpot.

The solenoid valve closes at the beginning of the frying cycle and is opened automatically at the end of the frying cycle. If this valve should become dirty or the teflon seat nicked, pressure will not build up and it must be repaired per the maintenance section.

Drain Valve

The drain valve is a two-way ball valve. It is normally in the closed position. Pull the knob out to drain the shortening from the cookpot into the filter drain pan.

DO NOT OPEN THE DRAIN VALVE WHILE COOKPOT IS UNDER PRESSURE. Hot shortening will exhaust from this valve. Severe burns will result.

Drain Interlock Switch

The drain interlock switch is a microswitch that provides protection for the cookpot in the event an operator inadvertently drains the shortening from the cookpot while the main switch is in the POWER position. The switch is designed to automatically shut off the heat when the drain valve is opened.

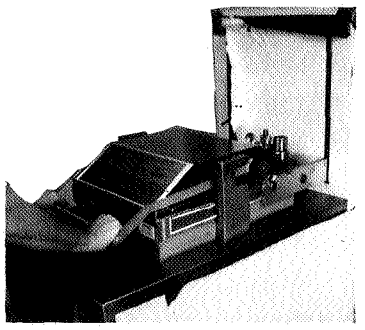
Condensation Drain Pan

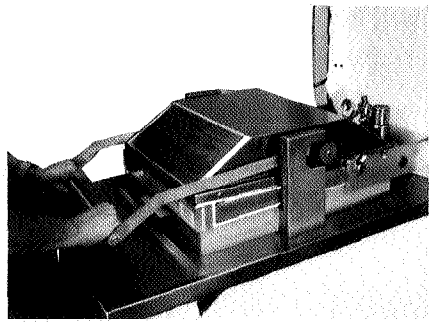
The condensation drain pan is the collection point for the condensation formed within the steam exhaust system. It must be removed and emptied periodically.

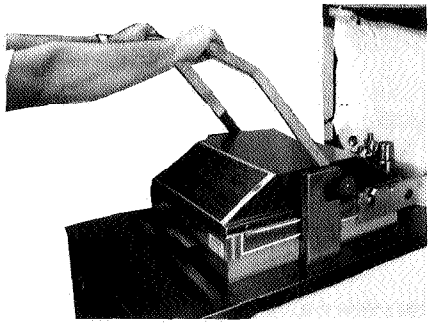
Lid Stop Bracket

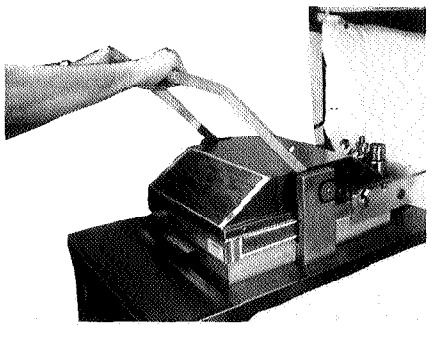
The lid stop bracket stops the upward motion of the lid assembly. This allows the lid to be lifted to an upright position with the rack removed allowing easier access to the cookpot for filtering and cleaning.

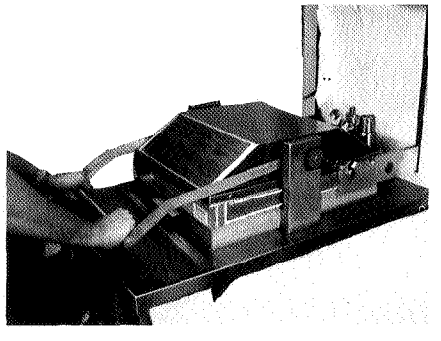
3-2. LID OPERATION







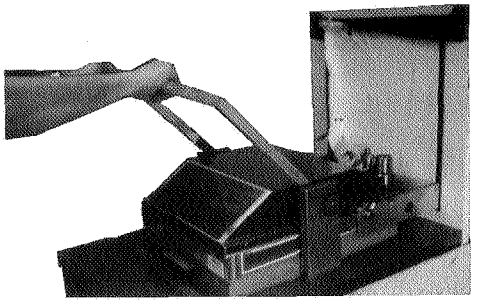


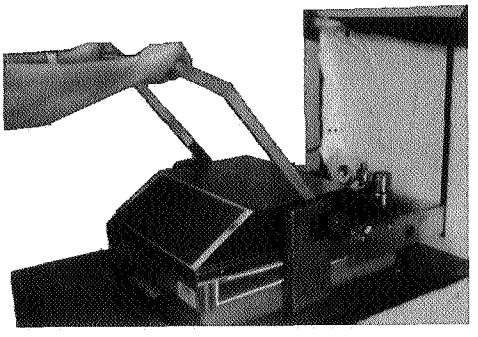


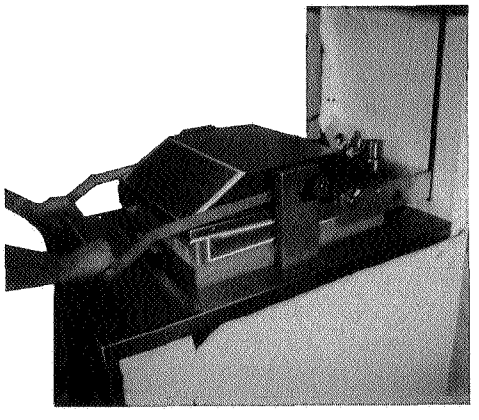
To close lid:

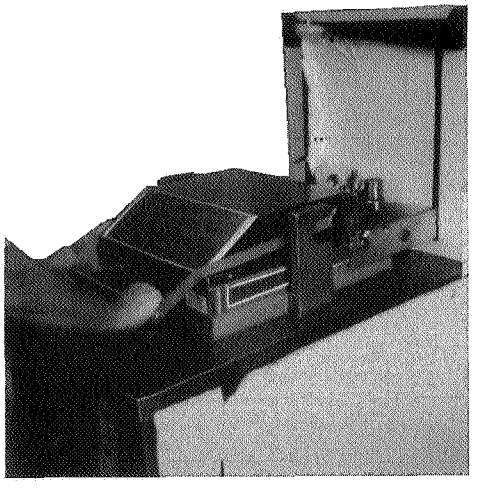
1. Lower the lid until gasket comes into contact with the pot.
2. With the lid lowered, pull lid handle forward until it stops.
3. Lift up on the lid handle until it stops.
4. Bring lid handle out towards you until it stops.
5. Push lid handle down, locking lid in place.

3-2. LID OPERATION (Continued)









To open lid:

DANGER

DO NOT ATTEMPT TO OPEN LID UNTIL THE PRESSURE DROPS TO ZERO. Opening the lid when the cookpot is pressurized will allow hot shortening and moisture to escape from the cookpot, resulting in severe burns.

1. Gently raise handle until it stops.

2. Push handle back until it stops.

3. Lower handle.

CAUTION

DO NOT raise the lid with the handle in the up position. Be sure to lower the handle before attempting to raise the lid, or damage to the lid could result.

4. Push handle back and raise lid.

3-3. MELT CYCLE OPERATION

If the shortening is below 185° F (77°-85° C) with the Power/Pump Switch in the "Power" position, the fryer enters the melt cycle. The shortening is heate slowly to prevent scorching of the shortening. The display reads "LO" and the heat cycles, 10 seconde on, 30 seconds off, to ensure slow melting of shortening. No othe rbutton on the control panel operates except the Power/Pump Switch.

NOTE

Should you require outside assistance, just call 1-800-417-8405, or 937-456-8405.

3-4. SWITCHES AND INDICATORS

NOTE

If the fryer has the FAST controls, see the FAST operation manual.

"Lo" Mode

The display will read "LO" anytime the shortening temperature is below 250° F. When the Power/Pump Switch is placed in the "Power" position, the control will begin a melt mode which cycles the heat on and off. This slowly melts/heats the shortening until the temperature reaches 185° F (85° C). This heat stays on until the "COOL" mode is reached, or until reaching the temperature of the selected cooking cycle.

"Cool" Mode

After cooking or filtering the shortening, the temperature will automatically go into the "COOL" mode which keeps shortening at 250° F (121° C). This temperature extends the shortening life and minimizes the time needed to heat the shortening for the next cook cycle. Press "Exit Cool" to leave the "Cool" mode, then press product button for the cook cycle desired.

To manually place the controls in the "COOL" mode, start a cooking cycle, and then press the cycle button again. The display should then show "COOL. See Cycle Selection below.

WARNING

Although the display will read "COOL" in the standby mode, the shortening is hot and could cause burns.

Cycle Selection	Select the cook cycle by pressing the button for the number of heads, or product, to be cooked. Shortening will then heat to "Drop" temperature. Pressing the same button again will begin the cook cycle. The indicator will change from "Drop" to counting down the cook time in minutes and seconds. At the end of the cook cycle, press the same button again when the indicator reads "Done" and the alarm sounds. The fryer will reset to the "Cool" mode.
Time/Temperature Display	This is a four (4) digit LED type display which shows the remaining cook time during cook cycles and also the shortening temperature on demand from the operator.
Heat Indicator	The heat light will illuminate whenever the control calls for heat. When shortening temperature has been reached the heat light will go off.
Hi Temperature Indicator	The display will read "HI" if the shortening temperature is 40° above the setpoint.
Drop Indicator	The display will read "Drop" when the shortening has reached the setpoint temperature (+4° to −2°).
Done Indicator	The display will read "DONE" at the end of the cook cycle.
Temperature Button	This button allows the operator to read the temperature of the shortening while in a cook cycle. The display range is from 256°F (124°C) to 390°F (199°C).

3-5. FRYER POWER MODE

With the Power Switch in the "Power" position, the mode is selected depending on the temperature of the shortening.

1. If pot temperature is below the melt temperature of 185°F (85°C) the fryer will enter the melt mode. Display will read "LO".
2. If the pot temperature is 185°F (85°C) or higher, the control will regulate the programmed temperature of the selected cycle.
3. The temperature will be regulated at 250°F (121°C), if the "EXIT COOL" button is pressed during heat up. The display will read "COOL".

3-5. FRYER POWER MODE (Continued)

WARNING

Although the display will read "COOL" in the stand-by mode, the shortening is hot and could cause burns.

NOTE

In the event of a power failure, no attempt should be made to operate the fryer. The Model 680 Fryer is equipped with an automatic ignition system and can not be operated without electrical power.

3-6. MODE SELECTION TO FILTER SHORTENING

When the operator wishes to filter, move the Power Switch to the "OFF" position and filter as usual (refer to filter instructions). The display should read "COOL" before filtering.

Dropping the shortening while at the "DROP" temperature and not in the "COOL" mode can result in shortening overflowing the cookpot which could cause serious burns, personal injury, fire and/or property damage.

WARNING

To avoid personal injuries or property damage be sure shortening has been pumped back into the cookpot before depressing the "EXIT COOL" switch. Unit will enter heat mode.

NOTE

The filter pump motor on the PF-180 is equipped with a manual reset button in the event the motor's thermal protection actuates. This reset button is located on the rear of the motor. A hinged door is placed on the motor cover to easily access this reset button. Wait approximately 5 minutes before attempting to reset this protective device. Also, some effort must be used when resetting the button and a definite "click" will be heard when it resets.

3-6. MODE SELECTION TO FILTER SHORTENING (Continued)

CAUTION

To prevent burns caused by splashing shortening, the unit's main power switch must be in the "OFF" position before resetting the filter pump motor's manual reset protection device.

NOTE

The pump motor and the combustion air motor are permanently lubricated and need no maintenance.

3-7. CLEANING THE FRYPOT

After the initial installation of the fryer, as well as before every change of shortening, the cookpot should be thoroughly cleaned as follows:

1. Turn the main power switch to "OFF".

DANGER

The filter drain pan must be in position under the drain valve to prevent splashing or spilling of hot liquids. Failure to do so will result in splashing and severe burns.

2. Refer to KFC's Standards Library on cleaning instructions.

WARNING

Always wear chemical splash goggles or face shield and protective rubber gloves when cleaning the cookpot as the cleaning solution is high in alkaline. Avoid splashing or other contact of the solution with your eyes or skin. Severe burns may result. Carefully read the instructions on the cleaner. If the solution comes in contact with your eyes rinse thoroughly with cool water and see physician immediately.

3-7. CLEANING THE FRYPOT (Continued)

NEVER PRESSURIZE FRYER TO CLEAN. Leave the lid open. Water under pressure is super heated and will cause severe burns if it comes in contact with skin.

WARNING

Never heat the cleaning solution to the boiling point. If the cleaning solution in the cookpot starts to foam and boil over, DO NOT TRY TO CONTAIN IT BY CLOSING THE FRYER LID, or severe burns could result.

CAUTION

Do not use steel wool, other abrasive cleaners or cleaners/sanitizers containing chlorine, bromine, iodine, or ammonia chemicals, as these will deteriorate the stainless steel material and shorten the life of the unit.

NOTE

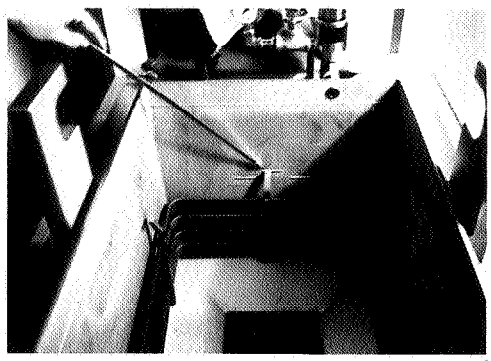
Make sure the inside of the cookpot, the drain valve opening, and all parts that come in contact with the new shortening are as dry as possible.

3-8. FILLING OR ADDING SHORTENING

1. It is recommended that a high quality frying shortening be used in the pressure fryer . Some low grade shortenings have a high moisture content and will cause foaming and boiling over.

2. If a solid shortening is used, it can be melted into a liquid first, then poured into the cookpot. Attempting to melt solid shortening in the cookpot may cause burning or scorching of the fresh shortening.

3-8. FILLING OR ADDING SHORTENING (Continued)



3. The gas model requires 95 lbs. The cookpot has three level indicator lines inscribed on the rear wall of the cookpot which show when the heated shortening is at the proper level.

4. Cold shortening should be filled to 1/2 inch below lower indicator.

DANGER

DO NOT fill cookpot with shortening above the upper cookpot "Fill" line. This could cause the shortening to overflow the cookpot, which could cause serious burns, personal injury, fire and/or property damage.

3-9. CARE OF THE SHORTENING

1. To protect the shortening when the fryer is not in immediate use, the fryer should be put into the "COOL" mode.

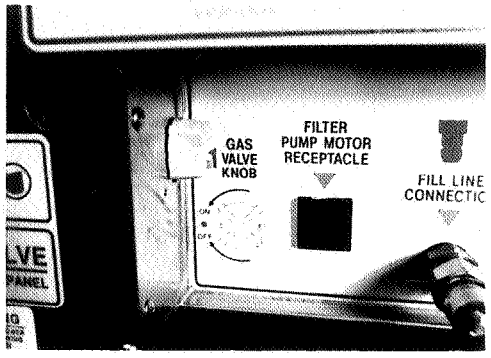
2. Frying breaded products requires filtering to keep the shortening clean. The shortening should be filtered after six loads of product, and the cracklings brushed down the drain.

3. Maintain the shortening at the proper cooking level, add fresh shortening as needed.

DANGER

Failure to follow these instructions can result in shortening overflowing the cookpot which could cause serious burns, personal injury, fire and/or property damage.

3-10. LIGHTING AND SHUTDOWN OF BURNER



1. Turn Power/Pump Switch to the "OFF" position.

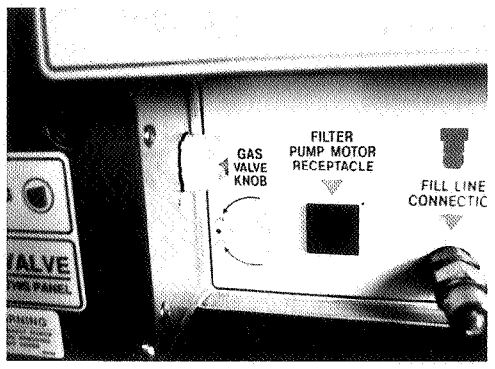
2. Rotate manual valve knob of Combination Gas Control clockwise to the "OFF" position and wait for at least five (5) minutes before continuing to next step.

3. Rotate manual valve knob of Combination Gas Control counter clockwise to the "ON" position.

4. Place the electrical Power/Pump switch to the "POWER" position.

5. The burner will light and operate in a melt cycle mode until shortening reaches a preset temperature.

3-10. LIGHTING AND SHUTDOWN OF BURNER (Continued)



6. Press cycle selection switch after temperature is displayed on front of control panel.

To shutdown burner:

1. Rotate manual valve knob of Combination Control to the "OFF" position.

2. Turn Power/Pump Switch to the "OFF" position.

This fryer is equipped with a grounded cord and plug for your protection against shock, and should be plugged into a 3 prong grounded receptacle. Do not cut or remove grounding prong.

WARNING

Before servicing the fryer, the burner should be shut down and the electrical supply removed from the unit. The fryer should be unplugged or the wall circuit breaker turned off, or electrical shock could result.

3-11. RACKING CHICKEN

1. Place breaded chicken on greased racks with the largest pieces towards the outside of the rack.

2. Load racks into basket starting at the bottom of basket and working up with each rack.

3. Place a clean, empty rack into the slot above the top rack of chicken to prevent pieces from floating while cooking.

NOTE

For additional information on racking chicken, refer to KFC's COM.

3-12. COOKING CHICKEN

1. When the display indicates proper temperature, close and lock the lid.
2. Press the button for the desired product to be cooked.
3. At the end of the cook cycle, pressure will begin venting automatically, an alarm will sound, and the display will indicate the end of the timing cycle. At this time, press the button next to the product cooking.
4. Wait for the pressure gauge to show "0" pressure in the pot before attempting to open the lid.

Check the pressure gauge reading. Do not attempt to open the lid until the pressure drops to zero. Opening the lid when the cookpot is pressurized will allow hot shortening and moisture to escape from the cookpot, resulting in severe burns.

5. Unlock lid and raise lid quickly to remove chicken from shortening.
6. Allow chicken to drain for at least 15 seconds, then using the rack handles, remove racks from basket, starting with the top rack and working down the basket.

NOTE

For further instructions on operating the cooker and filter, see KFC's COM.

SECTION 4. TROUBLESHOOTING

4-1. INTRODUCTION

This section provides troubleshooting information in the form of an easy to read table.

If a problem occurs during the first operation of a new fryer, recheck the installation per the Installation Section of this manual.

Before troubleshooting, always recheck the operation procedures per Section 3 of this manual.

4-2. TROUBLESHOOTING

To isolate a malfunction, proceed as follows:

1. Clearly define the problem (or symptom) and when it occurs.
2. Locate the problem in the Troubleshooting table.
3. Review all possible causes. Then, one-at-a-time work through the list of corrections until the problem is solved.
4. Refer to the maintenance procedures in the Maintenance Section to safely and properly make the checkout and repair needed.

WARNING

If maintenance procedures are not followed correctly, injuries and/or property damage could result.

Problem	Cause	Correction
	COOKING SECTION	
Product Color Not Correct:		
A. Too Dark	• Temperature too high.	• Check temperature setting in the program mode. See section on programming.
	• Faulty probe.	• Remove and replace probe.
	• Shortening too old.	• Change shortening.
	• Shortening too dark.	• Filter shortening. • Change shortening.
	• Breading product too far in advance.	• Bread product closer to actual frying period.
B. Too Light	• Temperature too low.	• Check temperature setting. • Remove and replace probe.
	• Burners out of adjustment.	• Refer to burner in the maintenance section.
	• Fryer incorrect preheat.	• Allow proper preheat time.
	• Slow fryer heat-up/ recovery.	• Refer to burner in the maintenance section (out of adjustment).
	• Wrong cook button pushed.	• Be sure to select the correct amount of product to be cooked.
C. Product Greasy	• Shortening old.	• Replace shortening.
	• Temperature too low.	• Check temperature setting. • Temperature not recovered when product was dropped in cookpot.
	• Faulty probe.	• Remove and replace defective probe.
	• Burner out of adjustment.	• Refer to burner in the maintenance section.
	• Cookpot overloaded.	• Reduce cooking load.
	• Product not removed from cookpot immediately after depressurization.	• Remove product from cookpot immediately after depressurization.

Problem	Cause	Correction
	COOKING SECTION (Continued)	
D. Spotted Product	• Improper separation of the product.	• Load product into basket properly.
	• Breading not uniform on the product.	• Sift breading regularly. • Separate product during breading.
	• Burned breading particles on product.	• Filter the shortening more frequently.
	• Product sticking together.	• Separate product prior to pressure cooking.
E. Dryness of Product	• Moisture loss prior to cooking.	• Use fresh products.
	• Overcooking the product.	• Reduce cooking time. • Reduce cooking temperature.
	• Low operating pressure.	• Check pressure gauge reading, check for pressure leaks.
	• Wrong cook button pushed.	• Be sure to select the correct amount of product to be cooked.
Product Flavor (Taste):		
A. Salty Taste	• Breading mixture is too salty.	• Sift breading after each use. • Incorrect breading mixture. • Discard old breading.
	• Incorrect choice of breading.	• Use breading designed for the desired product.
B. Burned Taste	• Burned shortening flavor.	• Replace shortening.
	• Cookpot not properly cleaned.	• Drain and clean cookpot.
C. Bland Taste	• Raw product not fresh.	• Use fresh raw product.
	• Breading mixture incorrect for product (spice content too low).	• Use breading designed for desired product.
	• Cooking temperature too high (spice flavors lost).	• Check temperature.

Problem	Cause	Correction
	COOKING SECTION (Continued)	
D. Rancid Taste	• Shortening too old.	• Replace shortening, and follow recommended care and use of shortening.
	• Infrequent filtering.	• Replace shortening and follow recommended care and use of shortening.
	• Non-compatible products cooked within the same shortening.	• Replace shortening. • Use compatible products, and follow recommended care and use of shortening.
	• Raw product not fresh.	• Use fresh product.
General: A. Meat Separation From Bone	• Incorrect meat cut.	• Use correct meat cutting procedures.
	• Overcooking.	• Check cooking time.
	• Product not fresh.	• Use fresh product.
B. Bone Color Not Proper	• Using frozen product (black bone).	• Use fresh product.
	• Improper processing of product (black bone).	• Use proper processing procedure for product.
	• Product not thoroughly cooked (red bone).	• Check cooking time. • Check cooking temperature.
C. Breading Falls Off	• Incorrect breading procedures.	• Use correct breading procedure.
	• Product partially frozen.	• Thoroughly thaw the product, before breading.
D. Product Sticking Together	• Product breaded too long prior to cooking.	• Refer to breading and frying instructions.
	• Improper loading procedure.	• Properly load product per loading procedures.
	• Wrong cook button pushed.	• Be sure to select the correct amount of product to be cooked.

Problem	Cause	Correction
POWER SECTION		
With switch in POWER position, the fryer is completely inoperative (NO POWER)	• Open circuit.	• Check to see that unit is plugged in. • Check the breaker or fuse at supply box. • Check voltage at wall receptacle. • Check MAIN POWER switch. Replace if defective. • Check cord and plug.
PRESSURE SECTION		
Pressure will not exhaust at end of cooking cycle.	• Exhaust line from solenoid valve to exhaust tank clogged.	• Turn unit off and allow fryer to cool to release pressure from cookpot; clean all pressure lines, exhaust stacks, and exhaust tank.
	• Solenoid valve clogged.	• Check and clean solenoid valve per maintenance section on solenoid valve.
Operating pressure too high	• Dead weight clogged.	• Turn unit off and allow fryer to cool to release pressure from cookpot; remove dead weight and clean.

Problem	Cause	Correction
	PRESSURE SECTION (Continued)	
DANGER DO NOT OPERATE UNIT IF HIGH PRESSURE CONDITIONS EXIST. SEVERE INJURIES AND BURNS WILL RESULT. Place the Power/Pump switch in the "OFF" position immediately. Release the pressure by allowing unit to cool. The pressure will then drop. Do not resume use of unit until cause of high pressure has been found and corrected.	• Exhaust line to stack clogged.	• Clean exhaust line to stack.
Pressure does not build	• Not enough product in fryer or product not fresh.	• Place proper quantity of fresh product within cookpot to generate steam.
	• Metal shipping spacer not removed from dead weight.	• Remove shipping spacer. See Unpacking Section.
	• Lid open or not latched.	• Close and latch lid.
	• Solenoid valve leaking or not closing.	• Check or clean solenoid valve per maintenance section on the solenoid valve.
	• Dead weight valve leaking.	• Repair per maintenance section on operating valve.
	• Pressure not programmed.	• Check programming.
	• Lid gasket leaking.	• Shims need to be placed under pressure pads. See maintenance section under lid system.
	• Safety relief valve leaking.	• Check and replace if necessary per maintenance section on the relief valve.
	• Pressure plate broken or crushed.	• Replace pressure plate.

Problem	Cause	Correction
	HEATING OF SHORTENING SECTION	
Shortening will not heat. "E20"	• Blown fuse or tripped circuit breaker at supply box or control panel.	• Reset breaker or replace fuse.
	• Blown fuse in PC board.	• Replace glass fuse in board.
	• Faulty Power/Pump switch.	• Check Power/Pump switch per maintenance section on the power/pump switch.
	• Faulty cord and plug. Check power at receptacle.	• Check cord and plug and power at wall receptacle.
	• Faulty drain switch.	• Check drain switch per maintenance section on drain switches.
	• Faulty PC Board.	• Remove and replace control panel.
	• Faulty high limit control switch.	• Check high limit control switch per maintenance section on the high limit.
	• Drain valve open.	• Close drain valve.
	• Possible faulty gas control valve.	• With power removed from fryer, check across electrical leads of gas valve with multimeter, and gas valve on "ON" position.
	• Possible faulty probe (PROB).	• Replace probe.
	• Bad ignitor.	• Replace ignitor.
	• Low air pressure into burner chamber.	• Clean or replace blower. • Replace air pressure switch.
	• Faulty ignitor module.	• Replace module.

Problem	Cause	Correction
HEATING OF SHORTENING SECTION (Continued)		
Heating of shortening too slow.	• Supply line too small - low gas volume.	• Increase supply line size. Refer to installation instructions.
	• Improper ventilation system.	• Refer to installation instructions. • Observe burners. • Check gas pressure.
	• Burner out of adjustment.	• Adjust air flow so burners are an orangy-red.
Shortening overheating.	• Programming wrong.	• Check temperature setting in the program mode.
	• Faulty PC Board.	• Remove and replace control panel.
	• Faulty probe.	• Remove and replace probe.

Problem	Cause	Correction
	SHORTENING FOAMING/DRAINING SECTION	
Foaming or boiling over of shortening.	• Water in shortening.	• At end of cooking cycle, drain shortening and clean cookpot. Add fresh shortening.
	• Condensation line stopped up.	• Remove and clean condensation line.
	• Improper or bad shortening.	• Use recommended shortening.
	• Improper filtering.	• Refer to the procedure covering filtering the shortening.
	• Cold zone full of cracklings.	• Filter shortening.
	• Improper rinsing after cleaning the fryer.	• Clean and neutralize the cookpot. Rinse with vinegar to remove the alkaline, then rinse with hot water and dry cookpot.
Shortening will not drain from cookpot	• Drain valve clogged with crumbs.	• Open valve - push cleaning brush through drain opening from inside of cookpot.
	• Drain valve will not open by pulling the knob.	• Replace cotter pins in valve coupling.
Shortening leaking through drain valve.	• Obstruction in drain.	• Remove obstruction.
	• Faulty drain valve.	• Replace drain valve.

Problem	Cause	Correction
	LID SECTION	
Gasket coming out of lid.	• Crumbs under gasket. • Gasket worn or damaged.	• Remove and clean gasket. • Clean rim of cookpot. • Replace gasket.
Steam leaking from around gasket.	• Gasket not sealing.	• Add shims to lid. See maintenance section on lid shims.
Lid will not move up or down.	• Cable broken. • Decorator strip interferring.	• Replace cable. • Replace broken strip.
Lid will not stay down while latching.	• Magnet plate out of adjustment.	• Adjust magnet plate in back of fryer.

SECTION 5. MAINTENANCE

5-1. INTRODUCTION

This section provides procedures for the checkout and replacement of the various parts used within the fryer. Before replacing any parts, refer to the Troubleshooting section. It will aid you in determining the cause of the malfunction.

5-2. ARRANGEMENT

This section is arranged in groupings of the components that work together within the fryer. The general groups are listed below.

- Removing the Control Panel
- Probe
- Electrical Components
- Control Board
- Pressure System

5-3. MAINTENANCE HINTS

1. You may want to use a multimeter to check the electric components.
2. When the manual refers to the circuit being closed, the multimeter should read zero unless otherwise noted.
3. When the manual refers to the circuit being open, the multimeter will read infinity.

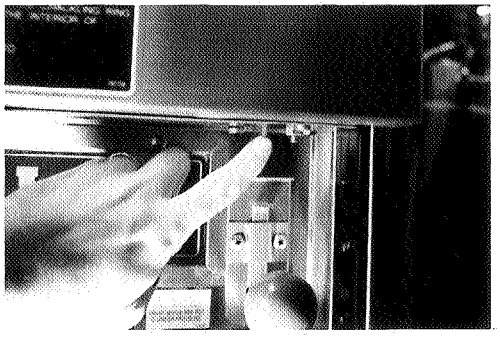
WARNING

Moving the cookpot with hot shortening in the cookpot or filter pan is not recommended. Hot shortening can splash out. Severe burns could result.

4. The weights can be removed from the frame to easily access the rear of cooker.

5-4. HIGH TEMPERATURE LIMIT CONTROL

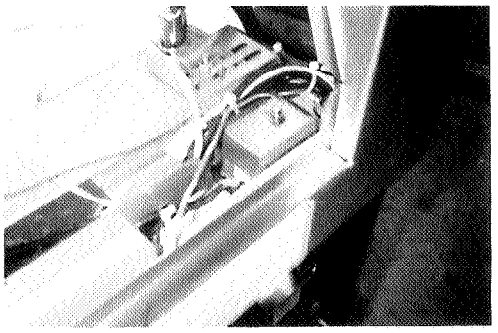
Description



This high temperature control is a manual reset control which senses the temperature of the shortening. If the shortening temperature exceeds 420°F (215°C), this control switch will open and shut off the heat to the cookpot. When the temperature of the shortening drops to a safe operation limit, the control must be manually reset. The reset button is located above the filter knob in the front of the cooker. This will allow heat to be supplied to the cookpot.

5-4. HIGH LIMIT (Continued)

Checkout



Before replacing a high temperature limit control, check to see that its circuit is closed.

NOTE

The shortening temperature must be below 380°F (193°C) to accurately perform this check.

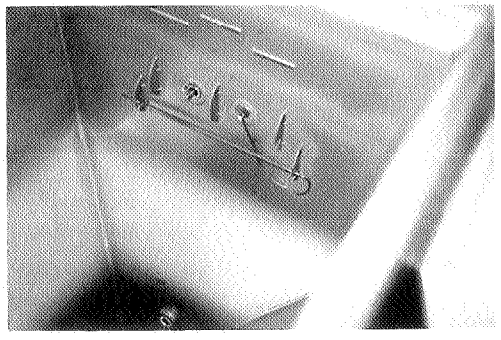
1. Remove electrical power supplied to the fryer.

WARNING

Remove electrical power supplied to the fryer by unplugging the unit, or by turning off the wall circuit breaker or electrical shock could result.

2. Remove the control panel.
3. Remove the two electrical wires from the high temperature limit control.
4. Manually reset the control, then check for continuity between the two terminals after resetting the control. If the circuit is open, replace the control, then continue with this procedure. (If the circuit is closed, the high limit is not defective. Reconnect the two electrical wires.)

Replacement

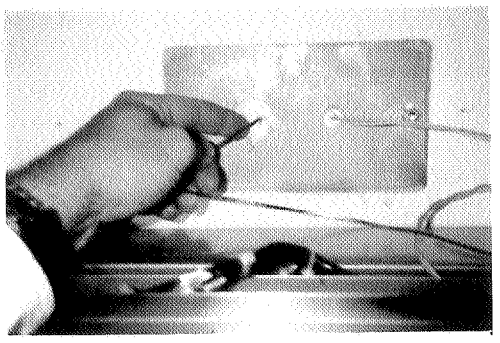


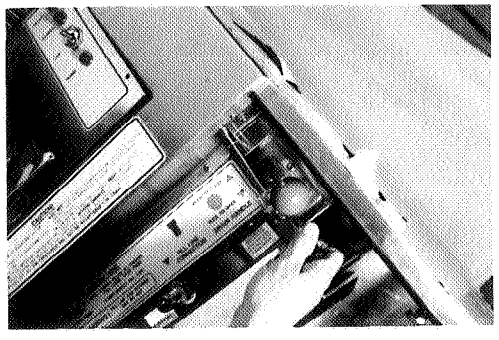
WARNING

Remove electrical power supplied to the fryer by unplugging the unit, or by turning off the wall circuit breaker or electrical shock could result.

1. If the tube is broken or cracked, the control will open, shutting off electrical power. The control cannot be reset.
2. Drain shortening from the cookpot and discard. A substance in the tube could contaminate the shortening.
3. Remove control panel.
4. Loosen small inside screw nut on capillary tube.

5-4. HIGH LIMIT (Continued)





5. Remove capillary bulb from bulb holder inside the cookpot.
6. Straighten the capillary tube.
7. Remove larger outside nut that threads into pot wall.
8. Remove the two nuts securing the high limit bracket at the front of the fryer, and remove bracket.
9. Remove the two screws that secure high limit to the high limit bracket.
10. Remove defective control from control panel area.
11. Insert new control and replace screws.
12. Uncoil capillary line, starting at capillary tube, and insert through cookpot wall.

WARNING

To avoid electrical shock or other injury, the capillary line must run under and away from all electrical power wires and terminals. The tube must NEVER be in such a position where it could accidentally touch the electrical power terminals.

13. Carefully bend the capillary tube as shown in photo and place into bulb brackets.
14. Pull excess capillary line from pot and tighten nut into cookpot wall.

CAUTION

Be sure capillary bulb of high limit is positioned as not to interfere with carrier or when cleaning the cookpot wall, or damage to capillary tube could result.

15. With excess capillary line pulled out, tighten smaller nut.
16. Replace front panel.
17. Refill with shortening.

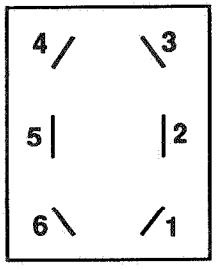
5-5. POWER/PUMP SWITCH

The Power/Pump Switch is a three way rocker switch with a center "OFF" position. With the switch in the POWER position the fryer will operate. With the switch in the PUMP position the filter pump will operate, but the heating unit will not.

WARNING

Remove electrical power suppled to the fryer by unplugging the unit, or turning off the wall circuit breaker or electrical shock could result.

Checkout



1. Remove Control Panel.
2. "OFF" Position - should be open circuit anywhere on the switch.
3. "Power" Position
   Check from:
   #5 to #6 closed circuit
   #1 to #2 closed circuit
4. "Pump" Position
   Check from:
   #4 to #5 closed circuit
   #3 to #2 closed circuit

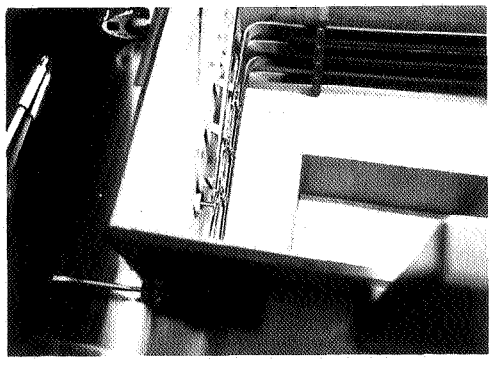
NOTE

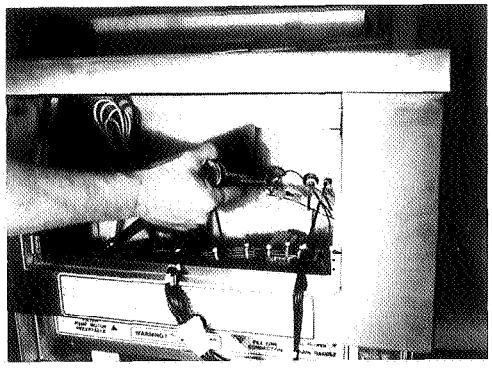
Check across the jumpers on the wires of the Power/Pump Switch. These jumpers have resistors and capacitors which may be faulty.

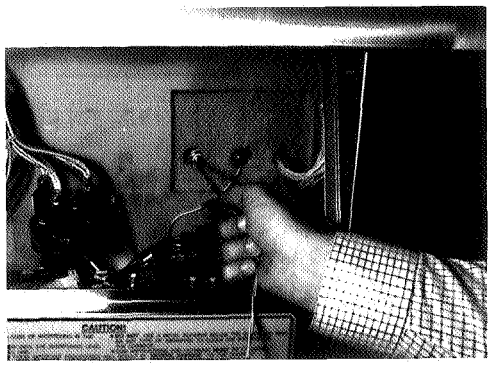
Replacement

1. With control panel removed and wires off of the switch, push in on tabs on the switch to remove from the panel.
2. Replace with new switch, and reconnect wires to switch following the wiring diagram.
3. Replace the control panel.

5-6. TEMPERATURE PROBE REPLACEMENT







The Temperature Probe relays the actual shortening temperature to the control. If it becomes disabled, PROB will show in the display. Also, if the temperature is out of calibration more than 10°F or C°, the probe should be replaced as follows:

1. Remove electrical power supplied to the fryer.

WARNING

Place the Power Switch to the "OFF" position, and unplug the power cord or turn the wall circuit breaker off or electrical shock could result.

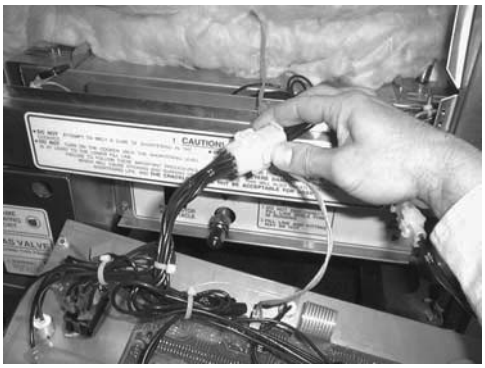
2. Drain the shortening from the cookpot.
3. Remove the Control Panel.
4. Remove probe connections from PC board.
5. Using a 1/2" wrench, remove the nut on the compression fitting.
6. Remove the probe from the cookpot.
7. Place the nut and new ferrule on the new probe and insert the probe into the compression fitting until it extends one-half (1/2) inch (1.3 cm) into the cookpot, 5/16 inch (.78 cm) on gas fryers.
8. Tighten hand tight and then a half turn with wrench.

CAUTION

Excess force will damage probe.

9. Connect new probe to PC board and replace Control Panel.
10. Replace shortening.
11. Turn power "ON" and check out fryer.

5-7 COMPLETE CONTROL PANEL - HENNY PENNY



Should the Control Panel not operate, replace the panel as follows:

1. Remove electrical power supplied to the fryer.

WARNING

Place the Power/Pump Switch in the "OFF" position, and unplug the power cord and/or turn off the wall circuit breaker, or electrical shock could result.

2. Remove the two screws securing the Control Panel and lift panel up and out.

3. Unplug the connectors going to the Control Board.

4. Install new Control Panel.

CAUTION

When plugging connectors into new Control Panel, be sure connectors are lined-up correctly, such as, connector is not plugged in backwards, or damage to the board could result.

5-8 PRESSURE REGULATION

The Henny Penny Fryer uses pressure as one of the components of the cooking process. Once the lid is sealed to the cookpot, and the solenoid valve closes, a deadweight valve maintains the correct pressure in the cookpot.

The lid has minimal and limited maintenance and repair procedures, which are addressed in the following sections.

The following is a routine maintenance schedule for the Lid:

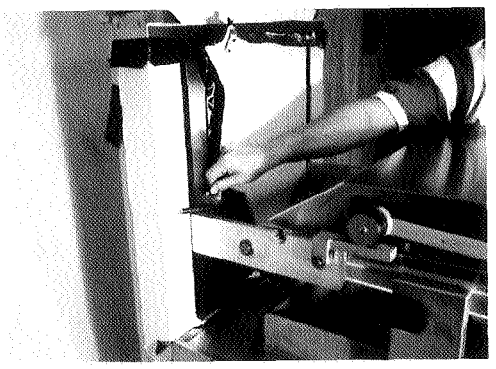
Every 90 days

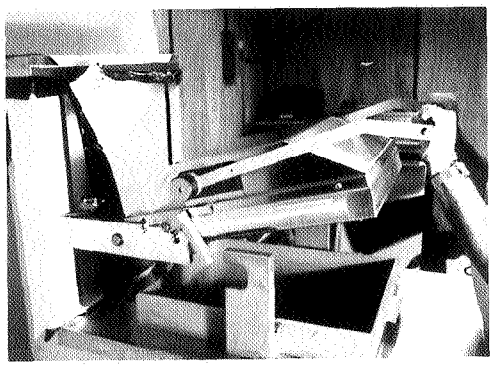
- Clean and reverse lid gasket

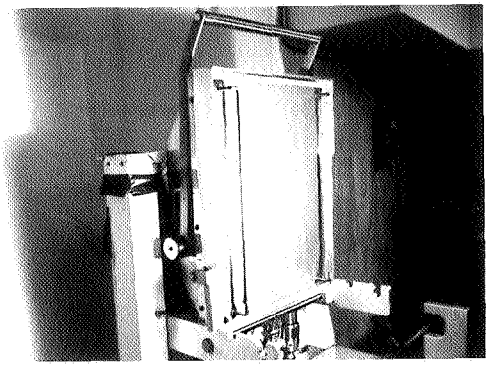
Yearly Inspection

- Remove and clean safety relief valve
- Check Lid Gasket for splitting and tears - replace if necessary
- Check Pressure Pads for wear - rotate if necessary
- Check Cam Slide Guides - replace if worn or broken
- Check Lid Rollers - replace if cracked or damaged.

5-9. TILTING THE LID UPRIGHT







The Lid Assembly is easily tilted up for cleaning or servicing.

1. Lower the lid assembly.
2. Turn the Lid Stop Bracket towards the left of the unit.

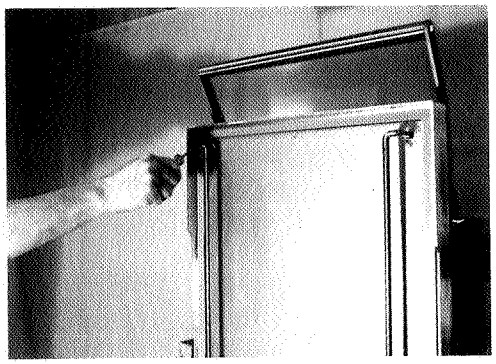
Do not tilt the lid back when the lid is in the full raised position. The handle will fall across the flue opening and will cause severe burns when touched.

3. Carefully allow the lid support to come to rest against the Lid Stop Bracket.
4. Grasping the lid handle, lift the front of the lid up until it stops in an upright position.

WARNING

Be sure the metal arm on the left side of the lid is in the vertical position holding the lid in the upright position, or severe injuries could result.

5-10. REVERSING THE LID GASKET



The gray rubber gasket surrounding the inside of the lid is designed to be reversed. HENNY PENNY RECOMMENDS THAT THIS BE DONE EVERY 90 DAYS.

Because of heat expansion and the pressure used for the cooking process, the gasket is constantly under extreme stress. Reversing the lid gasket every 90 days will help to assure that the fryer will not lose pressure through leakage.

1. Put the lid in the upright position, as previously described.
2. Using a thin blade screwdriver, pry out the gasket at the corners. Remove the gasket.

NOTE

Check the gasket for any tears or nicks. If the gasket is damaged it needs to be replaced.

WARNING

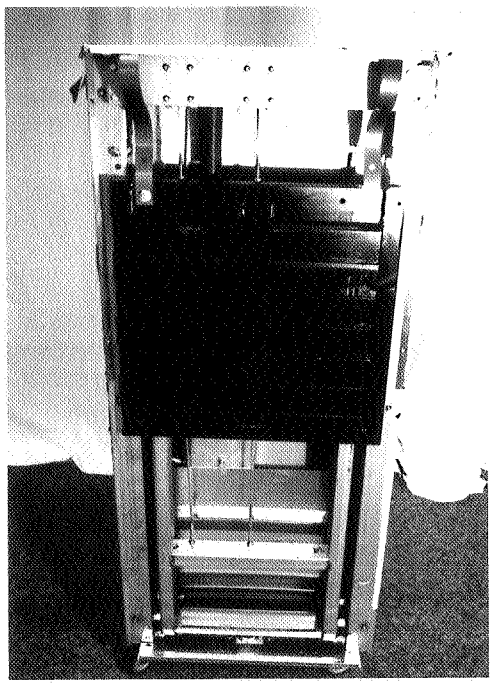
Be careful that the lid doesn't fall down while it is in the upright position, or serious injury could result.

3. Clean the gasket and gasket seat with hot water.
4. Rotate the gasket with the opposite side facing out.

NOTE

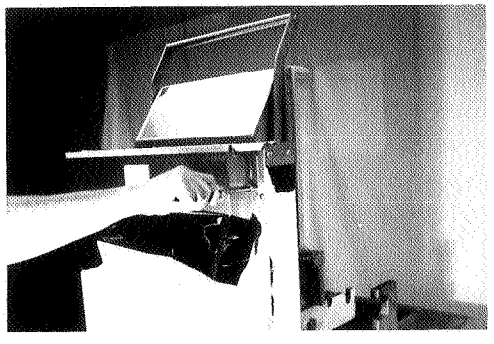
Begin the installation by installing the four corners of the lid gasket, and smoothing the gasket into place from the corners.

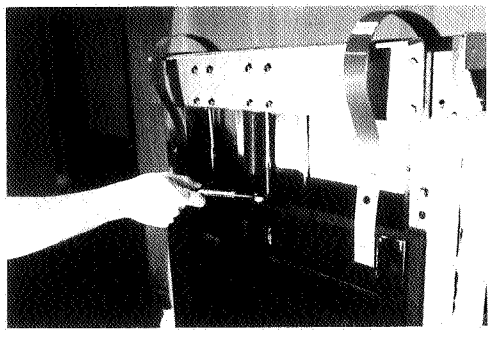
5-11. LID COUNTERWEIGHT



The Lid Counterweight in the back of the fryer balances the weight of the lid system to allow easier opening and closing of the lid. The weight has two cables attached to it, and weighs about 150 lbs. (67.5 Kg). One cable is centered on the weight and is the cable being used. The other cable is a safety cable and is off center. In case the main cable becomes loose or broken, the safety cable catches the weight and puts the weight into a bind, not allowing the lid to be opened or closed.

Replacement/Repair





1. Using a 3/8" socket, remove the back shroud of the fryer.
2. With one person holding the weight level, another person locks the lid down.
3. Unthread the broken cable from the weight and the bracket attached to the fryer, and remove broken cable.
4. Thread a 5/16" nut on each end of the new cable.
5. Screw the new cable into the weight, using a wrench, until it is tight.
6. Using a 1/2" wrench, tighten the nut (already threaded on the cable) against the weight securing the cable into the weight.
7. Pull cable over pulley and down behind the weight.
8. Thread the other end of the cable through a 5/16" nut on the underside of the bracket.
9. Tighten the cable up by screwing the cable through the nut, until the weight becomes level.

5-11. LID COUNTERWEIGHT (CONT'D)

NOTE

The cable should now have some slack in it, with the weights level.

10. Tighten the nut against the bracket, securing the cable.

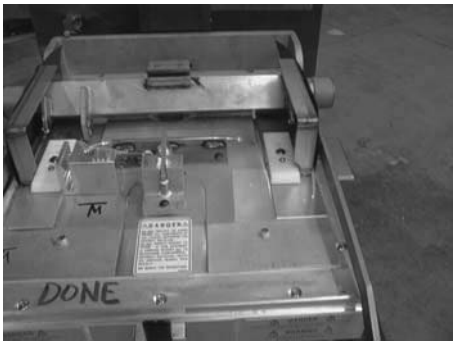
11. Replace back shroud. Repair is now complete.

5-12. PRESSURE PAD

The pressure pads are plastic strips that the lid cam presses against to seal the lid.

1. Raise the lid.

2. Remove the four screws securing the lid cover and remove cover.



3. Push the lid cam back, off of the pressure pads.

4. Using an Allen wrench, remove large bolt securing the pad.

5. Using a Phillips head screw driver, remove the small screw securing the pad and remove the broken pad.

NOTE

If the pressure pad is worn, but not broken, it can be reversed 180 degrees, and the other end of the pad used.

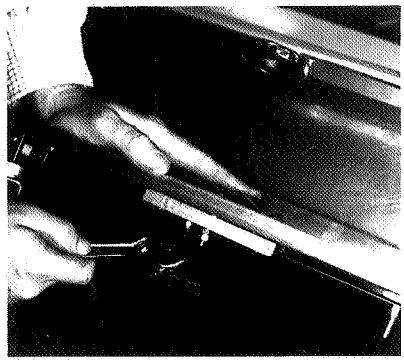
6. Install new pad in reverse order.

5-13. LID ADJUSTMENT

If steam leaks out from around the lid gasket, the pressure pads could be worn or broken. If the pressure pad is worn, but not broken, it can be reversed 180 degrees, and the other end of the pad used. See Section 5-12.

Other problems could cause the steam to leak, such as a cracked or worn gasket, or gasket not installed properly. Be certain leaking is not caused by too much pressure before making any lid adjustments. Fryer should be operating at 12 psi. Refer to Operating Control Valve section. All these areas should be checked, or serious burns could result.

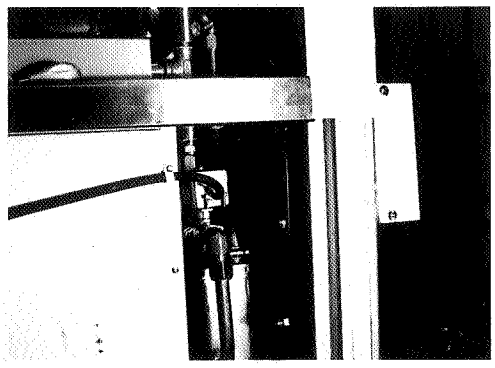
5-15. ADJUSTING THE MAGNET PLATE



With the carrier and racks installed on the lid, the lid should stay down, in contact with the pot rim, when the lid is lowered. The user will then be able to lock the lid in place. If the lid has a tendency to rise up before getting the lid locked down, the magnet plate probably needs adjusting. Follow these steps:

1. Remove the six nuts securing the back shroud and remove back shroud.
2. Loosen the bottom nut under the plate and unscrew both nuts a couple turns, then lower the lid again to see if the lid stays down. If not, repeat procedure.
3. Tighten lower nut up against the other nut and install back shroud - adjustment is now complete.

5-16. SOLENOID VALVE



This is an electromechanical device that causes pressure to be held in the cookpot. The solenoid valve closes at the beginning of the cook cycle and opens automatically at the end of the cook cycle. If this valve should become dirty, or the Teflon seat nicked, pressure will not build up. The electric fryer uses a 208/240 volt, 60 hertz coil (50 hertz internationally). The gas uses a 120 volt, 60 hertz coil (208/240 volt, 50 hertz internationally).

WARNING

Before starting repair procedures, move the Power/Pump Switch to the "OFF" position. Disconnect main circuit breaker at the circuit breaker box and/or unplug service cord from the wall receptacle or electrical shock could result.

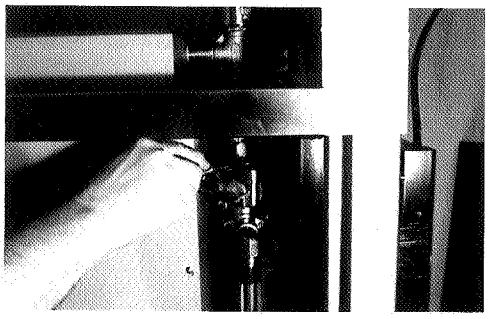
Coil Check Procedure

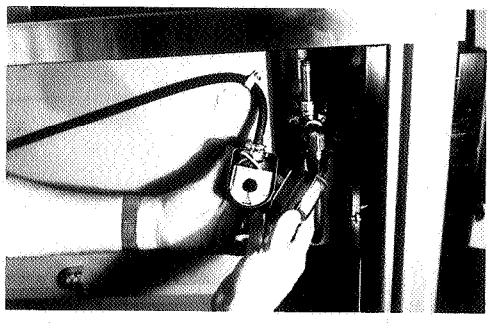
Remove the solenoid wires from the wire nuts which are found behind the control panel. Check across wires.

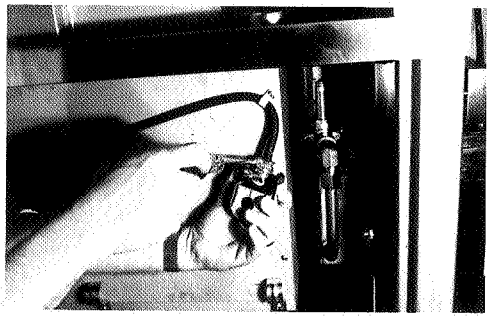
	RESULTS
208/240 Volt, 60 Hertz	150 Ohms
208/240 Volt, 50 Hertz	230 Ohms
120 Volt, 60 Hertz	50 Ohms

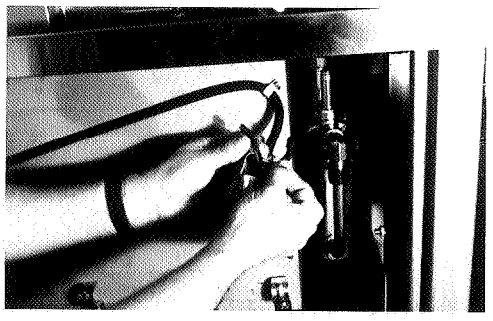
5-16. SOLENOID VALVE (Continued)

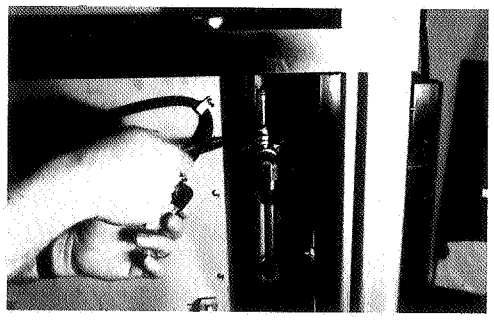
Replacement











NOTE

Prior to servicing the solenoid valve, it is necessary to remove the side panel on the right side of the unit.

1. Remove the "tru-arc" retaining clip on top of the coil housing.

2. Remove the cover.

3. If only the coil is to be replaced, disconnect the two coil wires at the wire nuts in the coil housing. Remove the coil, insert new coil, and connect the wires at the wire nuts. Assemble in reverse order of disassembly.

NOTE

The wires may be connected in any order.

4. Loosen the screws on the strain relief and pull the wires through the relief.

5. If the core-disc assembly is sticking due to build up of shortening, breading, and food particles, proceed with the following steps:

   a. Unscrew the solenoid bonnet assembly from the solenoid valve body.

   b. Remove the solenoid bonnet assembly and bonnet gasket.

   c. Remove the core-disc assembly, core spring retainer, and the core spring.

   d. Wash all these parts in hot water.

NOTE

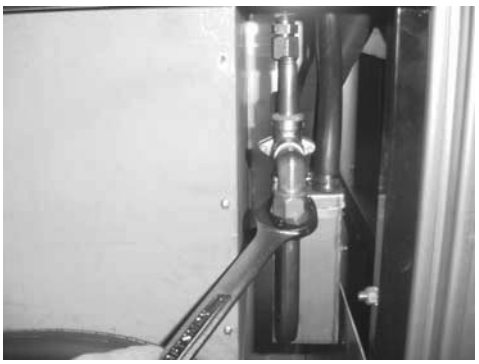
If Teflon seals need to be replaced, proceed to Step 6; otherwise, assemble in reverse order of disassembly. Assemble valve core and blade with smooth side and rounded edge of blade toward the disc spring guide.

6. A repair kit (Part No. 17120) is available if any of the seals must be replaced. If any one seal is defective, they all should be replaced.

NOTE

Solenoid body must be removed from the fryer for replacement of seals.

5-16. SOLENOID VALVE Replacement (Continued)



7. With the bonnet assembly and core-disc assembly removed, disconnect the two nut fittings. One connects the solenoid valve to the dead weight system; the other is attached to the condensation tank.

8. Remove the elbows from the solenoid valve.

9. Remove the two adapter screws which attach the pipe adapter to the solenoid valve body.

10. Remove the disc spring, guide, and Teflon seat.

11. Clean the valve body.

12. Wet "O" ring around seat with water and insert "O" ring assembly (flat side first) in valve through "IN" side of body. Use an eraser end of pencil and press in the Teflon seal until it snaps into place. BE CAREFUL NOT TO MAR OR NICK THE SEAT.

NOTE

The smallest nick can cause a pressure leak. Replace all "O" ring seals that are in the parts kit and reassemble valve.

13. If the complete valve is being replaced, follow steps 1, 2, 3, 4, 5, 7, and 8, in this section.

5-17. OPERATING CONTROL VALVE

DO NOT ATTEMPT TO REMOVE THE VALVE CAP WHILE THE FRYER IS OPERATING, or severe burns or other injuries could result.

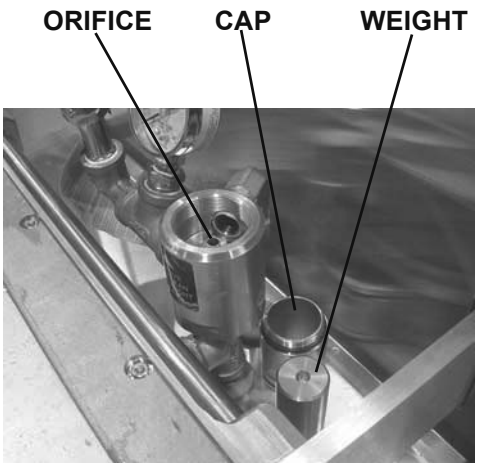
The operating valves are located at the back of the unit. The valve left of the pressure gauge is a 14 ½ lb. safety relief valve, and to the right of the pressure gauge, the operating valve.

Valves are working properly, when "OPERATING ZONE" indicates on the gauge by the pointer. The gauge pointer should not normally exceed the operating zone. If the pressure builds to 14 ½ lbs., the safety relief valve opens and releases pressure from the frypot.

5-17. OPERATING CONTROL VALVE (Continued)

DO NOT MANUALLY ACTIVATE THE SAFETY RELIEF VALVE. Hot steam will be released from the valve when the ring is pulled. Keep away from safety valve exhaust, or severe burns could result.

Cleaning Steps



1. AT THE END OF EACH DAY'S USAGE OF THE FRYER, THE OPERATING VALVE MUST BE CLEANED. The fryer must be OFF and the pressure released. Open the lid and then remove the dead weight valve cap and dead weight.

WARNING

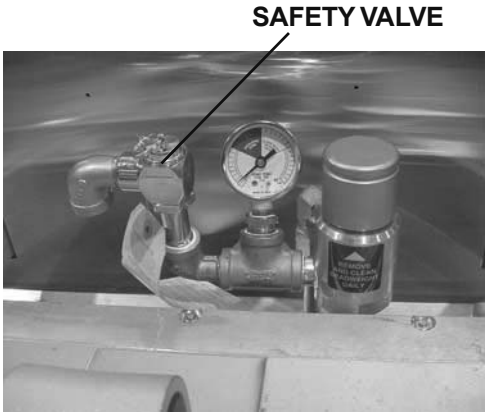
Failure to clean the operating valve daily could result in the fryer building too much pressure. Severe injuries and burns could result.

2. Wipe both the cap and weight with a soft cloth. Make certain to thoroughly clean inside cap, the weight seat, and around valve orifice.

3. Dry the parts and replace immediately to prevent damage or loss.

5-18. REMOVAL & CLEANING OF SAFETY VALVE

The safety relief valve should be cleaned once a year.



Do not attempt to remove valve while fryer is operating, or severe burns or other injuries could result.

1. Remove pressure gauge.

2. Use a wrench to loosen the valve from the elbow, turn counterclockwise to remove.

5-18. REMOVAL & CLEANING OF SAFETY VALVE (Continued)

3. Clean inside of the elbow with hot water.

NOTE

Turn the relief valve towards the left side of the fryer when reinstalling relief valve.

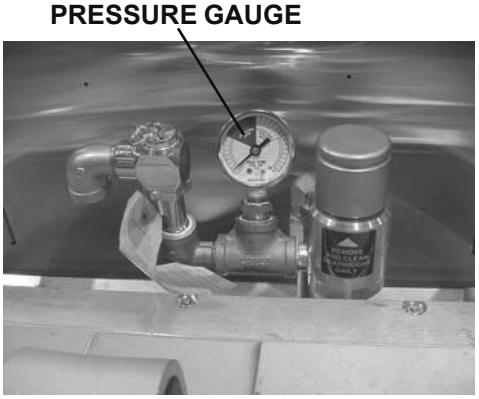
4. Immerse the safety relief valve in soapy water for 24 hours. Use a 1 to 1 dilution rate. The valve cannot be disassembled. It is factory preset to open at 14 ½ pounds of pressure. If it does not open or close, replace it!

DO NOT DISASSEMBLE OR MODIFY THIS VAVLE! Tampering with this valve could cause serious injuries and also voids agency approvals and appliance warranty.

5-19. PRESSURE GAUGE

Calibration Steps

Recalibrate the pressure gauge if it is out of adjustment.



1. Remove the rim and glass.

2. If the indication hand shows a pressure or vacuum reading when it should stand at "0", turn the recalibrator screw in the same direction in the indicating hand is to be moved until the hand stands at proper "0" position.

3. Replace the rim and glass.

Cleaning Steps

1. Remove the gauge and check inside the pipefittings from dead weight body. Make certain fittings are clean and open.

2. Clean and reinstall the gauge.

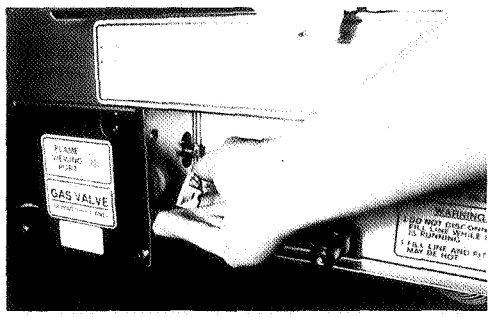
5-20. GAS CONTROL VALVE

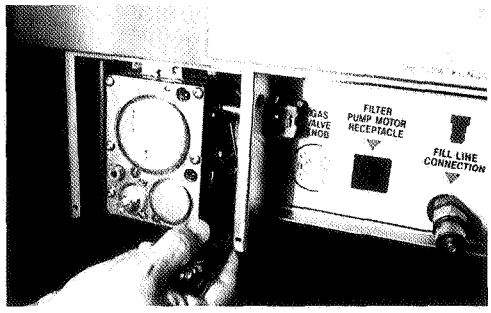
The gas control valve is a dual controller, in which one side of the control valve controls one burner and the other side of the control valve controls the other burner. If one burner shuts down, both burners will shut down. The control valve is turned on or off, it has no pilot position, because the burner does not require a pilot light.

Safety Precautions

To avoid injury or property damage, before starting this procedure, move the Power/Pump switch to the "OFF" position. Disconnect the main circuit breaker at the circuit breaker box, or unplug the service cord at the receptacle. Turn off the main gas supply to the cooker and disconnect and cap the supply line to fryer, or possible explosion could result.

Replacement



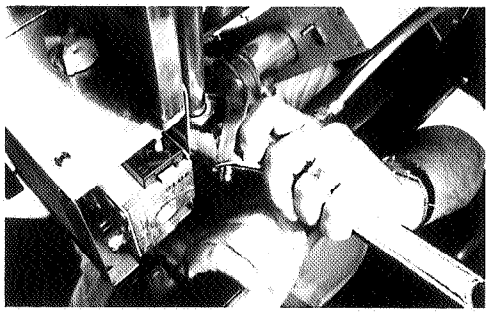


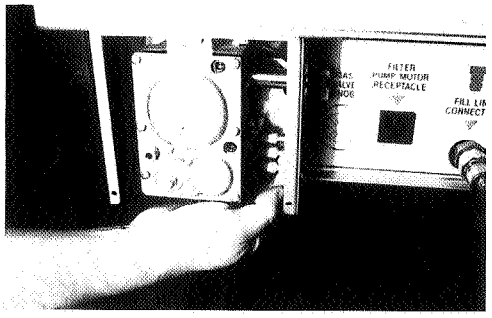
NOTE

A voltage check at the control valve must be taken four (4) seconds after the Power/Pump switch is turned to Power position.

1. Turn gas cock knob to the "OFF" position.
2. Pull gas cock knob from control valve.
3. Remove cover from control valve.
4. Using an allen wrench, remove shaft extension from control valve.
5. Remove left side panel.
6. Unscrew nut from outlet line under the control valve.
7. Measure air slide adjustment from manifold to end of air slide and slide air slide all the way in.
8. Loosen nut from inlet line going to control valve.
9. Remove wires from control valve.
10. Remove the two screws and nuts from bracket and remove bracket.

5-20. GAS CONTROL VALVE (Continued)





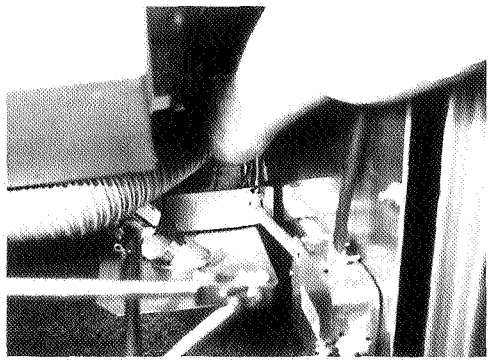
11. Remove the three screws from back of control valve and remove from bracket.

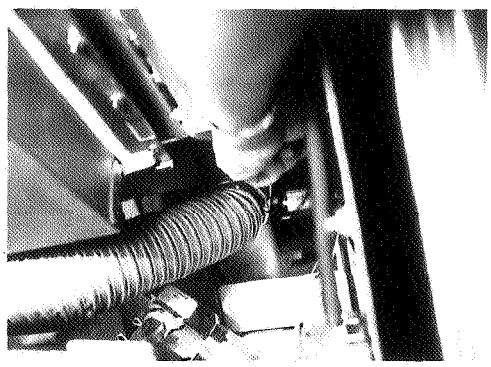
12. Reassemble in reverse order.

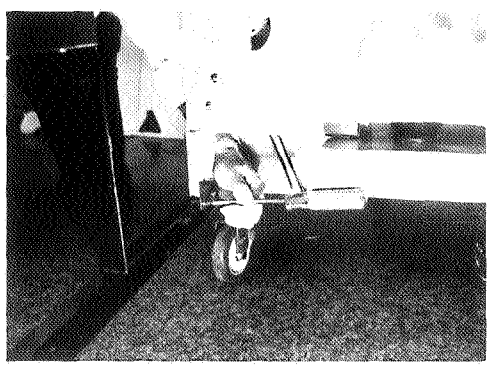
5-21. BLOWER MOTOR

The blower motor circulates air into the burner area to create the correct heat for the fryer. If the blower fails, a sensor will shut the power control valve down.

Replacement







1. Remove the electrical power supplied to the unit.

WARNING

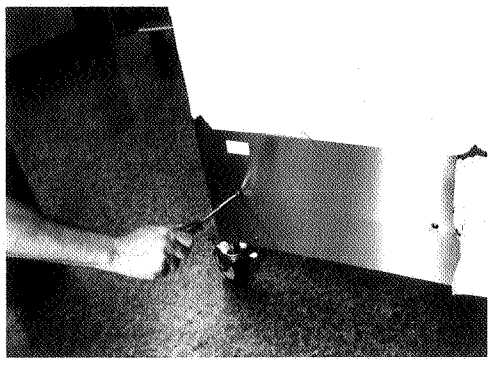
Remove electrical power supplied to the unit by unplugging the unit, or by turning off the wall circuit breaker, or electrical shock could result.

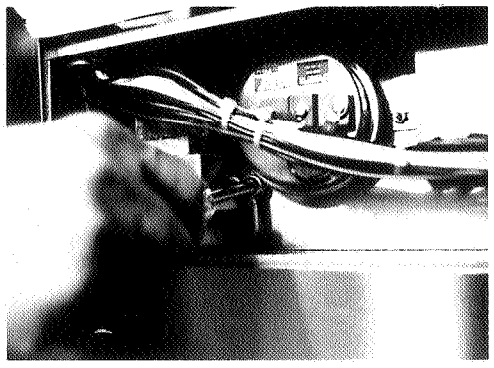
1. Remove both side panels.
2. Remove the nut from the ground wire and remove ground wire.
3. Disconnect wires at junction box on right, back of fryer.
4. Remove conduit fitting from the blower bracket.
5. Loosen hose clamp and remove hose from blower.
6. Remove two (2) screws from the frame which secures the bracket, and lift bracket and blower assembly from unit.
7. Remove the three (3) nuts from the back of the blower and remove the blower from bracket.
8. Replace new blower in reverse order of procedures.

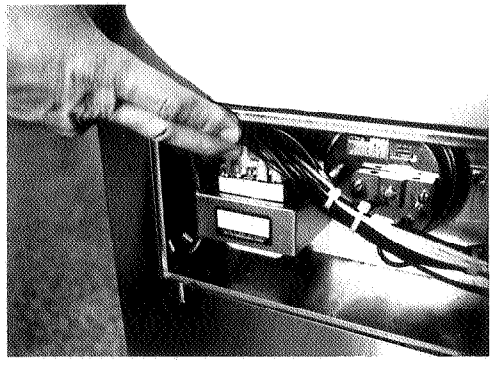
5-22. TRANSFORMER

The transformer reduces the voltage down to accommodate those components with low voltage.

Replacement







1. Remove electrical power supplied to the unit.

WARNING

Remove the electrical power supplied to the fryer by unplugging the unit, or by turning off the wall circuit breaker, or electrical shock could result.

2. Remove the small access panel from the right side panel.
3. Remove the two (2) nuts securing the transformer to the unit and remove transformer.
4. Remove the wires from transformer.

NOTE

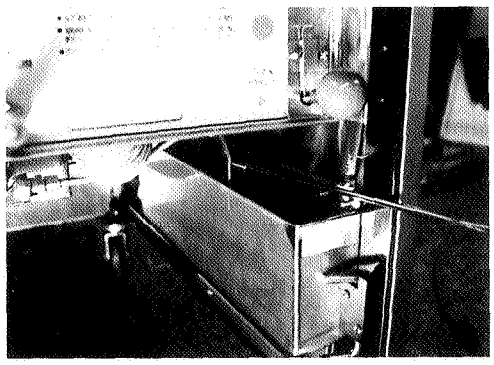
Mark wires before removal to insure new transformer is wired correctly.

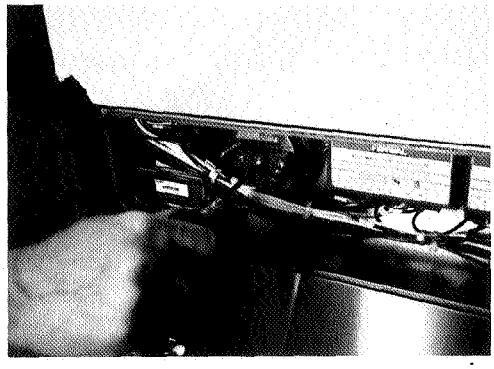
5. Replace with new transformer in reverse order.

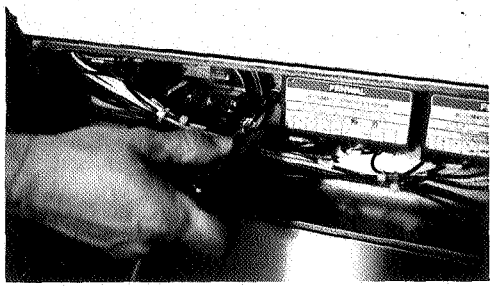
5-23. AIRFLOW SWITCH

The airflow switch senses the flow of air coming from the blower. If the airflow is reduced below a set amount, the switch will cut power to the control valve, which shuts the burners down.

Replacement







1. Remove electrical power supplied to the unit.

WARNING

Remove electrical power supplied to the unit by unplugging the unit, or by turning off the wall circuit breaker, or electrical shock could result.

2. Remove small access panel from right side panel.
3. Pull hose from switch from under fryer.
4. Disconnect wires from switch.

NOTE

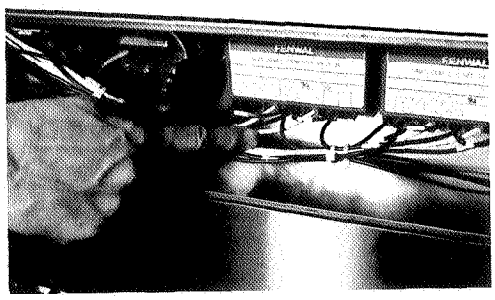
Mark wires before removal to insure new airflow switch is wired correctly.

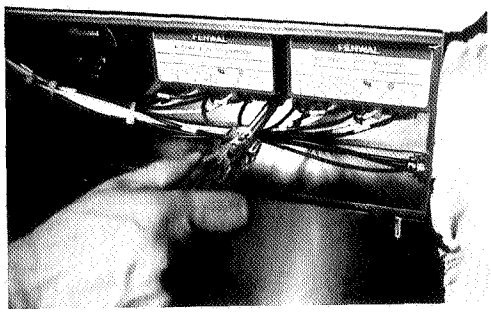
5. Remove the two (2) nuts securing switch and remove switch.
6. Install new airflow switch in reverse order.

5-24. IGNITOR MODULES

The ignitor module sends 24 volts to the ignitors and there is an ignitor module for each ignitor.

Replacement





1. Remove electrical power supplied to the unit.

WARNING

Remove electrical power supplied to the unit by unplugging the unit, or by turning off the wall circuit breaker, or electrical shock could result.

2. Remove small access panel from right side panel.
3. Remove wires from modules.

NOTE

Mark wires before removal to insure new modules are wired correctly.

4. Remove the two nuts securing the module and remove module.
5. Install new module in reverse order.

5-25. DRAIN MICROSWITCH

Upon lifting up on the drain knob, the microswitch should not be activated, but still be activated by pulling out on the knob. The nuts on the microswitch can be screwed up or down to adjust the microswitch.

Replacement

1. Remove electrical power supplied to the unit.

WARNING

Remove electrical power supplied to the unit by unplugging the unit, or by turning off the wall circuit breaker, or electrical shock could result.

2. The following check should be made to determine if the Drain Switch is defective.
   a. Remove the right side panel.
   b. Remove bottom nut securing the microswitch and remove microswitch from unit.

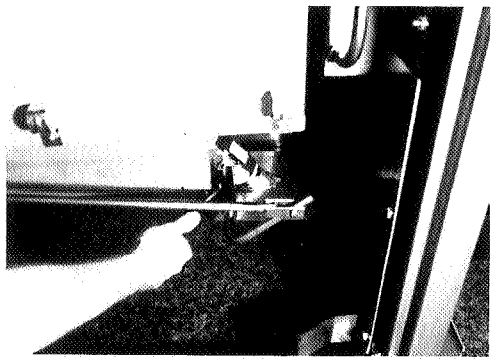
5-25. DRAIN MICROSWITCH (Continued)

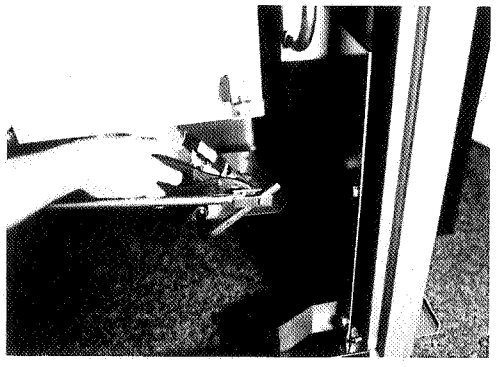
c. Check for continuity across the two outside terminals on the Drain Switch. If circuit is open, the Drain Switch is bad. The circuit should only be opened by pressing on the actuator of the Drain Switch.

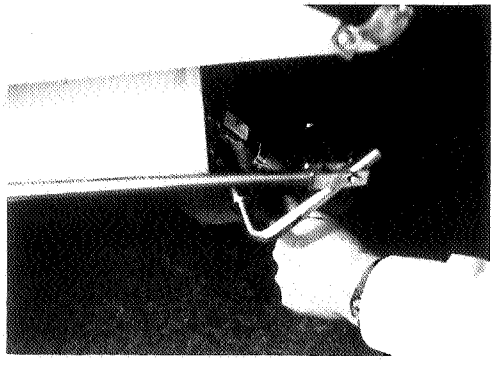
3. To replace switch, remove wires going to switch and install new switch in reverse order of above procedures.

4. Test to see if drain valve extension rod actuates the switch. NOTE: Listen for CLICK of switch while pulling drain valve extension rod.

5-26. DRAIN VALVE







The drain valve opens when the drain valve knob is pulled out and drains the shortening out of the pot.

1. Remove both side panels of unit.
2. Remove cotterpin closest to drain valve.
3. Remove blower (see maintenance section on blower).
4. Unscrew shield from drain valve.
5. Unscrew drain valve from unit.
6. Install new drain valve in reverse order.

5-27. BURNER ASSEMBLY

The 680 fryer has two burner assemblies, one on each side of the pot. The burners can be ignited with either natural or L.P. gas.

Adjustment

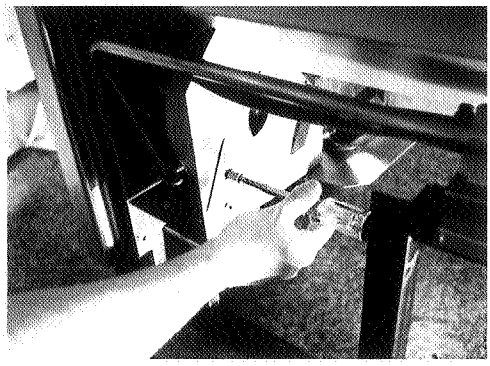
A blower in the fryer produces the airflow needed for combustion inside the burner chamber. Both burners should be an orangy-red color while the burners are on continuously (not pulsing).

NOTE

A color chart is provided with this manual for comparison. Two observation holes, for easily comparing the burners, are located in the front of the unit. If the burners are out of adjustment proceed with the following:

A. Both burners the same color, but not orangy-red.

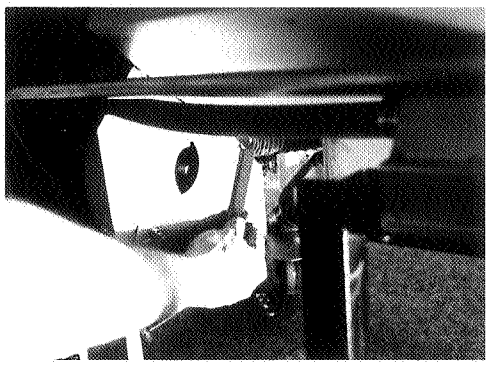
1. Remove electrical power supplied to the unit.



WARNING

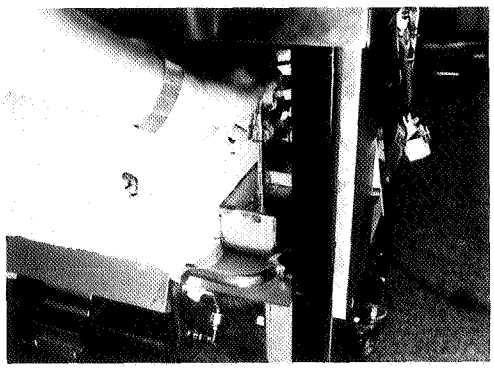
Remove electrical power supplied to the unit by unplugging the unit, or by turning off the wall circuit breaker, or electrical shock could result.

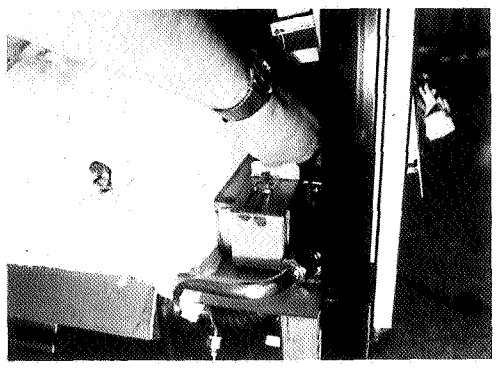
2. Using 1/4" socket remove the left side panel.



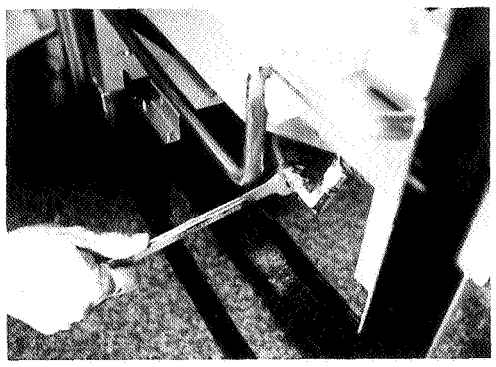
3. At the back of the unit, locate the blower and the slotted shield on the front of the blower.
4. Mark the shield in the postion it is in.
5. Loosen the nut securing the shield.
6. Supply power back to the unit and turn Power Switch to "Power" position.
7. While the burners are igniting continuously, slide the shield to either open or close the blower opening and observe the color of the burners until they are both an orangy-red color. (Refer to color chart.)
8. When the burners are the correct color, tighten the nut securing the blower shield and replace side panels.

5-27. BURNER ASSEMBLY (Continued)





Replacement: Left Burner



B. Burners are different colors.

1. Remove electrical power supplied to the unit.

WARNING

Remove electrical power supplied to the unit by unplugging the unit, or by turning off the wall circuit breaker, or electrical shock could result.

2. Using 1/4" socket, remove both side panels.
3. Locate the air adjustment behind the control panel on each side of the unit.
4. Loosen the nuts securing the slide adjustments.
5. Replace power to unit and turn Power Switch to the "Power" position.
6. While the burners are igniting continously, slide the adjustment shield open or close until both burners are orangy-red. (Refer to color chart.)
7. Tighten nuts on adjustment shields and replace side panels.

---

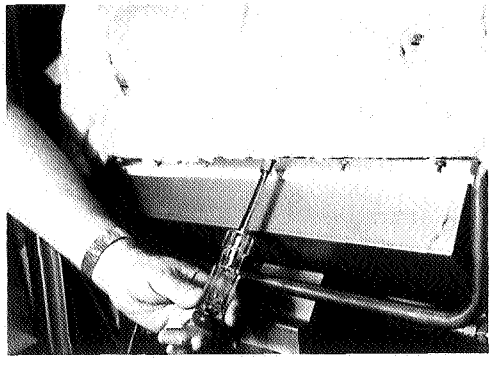
1. Remove electrical power supplied to the unit.

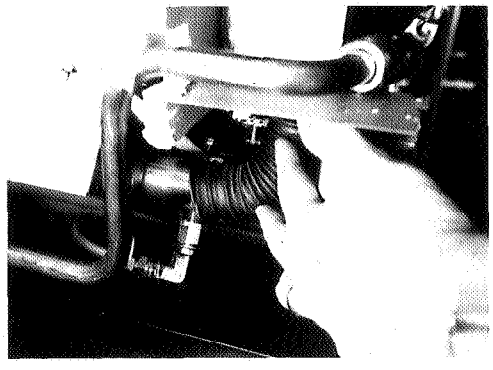
DANGER

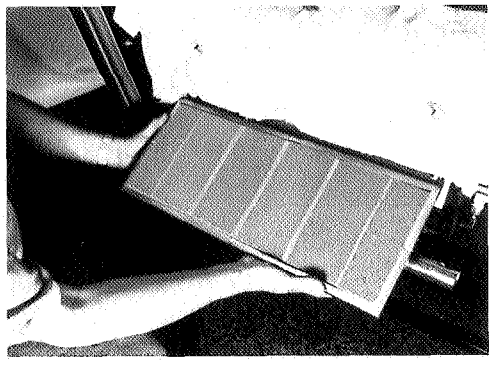
Remove electrical power supplied to the unit by unplugging the unit, or by turning off the wall circuit breaker. Turn off the main gas supply to the fryer and disconnect and/or cap the main supply line to the fryer, or possible explosion could result.

2. Remove the left side panel of the fryer.
3. Using 11/16" wrench loosen fitting on gas line going to burner, and disconnect gas line.
4. Using a Phillips head screwdriver, remove the two screws securing the condensation deflector onto the frame and remove deflector.
5. Using 3/8" socket, remove nuts securing burner and drop burner off unit.

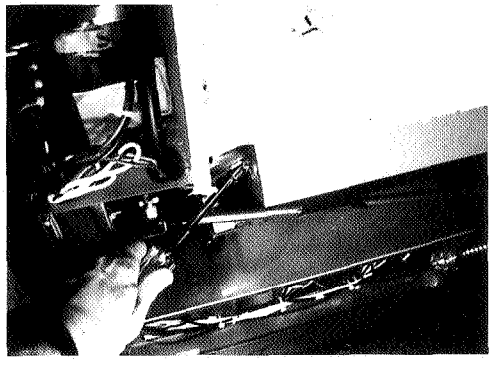
5-27. BURNER ASSEMBLY (Continued)







Replacement: Right Burner



6. Remove air hose.
7. Remove pilot orifice and elbows off of faulty burner.
8. Screw pilot orifice and elbows onto new burner.

NOTE

Use pipe thread sealant on threads on elements.

9. Remove old insulation from burner area.
10. Using a gasket adhesive, mount the insulation provided onto the outer surface of burner bracket.

CAUTION

Do not get adhesive onto burner "windows". It will discolor, blocking the view.

11. Carefully mount burner assembly onto studs and bracket, making sure the insulation seals around burner.

CAUTION

Avoid striking the ignitor while making the installation. Also, do not over-tighten the nuts on the studs, or the studs could break.

12. Fasten condensation deflector onto frame and reconnect gas line into fitting on new burner.
13. Check for gas leaks per section in the installation portion of this manual.
14. Place side panel on unit, turn gas on and electrical supply to unit.

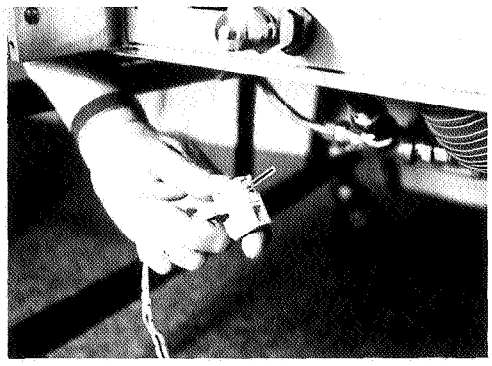
---

1. Follow steps 1 thru 3 on left burner instructions, except remove right side panel, and drop down drain rod.
2. Using 3/8" socket, remove nut securing ground wire and nuts securing the burner assembly. Drop burner assembly from unit.
3. Follow steps 6 thru 15 on the left burner instructions.

5-28. IGNITORS

The ignitors are electrically energized and the tip of the ignitor glows red creating combustion in the burner chamber. It then senses the combustion and sends the message to the modules. If no combustion occurs, the modules shut the gas off at the gas valve.

Checkout



When the Power/Pump switch is in the power position, a red glow should be seen in each porthole in the front of the fryer. If no red glow is seen, proceed with the following:

1. Remove electrical power supplied to the unit.

WARNING

Remove electrical power supplied to the unit by unplugging the unit, or by turning off the wall circuit breaker, or electrical shock could result.

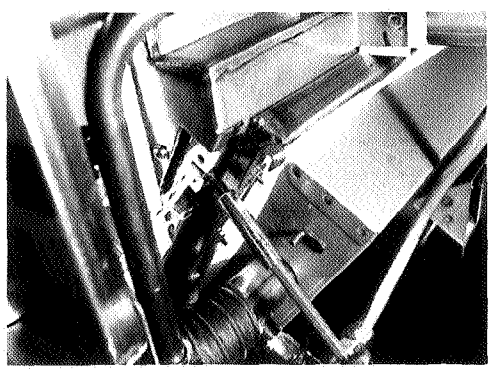
2. Remove the side panel.
3. Locate and remove the wire nuts on the leads to the ignitors.
4. The ignitor should ohm out at 1.0-6.0 ohms.

WARNING

The following checks are performed with the wall circuit breaker closed and the Power/Pump switch in the Power position. Extreme caution should be taken. Make connections before applying power, take reading, and remove power before removing meter leads, or electrical shock could result.

5. Also, a voltage check can be taken. The ignitor should receive 24 volts from the ignitor module. If 24 volts is found from the leads from the modules, then the ignitor is probably faulty.

Replacement



If an ignitor is found to be faulty it must be replaced as follows:

1. Remove electrical power supplied to the unit.

WARNING

Remove electrical power supplied to the unit by unplugging the unit, or by turning off the wall circuit breaker, or electrical shock could result.

2. Remove the side panel.

5-28. IGNITORS (Continued)

3. Locate wire nuts and disconnect leads.
4. Remove the screw securing the ignitor in the bracket and remove ignitor.
5. Make sure insulation is in place in the ignitor bracket and slide the probe through the slot in the bracket.

CAUTION

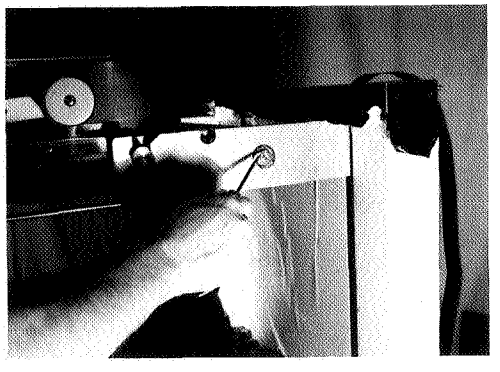
The probe, or tip of ignitor, is very fragile. Take care when installing the ignitor.

6. Secure ignitor in place with screw, reconnect wire leads and replace side panel.
7. Reconnect power and test the fryer for proper operation.

5-29. NYLATRON STRIPS

The nylatron strips fill the gap in the shroud behind the lid.

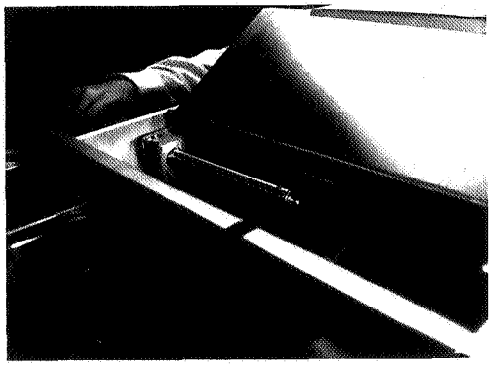
1. Secure the lid with the lid stop bracket.
2. Remove one of the tru-arc rings off of the lid pin and knock the pin out of the lid.
3. Lift the lid from the unit.



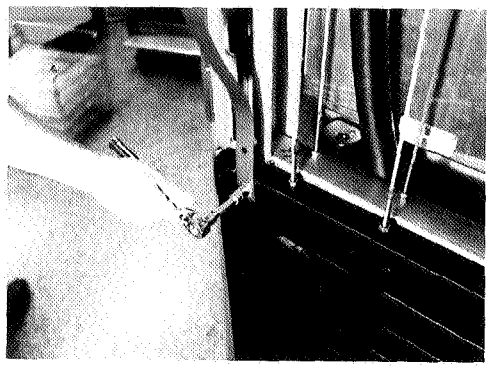
WARNING

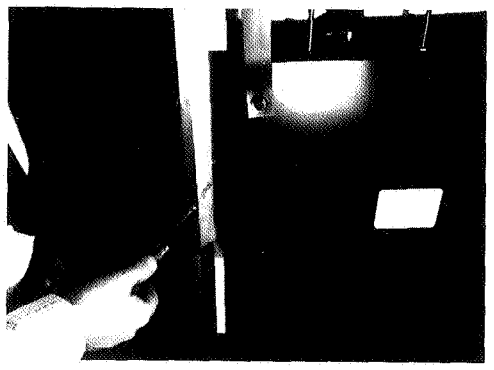
The lid weighs 80 lbs. Care should be taken when lifting the lid to prevent personal injury.

4. With one person on each lid arm, release arms from the lid stop bracket and allow lid arms to rise all the way up.



5-29. NYLATRON STRIPS (Continued)



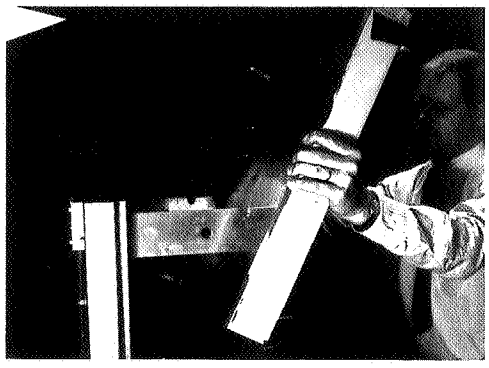


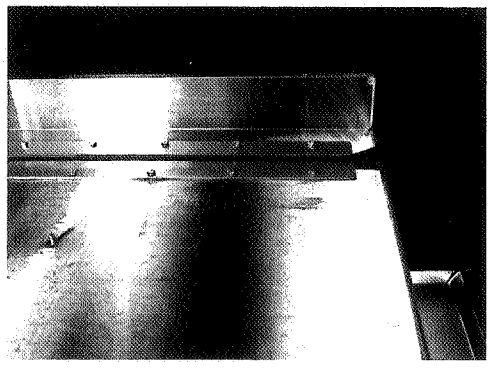
5. Using a 3/8" socket remove the nuts securing the back shroud and remove the back shroud.

6. Remove bolts securing the strips to the weights, and remove strips from weights.

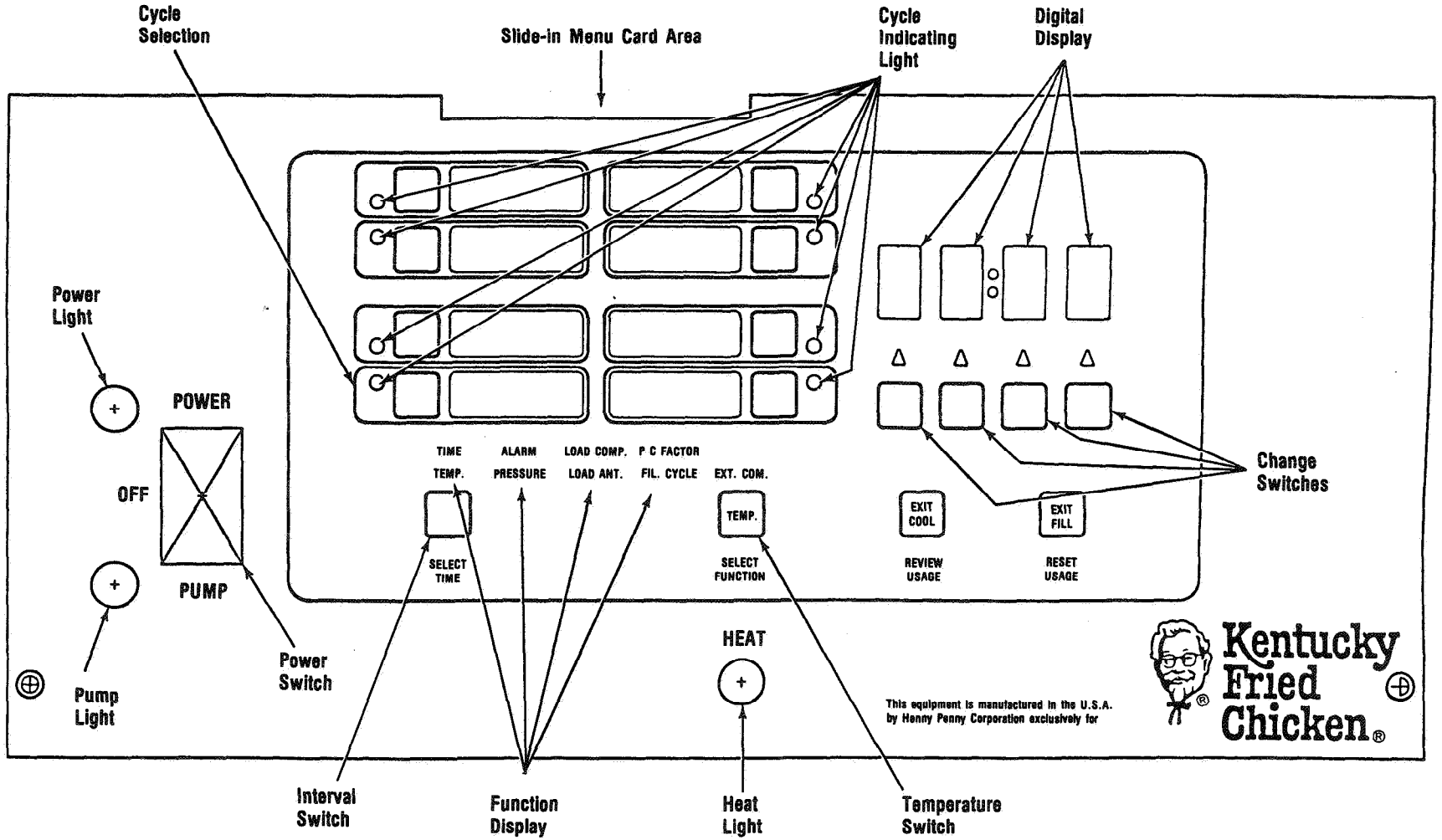
7. Remove the screws securing the front shroud, and the nut securing the exhaust tube bracket.

5-29. NYLATRON STRIPS (Continued)





8. Lift the front shroud up and out, over the arms of the lid.
9. Thread the new nylatron strip through the track in the front shroud.
10. Lining up the holes in the strips, fit the front shroud over the lid arms and secure to carriage frame.
11. Secure the strips to the weights.
12. Replace back shroud and lid - replacement is complete.


Cycle Selection
Slide-in Menu Card Area
Cycle Indicating Light
Digital Display
Power Light
POWER
OFF
PUMP
Pump Light
Power Switch
TIME
TEMP.
ALARM
PRESSURE
LOAD COMP.
LOAD ANT.
P C FACTOR
FIL. CYCLE
EXT. COM.
SELECT TIME
TEMP.
SELECT FUNCTION
EXIT COOL
REVIEW USAGE
EXIT FILL
RESET USAGE
Change Switches
HEAT
This equipment is manufactured in the U.S.A. by Henny Penny Corporation exclusively for
Kentucky Fried Chicken®
Interval Switch
Function Display
Heat Light
Temperature Switch

SECTION 6. PROGRAMMING

6-1. BASIC PROGRAMMING SEQUENCE

To enter the program mode, a password keystroke sequence is required. Note that when performing this sequence, the buttons must be depressed within one second of each other, If not, the control will not enter the program mode.

1. Depress the square under the far right digit of the display.
2. Depress the "Select Time" button.
3. Depress the square under the far left digit of the display.
4. Depress the "Exit Cool" button.

You are now in the program mode of the control.

6-2. COOK CYCLE

To program a cook cycle, the following steps should be followed.

1. Follow the keystroke sequence and enter the program mode.
2. Select the product you desire to program by depressing the cycle button next to the product.
3. TIME will be flashing in the function display.
4. Use the four change buttons beneath the display to change the displayed values. Program the starting time first.
5. Depress the SELECT TIME button, which allows you to enter the second interval for time.
6. Program your second interval time. Repeat until all six interval times have been programmed.
7. Depress the SELECT FUNCTION button. TEMP will be flashing in the function display.
8. Repeat steps 4, 5, and 6 until all six interval temperatures have been programmed.
9. Depress the SELECT FUNCTION button until PRESSURE is flashing in the function display. Digital display will read OFF and ON.
10. Follow steps 4, 5, and 6 until all six intervals have been programmed for pressure.

6-2. COOK CYCLE (Continued)

NOTE

The above steps may be followed for interval alarms except you cannot program an interval alarm in the first interval.

Refer to Special Programming Modes on factory presets for load compensation, proportional control, and filter cycle counts.

6-3. ERROR CODES

The following defines the error code number. If an error code occurs, the buzzer will sound until you depress a cycle button. The control will continue to display the error code and fryer will be inoperative until error is corrected.

- E 5 - Pot temperature too high. (Software high limit)
- PROB - Temperature probe has failed.
- E 41 - Control Problem - must be initialized and programmed. (See One-Step KFC Parameters)
- E 20 - No Burner Ignition - Check gas flow.

6-4. SPECIAL PROGRAMMING MODES

The special programming modes are entered by way of a special sequence of keys and are intended to be infrequently used for service or factory preset functions. The modes are numbered according to the cycle that is selected to enter them.

- KFC Parameters (Factory Preset) (Cycle 6)
- Test Procedures (Cycle 7)

To enter special programming mode, the following steps must be followed exactly.

1. Enter the password keystroke sequence for programming mode. Refer to "The Basic Programming Sequence."
2. Depress the EXIT COOL button. Display will read "SP".
3. Select the desired special function by depressing either cycle button 6 or 7.
4. Perform the desired operation.

6-4. SPECIAL PROGRAMMING MODES (continued)

5. Depress the EXIT FILL button to exit the special program mode. Unit will return to stand-by cook mode.

NOTE

The preceding steps must be followed exactly to enter the special program mode.

6-5. ONE STEP KFC PARAMETERS

1. Enter the special program mode.
2. Depress the cycle 6 button. Display will read as follows.

DISPLAY	E or O	F or C	BLANK	BLANK
Digit	4	3	2	1

Digit 1: Blank - When depressed, it will enter all KFC "Big Bird" parameters. Display will read INIT for two seconds, then 2-75 for two seconds.

Digit 2: Blank - When depressed, it will enter all KFC cooking parameters. Display will read INIT for two seconds, then 2-50 for two seconds.

Digit 3: Display will read either F for Fahrenheit degrees, or C for Celsius degrees.

Digit 4: Display will read either E for Electric or O for Other (includes Gas).

6-6. TEST PROCEDURES

1. Enter the special program mode.
2. Depress the product 7 button. Display will be blank.
3. Depressing a certain button on the front pannel turns an output on, while depressing the same button again turns that output off. This will test all circuits on the controller.

The table below shows the corresponding button with the output.

WARNING

To avoid personal injuries or property damage when performing the solenoid and heat control test, be sure there is shortening in the cookpot. The heat could run uncontrolled. For test purposes only.

6-6. TEST PROCEDURES (Continued)

Button	Device Activated
Product One	Pressure Solenoid and Heat Control
Select Time	Product Indicators
Select Function	Function Indicators
Change Button Under Display 4	Change Button Indicator Display
Change Button Under Display 3	Change Button Indicator Display
Change Button Under Display 2	Change Button Indicator Display
Change Button Under Display 1	Change Button Indicator Display

NOTE

The SELECT FUNCTION or SELECT TIME button must be depressed before the PRODUCT ONE button to properly perform the solenoid and heat control output test.

WARNING

For short duration only, until will operate without temperature regulation, or will overheat the shortening.

6-7. SPECIAL FUNCTIONS

When programming one-step KFC parameters, load compensation and proportional control are automatically programmed into the control. The following defines these two functions.

Load Compensation - Load compensation adjusts cooking times to compensate for differences in the cooking process such as load size. The control is continuously comparing the pot temperature to the setpoint temperature. If the pot temperature is above the setpoint, the control will shorten the cook time. If the pot temperature is below the setpoint, the control will lengthen the cook time. Load compensation for KFC parameters is set at 0.

Proportional Control - Proportional control regulates pot temperature by pulsing the heat on and off until it reaches setpoint temperature. This allows better temperature accuracy when dropping product. Proportional control for KFC parameters is set at 10 degrees.

RECOMMENDED SPARE PARTS FOR DISTRIBUTORS Recommended replacement parts, stocked by your distributor, are indicated with √ in the parts lists. Please use care when ordering recommended parts, because all voltages and variations are marked. Distributors should order parts based upon common voltages and equipment sold in their territory.

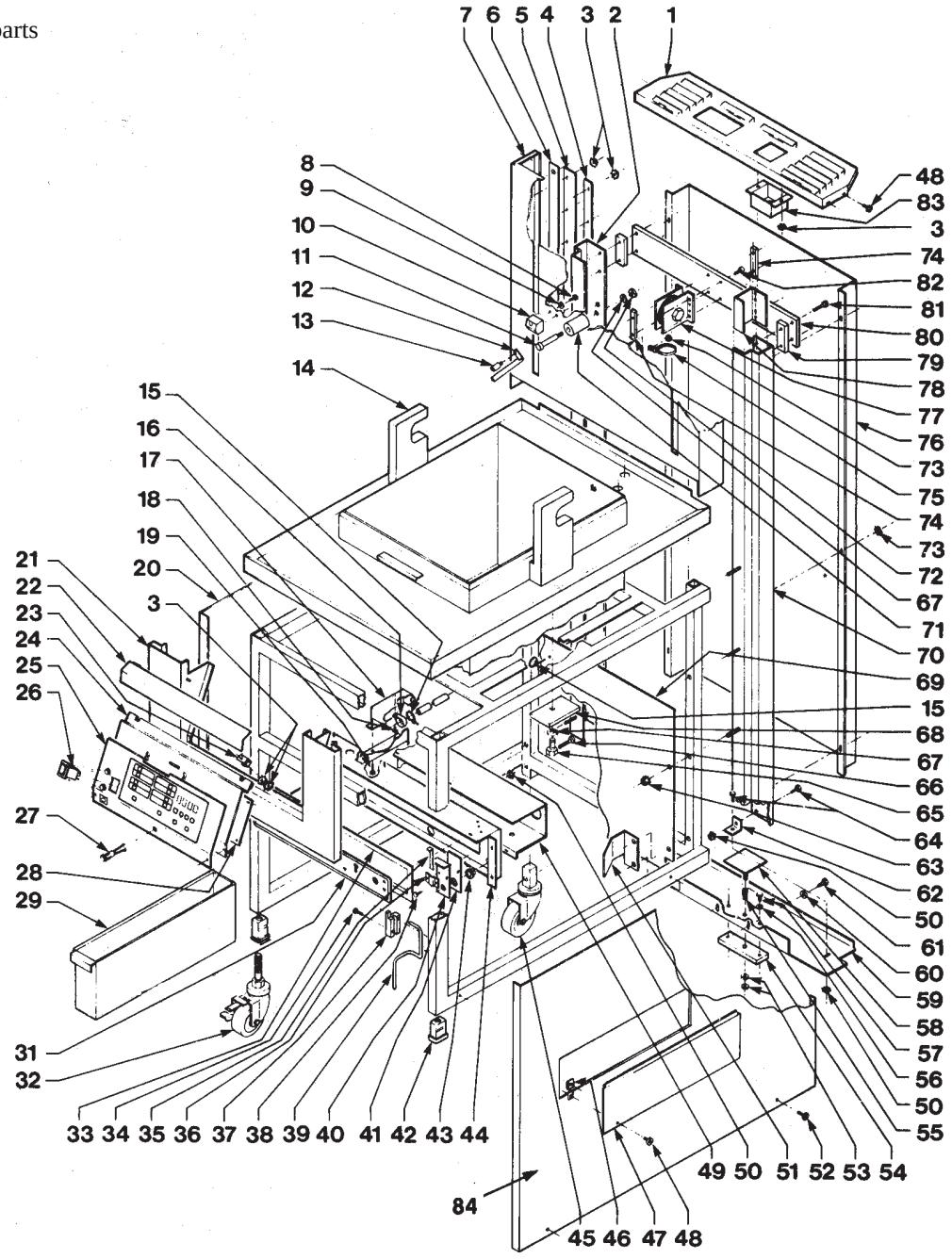
	FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
	1	36901	TOP LOUVER COVER	1
	2	36190	CARRIAGE TRACK STUD ASSEMBLY, L.H	1
	3	NS02-005	NUT, (#6-32 Hex Keps)	*
	4	35057	SLIDE, Shroud (Inner)	2
	5	35248	SLIDE, Shroud (Outer)	2
	6	36839	SLIDE	2
	7	35304	WELDMENT, Shroud	1
	8	SC01-052	SCREW, Machine (1/4-20 x 3/8")	2
	9	LW0l-002	LOCKWASHER, (Split Ring 1/4)	2
	10	35254	BLOCK, Lid Arm Lock	1
	11	SC01-158	BOLT, (1/2" - Hex Socket - Shoulder 2" LG)	2
	12	35560	WELDMENT, Lid Stop	1
	13	35420	ROD, Lid Stop Upper	1
	14	N/A	WELDMENT, Pot/Countertop	1
	15	EF02-003	WIRE TIE	*
	16	EF02-037	CLAMP	2
	17	70312	DEFLECTOR, Steam	1
	18	SC01-034	SCREW, Machine (#8-32 x 3/8)	1
	19	SC04-003	SCREW, THD Cutting (#8-32 x 3/8 P PHD TYPE F)	2
	20	35053	PANEL, Left Side	1
	21	35166	PANEL, Control Weldment	1
		14247	KIT, Conv. 120V 680 to SMS - Domestic	1
		14150	KIT, Conv. 208/240V 680 to SMS - Domestic	1
		14754	KIT, Conv. 120V 680 to SMS - International	1
		14745	KIT, Conv. 208/240V 680 to SMS - International	1
√		36577RB	PANEL, Control Assy. Complete – Non SMS	1
√		56818RB	PANEL, Control Assy. Complete – SMS - Domestic	1
√		70950RB	PANEL, Control Assy. Complete – SMS - International	1
	22	31299	STUD ASSY COVER, Control Panel – Non SMS	1
	23	31271	HINGE SPRING – Non SMS	2
	24	36365	ASSEMBLY, Weld Stud & Spacer – Non SMS	1
	25	29382	DECAL, Membrane Switch-KFC – Non SMS	1
	25	56528	DECAL, Membrane Switch-KFC - SMS	1
√	26	29898	SWITCH, Power	1
√	27	16624	LIGHT, Indicator (250V)	3
	28	36578	ASSEMBLY, 8 HD FRYER PCB– Non SMS	1
	29	51737	CONDENSATION PAN ASSEMBLY	1
	31	35912	DECAL, Fill Instructions	1
	32	37246	CASTER, w/Brake	2
	33	35181	COVER, Drain Rod Access	1
	34	SC02-034	SCREW, (#8-AB or A x 1	2
	35	35703	LATCH, Drain Rod	1
	36	35705	LATCH, Retainer, Drain Rod	1
	37	35919	BLOCK, Latch Mounting	1
	38	SC01-034	SCREW, Machine (#8-32 x 3/8)	2
	39	36185	LATCH, Filter	1

√ recommended parts

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY.
40	35855	LATCH PLATE, Drain Rod	1
41	35899	LATCH PLATE SPACER	1
42	17612	INSERT, Leg Casting	2
43	EF02-072	BUSHING, Split (3/4)	1
44	35107	BRACKET, Drain Rod Weldment	1
45	35154	CASTER	2
46	NS03-017	NUT, (#8 U Type Clip)	1
47	35393	MODULE ACCESS COVER	1
48	SC02-023	SCREW, (#8-B x 3/8 PH THD SS)	5
49	35416	WELDMENT, Contactor Bracket	1
50	NS02-002	NUT, (1/4-20 Hex Keps)	6
51	35677	CLAMP, Power Cord	1
52	SC04-011	SCREW, (#8-32 x 1/2 Slot Hex HD SS)	4
53	NS01-015	NUT, (1/4-20 Hex)	2
54	35924	BUSHING PLATE	1
55	36075	SPRING, Magnet Plate	1
56	LW01-012	LOCKWASHER, (#10 Split Ring) SS	2
57	SC01-055	SCREW, (#10-32 x 3/4 Hex HD SS)	2
58	35923	PLATE/STUD ASSEMBLY	1
59	35455	PLATE, Magnet Mounting	1
60	WA01-002	WASHER, (1/4 Type B - Series R)	2
61	SC04-006	SCREW, (1/4-20 x 1/2" Hex HD C)	2
62	35515	ANGLE MOUNT	2
63	NS02-010	NUT, (5/16-18 Hex Keps SS)	8
64	SC01-057	SCREW, (1/4-20 x 1/2" Hex HD)	4
65	SC01-042	SCREW, (3/8-16 x 1" Hex HD)	2
66	SC01-104	SCREW, (1/4-20 x 1-1/2" Hex HD)	2
67	LW01-001	LOCKWASHER, (3/8 Split Ring)	4
68	35484	LOCKPLATE, Hookarm	2
69	35299	GUARD, Splash	1
70	36191	CARRIAGE TRACK STUD ASSEMBLY, R.H.	1
71	35490	STOP, Carriage	2
72	NS01-024	NUT, (3/8-16 Hex SS)	2
73	NS01-011	NUT, (#10-32 Hex)	
74	35954	PLATE, Support, Pulley	6
75	18609	RETAINER, Str. Back	1
76	35047	BACK, Shroud	1
77	35962	BRACKET, Wheel Assembly	2
78	36165	BRACE, Carriage Track	2
79	35244	SPACER, Top Frame Brace	2

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY.
80	35092	TOP FRAME BRACE	1
81	SC01-160	SCREW, (1/4-20 X 1-1/4 HEX HD	4
82	SC01-132	SCREW, (1/4-20 X 5/8" Soc. HD CAP SS)	8
83	35725	ADAPTER, Hose Exhaust	1
84	35391	PANEL, RIGHT SIDE	1
√ 85*	36210	REPLACEABLE BEEPER	1
√ 85*	51877	WIRE/SPEAKER ASSY – SMS	1

√ recommended parts
*not shown



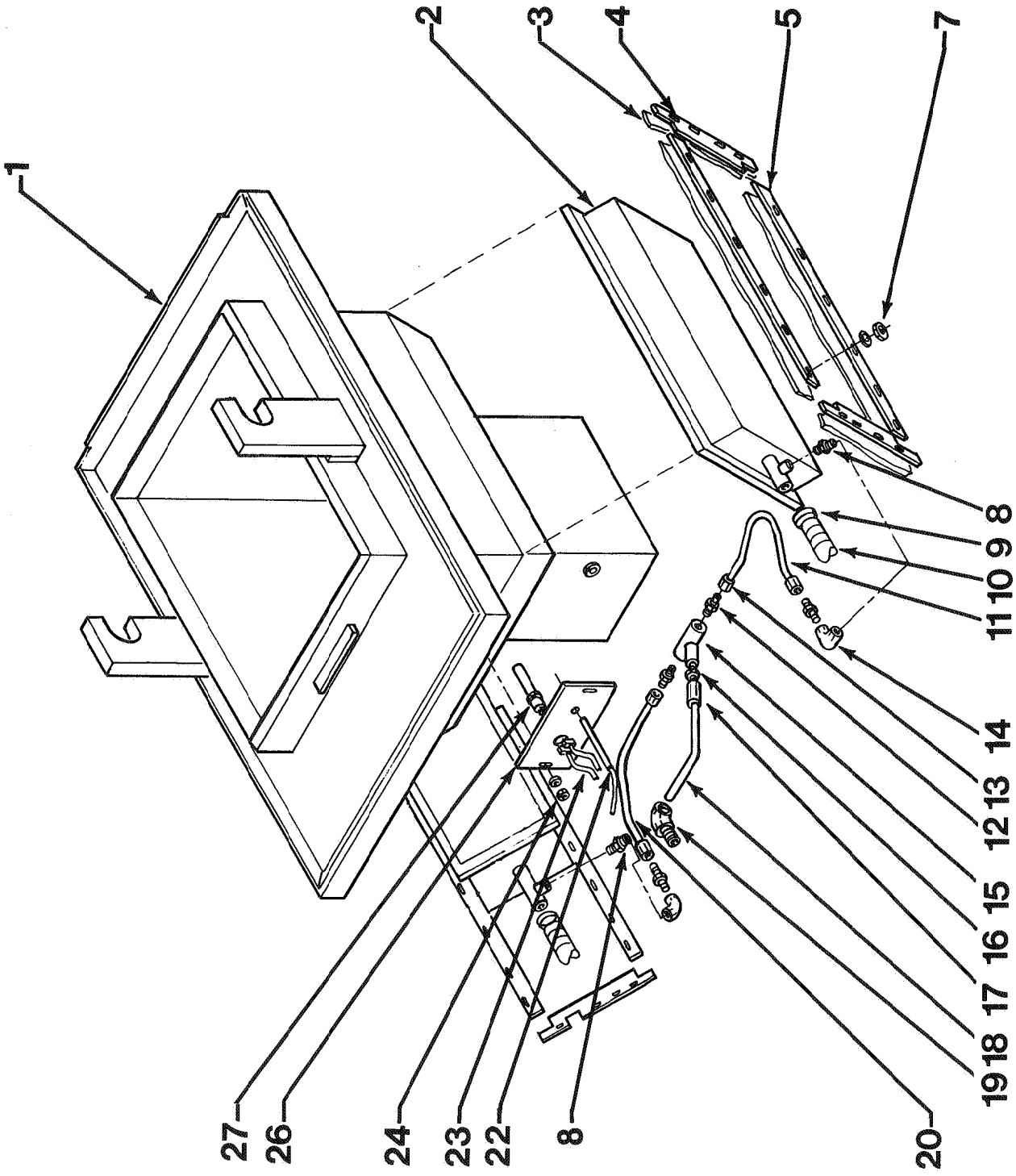

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	FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
	1	**Not Avail.**	POT & COUNTERTOP ASSY.	1
√	2	35487	BURNER, Infrared	2
	3	35940	INSULATION, BurnerSide	4
	3	35941	INSULATION, Burner Top & Bottom.	4
	4	36753	RETAINER, Burner Side	4
	5	35376	RETAINER, Burner Top	2
	6	WA01-007	WASHER	1
	7	NS02-005	HEXNUT	25
	8	35246	ORIFICE, Natural	2
	9	35504	HOSE	1
	10	35504	HOSE	1
	11	35846	GAS LINE TEE TO ORIFICE, Right	1
	12	FP01-075	FITTING, 3/8- 1/2" NPT	2
	13	FP01-074	FITTING, 3/8- 1/4" NPT	4
	14	16909	ELBOW, 90°	2
	15	FP01-011	TEE	1
	16	16808	FITTING	1
	17	16809	FITTING	1
	18	35507	TUBE, Gas Valve to Tee	1
	19	17407	ELBOW, 90°	2
	20	35508	GAS LINE TEE TO ORIFICE, Left	1
	21	35268	ORIFICE, Propane	2
√	22	14058	PROBE ASSEMBLY, Kit - Non-SMS	1
√	22	14373	PROBE ASSEMBLY, Kit - SMS	1
√	23	16727	HIGH LIMIT CONTROL	1
	24	NS02-006	HEXNUT	2
	25	NS02-006	HEXNUT	2
	26	35889	COVER, Front Probe	1
√	27	16727	HIGH LIMIT CONTROL	1
√	28	38466	IGNITOR and BRACKET ASSY., SN:DHO01IB and above (Not Shown)	2
√	29	38568	REMOTE SENSOR (Not Shown)	2

√ recommended parts

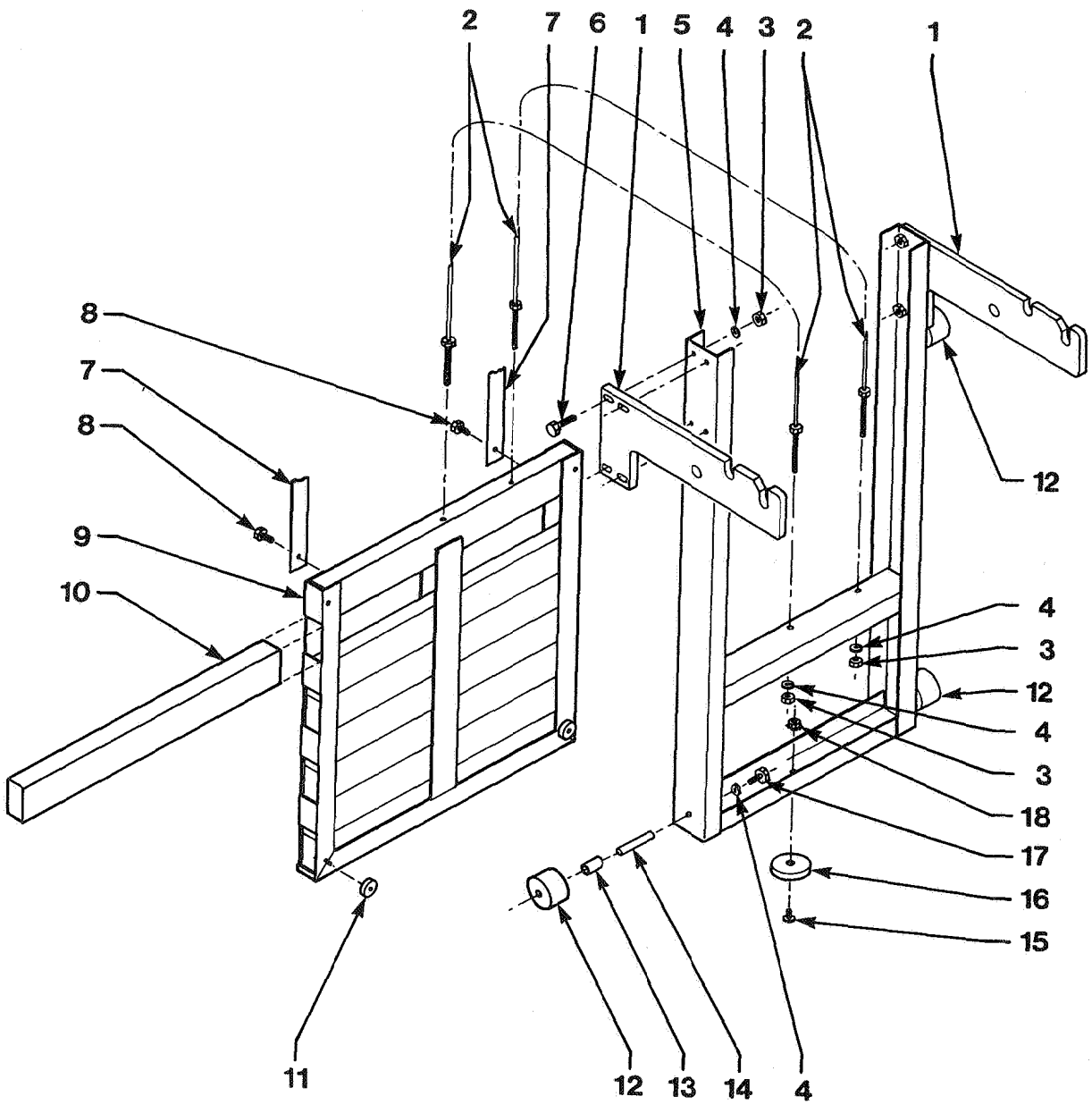
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FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY.
1	35026	ARM, Lid Support	2
√ 2	35207	CABLE	2
3	NS01-025	NUT, HEX 5/16-18 SS	10
4	LW0l-010	WASHER, 3/8 Split Ring SS	10
5	35092	CARRIAGE	1
6	SC01-069	SCREW, 3/8-16 x 1-1/2 Hex HD S2P	8
7	36839	SLIDE	2
8	SC01-042	SCREW, 3/8-16 x 1 Hex C	2
9	36625	WELD ASSEMBLY, C/W Carriage	1
10	36627	COUNTERWEIGHT BAR	7
11	36626	SPACER, C/W Frame	2
12	37362	WHEEL, Carriage	4
13	37363	SPACER, Carriage Wheel	4
14	37364	SPINDLE	4
15	SC01-009	SCREW, 1/4-20 x 1/2 P THD	1
16	35438	MAGNET, Ceramic (Small)	1
17	SC01-081	SCREW, 3/8-24 x 3/4 Hex HD SS	4
18	NS02-002	NUT, 1/4-20 Hex Keps	1

√ recommended parts

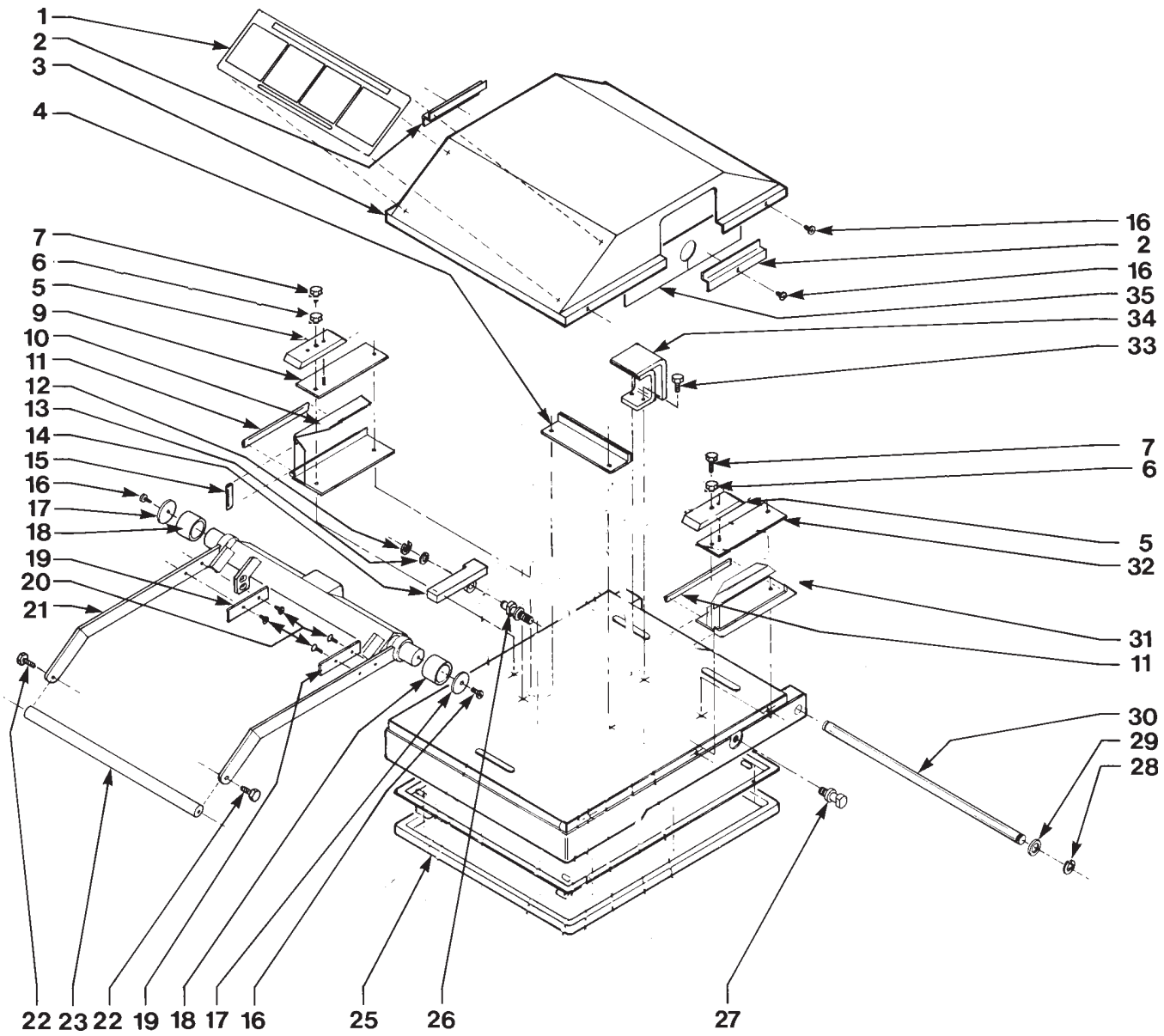
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	FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY
	1	35792	LID INSTRUCTION LABEL	1
	2	35675	FILLER, Lid	2
	3	35243	COVER, Lid, Main	1
	4	35413	PLATE, Trip	1
√	5	52627	Pressure Pad Assembly	2
	5	49864	Pressure Pad (use 52627)	2
	6	49852	Bushing (not shown)	2
	7	SC01-204	Screw 1/4-20 x 1.00 Sock Butt Hd	2
	8	37171	SHIM, Lid (.030)	1
	9	49962	PLATE, Shim Assembly (L.H.)	1
	10	49890	PLATE, Cam Guide (L.H.)	1
	11	35359	SLIDE, (6")	2
	12	16121	RING, (Tru-Arc) Latch Pin	1
	13	WA01-020	WASHER, Lid Stop	1
	14	51531	ASSEMBLY, Lid Stop	1
	15	35360	SLIDE, (2")	2
	16	SC01-074	SCREW, #10-32 x 1/2 PH THD SS	8
	17	35223	WASHER, Special	1
	18	35227	ROLLER, Linkage Shaft	2
	19	35339	GUIDE, Handle Side	2
	20	SC01-062	SCREW, #6-32 x 3/8 PH FH	4
	21	34510	LINKAGE ASSEMBLY	1
	22	SC01-041	SCREW, 5/16-18 x 1.00 Hex HD C	2
	23	36285	WELDMENT, Handle Tap Plate	1
√	25	34526	GASKET, Lid- SN: AP0712013 & below	1
√	25	66620	GASKET, Lid- SN: AP0712014 & above	1
	26	35945	PIN, Lid Support	1
	27	35032	PIN, Lid Support	1
	28	RR01-010	RING, Ret. 3/4 Shaft SS	2
	29	36312	WASHER, Lid Hinge	2
	30	35033	PIN, Lid Hinge	1
	31	49895	PLATE, Cam Guide (R.H.)	1
	32	49963	PLATE Shim Assembly (R.H.)	1
	33	SC01-146	SCREW, 1/4-20 x 3/4 Hex HD SS	2
	34	52477	LIFT, Lid	1
√	35	35465	CAM SLIDE FILLER	2
	36	52728	SHIM, Lid Lift (not shown)	1

√ recommended parts

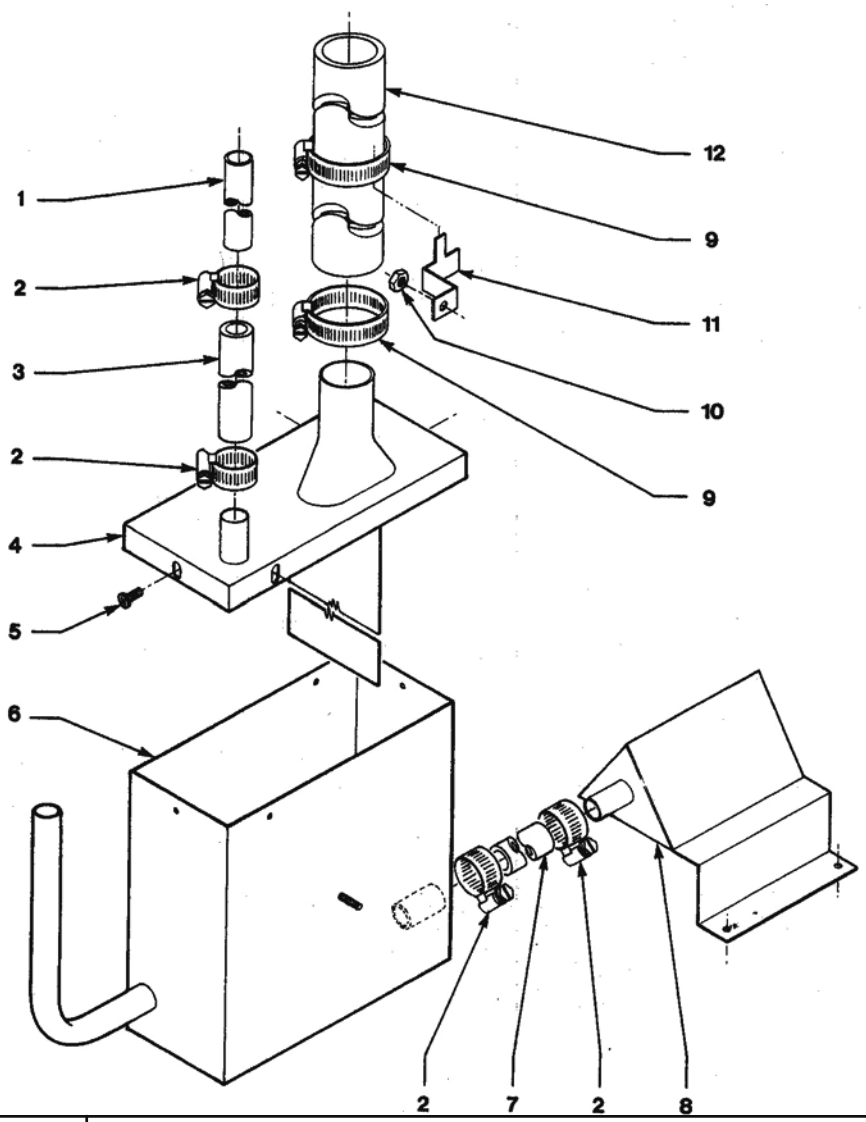

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY.
1	35686	TUBE, DW to Exhaust Stack SS	1
2	MS01-297	HOSE CLAMP, SS - .500 – 1.062 DID	4
3	35693	TUBE, Exhaust Connect	1
4	35696	WELDMENT, Steam Exhaust Box Lid	1
5	SC02-014	SCREW, #8 AB x 3/8 P THD SS	4
6	35687	WELDMENT, Steam Exhaust Box	1
7	35694	TUBE, Condensate	1
8	70312	ASSEMBLY, Restrictor Weld	1
9	MS01-315	HOSE CLAMP, ½ x 1-3/4 SS	2
10	NS01-011	NUT, (#10-32 Hex)	1
11	36851	BRACKET, Hose	1
12	21877	TUBING, Steam Exhaust	4

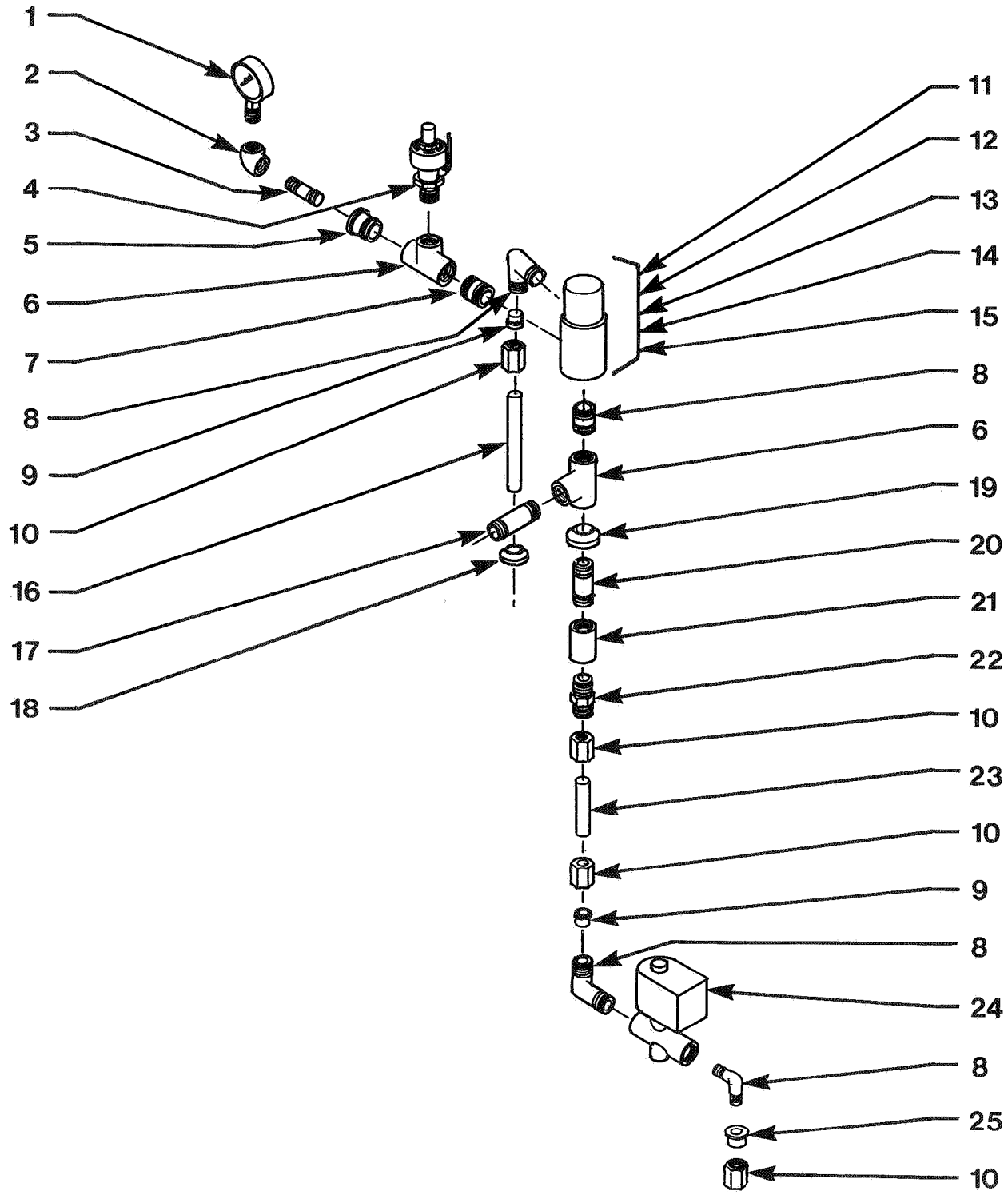
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FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY.
√ 1	16910	PRESSURE GAUGE	1
2	16909	PIPE ELBOW, 1/4”	1
3	16908	PIPE NIPPLE, 1/4”	1
√ 4	59742	RELIEF VALVE	1
5	FP01-063	REDUCER, 1/2 NPT M TO 1/4 NPT F	1
6	FP01-011	PIPE TEE	2
7	FP01-028	NIPPLE, Close 1/2 Male Elbow	2
8	17407	CONNECTOR, 1/2 Male Elbow	3
9	16817	FITTING, Sleeve Teflon	*
10	16809	NUT FITTING	*
11	16926	CAP, Dead Weight Valve Assy.	1
12	16902	SEAL “O” RING	1
13	16903	DEAD WEIGHT	1
14	16918	ORIFICE, 12 PSI	1
15	16852	BODY, Valve	1
16	35686	TUBE, DW to Exhaust Stack	1
17	35817	PIPE NIPPLE, 1/2 x 2 1/4 SS	1
18	16804	UMBRELLA GROMMET	1
19	35200	UMBRELLA GROMMET	1
20	35474	PIPE NIPPLE, 1/2 x 2	1
21	FP01-066	COUPLING, 1/2 NPT SS	1
22	16807	FITTING CONNECTOR	1
23	35147	TUBE, Steam Exhaust - Up	1
24	17121	VALVE, Solenoid	1
25	16808	FITTING SLEEVE, Steel	1

√ recommended parts

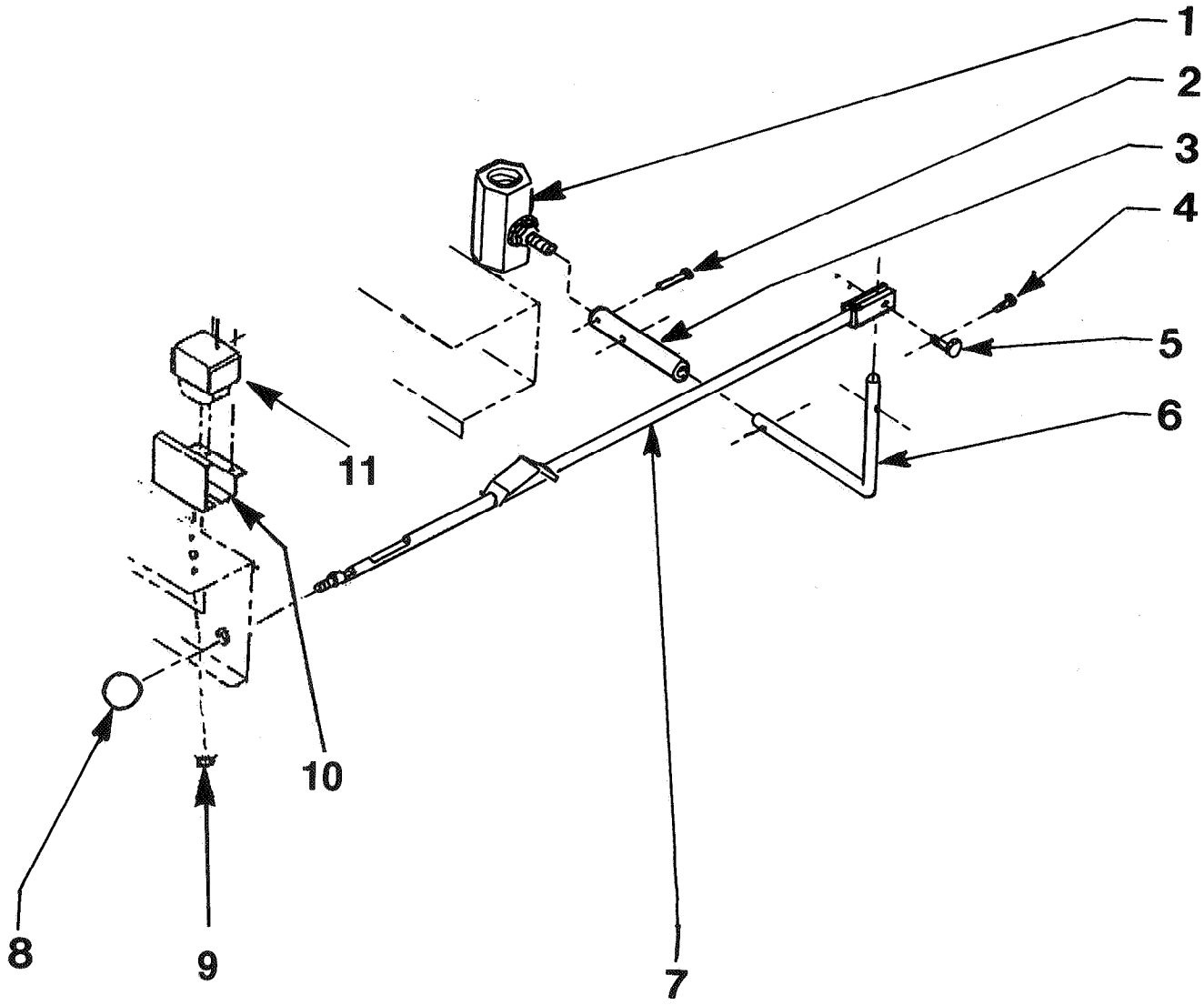
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	FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY.
	1	14234	KIT, 680 - VALVE - DRAIN	1
	2	17255	COTTER PIN, 9/64 x 1-1/4	2
	3	36318	LINK, DRAIN ROD	1
		55173*	SUPPORT, DRAIN ROD	1
	4	PN01-002	COTTER PIN, 3/32 x 3/4	1
	5	PN01-012	CLEVIS PIN, 1/4 x 1 SS	1
	6	55139	LEVER, DRAIN VALVE	1
	7	35132	DRAIN ROD HANDLE	1
	8	16102	SPINDLE KNOW, RED	1
	9	NS02-005	NUT, #8-32 x 3/8 P PHD	2
	10	17216	BRACKET, HI-LIMIT	1
√	11	55151	HI-LIMIT.	1

√ recommended parts
*not shown

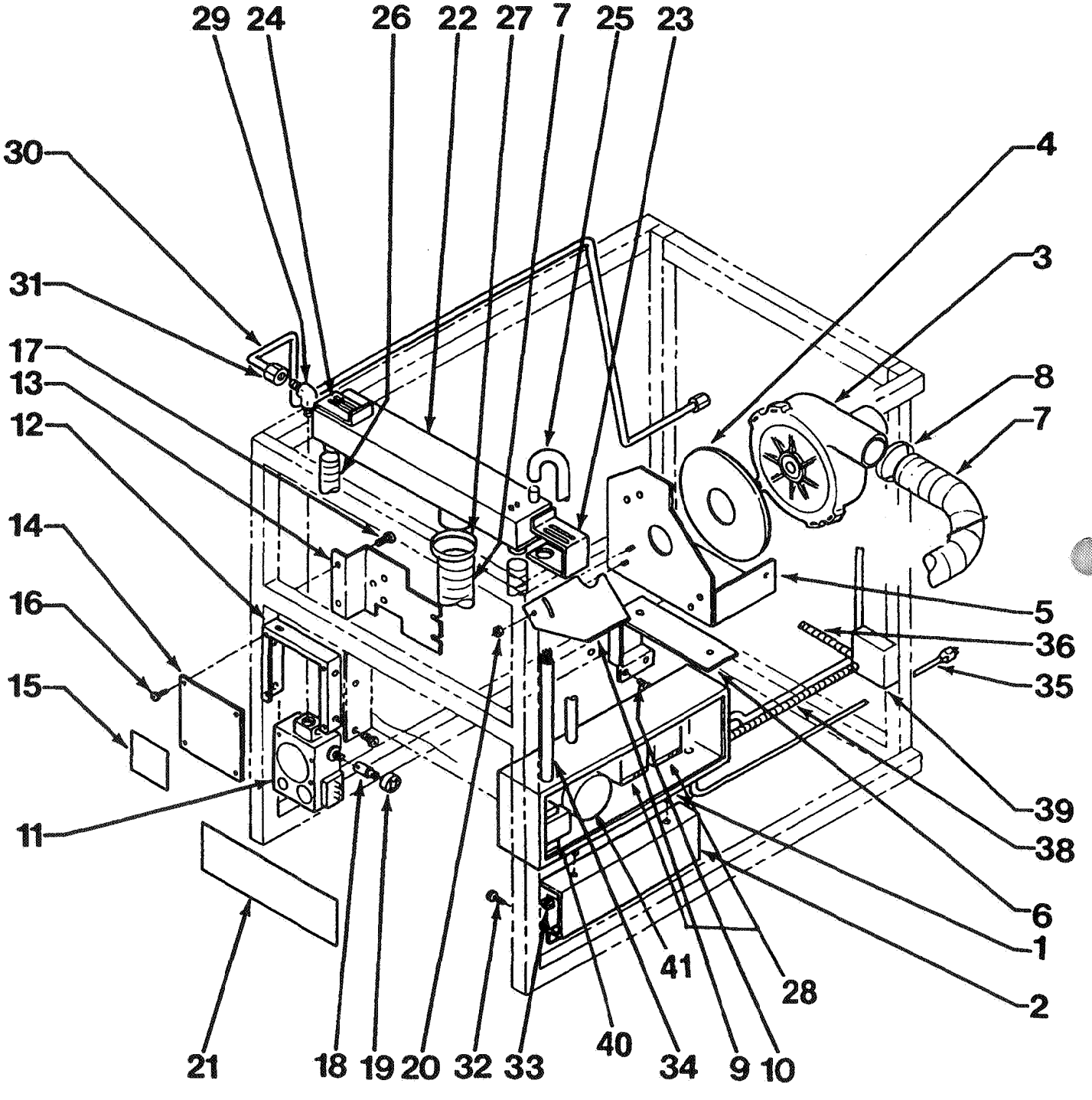
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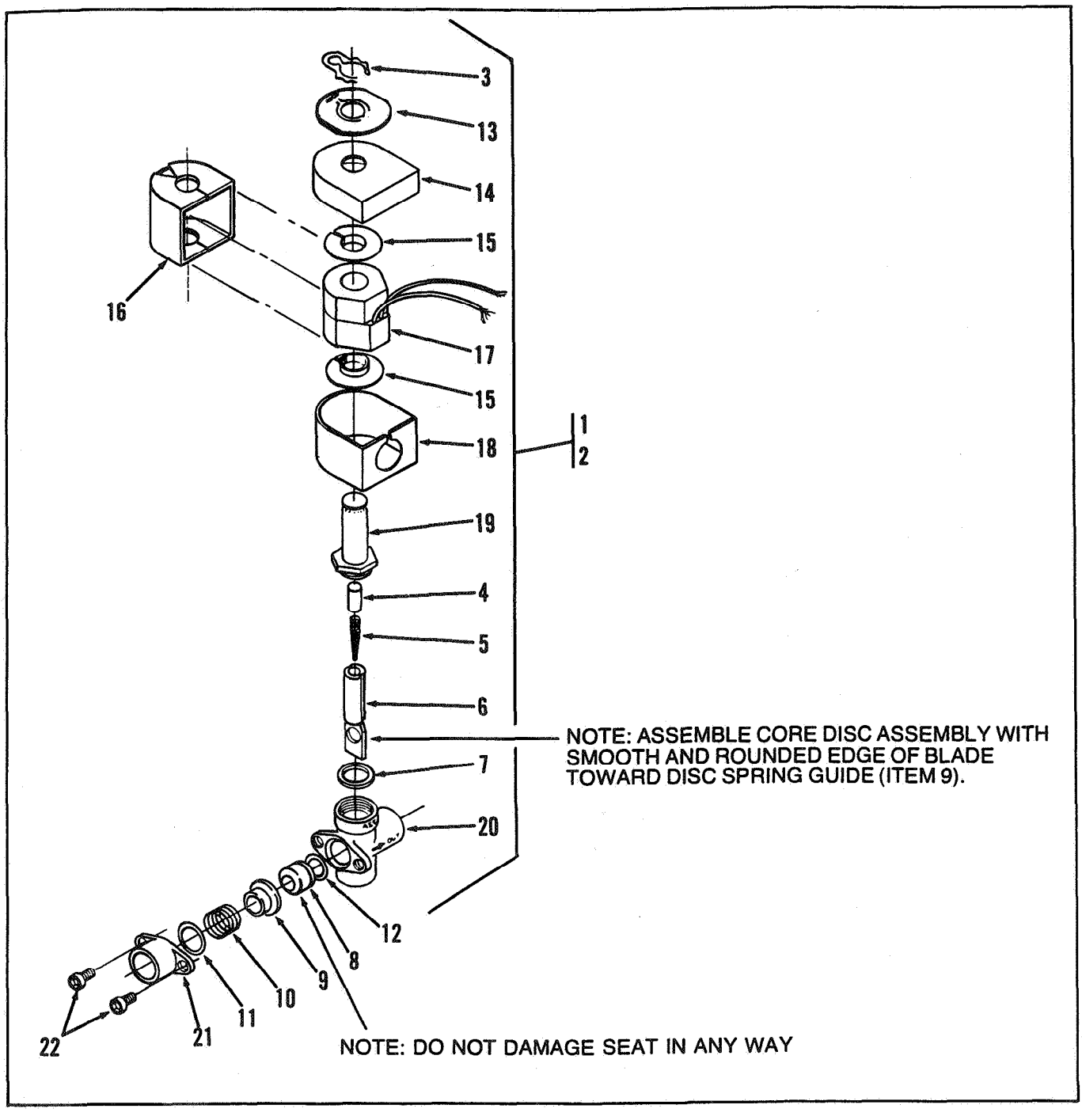
FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY.
1	35814	MODULE	1
2	35645	BRACKET, Module Box	1
√ 3	35486	BLOWER, Combustion Air - 120V	1
√ 3	36152	BLOWER, Combustion Air - 240V	1
4	35918	GASKET, Blower	1
5	36521	BLOWER, Bracket Stud Assy	1
6	35655	BRACKET, B lower Support	1
7	35505	HOSE, Blower to Manifold (2.5)	1
8	MS01-307	CLAMP	2
9	35623	COVER, Blower Intake	1
10	SC03-005	SCREW	2
√ 11	35482	VALVE, Gas - O/S	1
√	38276	VALVE, Gas - SN:FH011IB and above	1
12	35647	PLATE, Gas Valve Trim	1
13	35645	BRACKET, Gas Valve	1
14	35573	COVER, Gas Valve	1
15	35927	DECAL, Gas Valve	1
16	SC04-011	SCREW	4
17	SC03-005	SCREW	5
18	35617	EXTENSION, Gas Valve Knob	1
19	-------	GAS VALVE KNOB	1
20	NS02-006	NUT	6
21	35744	DECAL, Drain Rod Bracket	1
22	36325	BLOWER BOX WELD ASSY	1
23	35615	SLIDE, Air Cover	2
24	NS02-006	HEX NUT	2
25	35936	HOSE, Pressure Switch	1
26	35504	TUBE, Box to Burner (1.5)	1
27	MS01-307	CLAMP	2
√ 28	14292	DUAL, Ignitor Module Kit (Remote flame sense).	1
√ 28	14294	DUAL, Ignitor Module Kit (Ignitor as flame sense)	1
√ 28	59723	DUAL Module Only	2
29	17407	ELBOW, 90°	2
30	35506	TUBE, Main Gas Line	1
31	16809	FITTING	2
32	SC03-005	SCREW	2
33	NS02-006	HEX NUT	2
34	35860	TUBE, Heat Shrink	1
35	35861	POWER CORD ASSY	1
36	35957	CONDUIT, Flexible	1
38	35950	CONDUIT, Flex	1
39	18102	JUNCTION BOX	1
√ 40	TS22-003	TRANSFORMER	1
√ 41	30628	AIRFLOW SWITCH	1
√ 42*	38503	28 VOLT LIGHT	2
√ 43*	22198	POWER SWITCH	1
44*	35927	DECAL-GAS VALVE	1

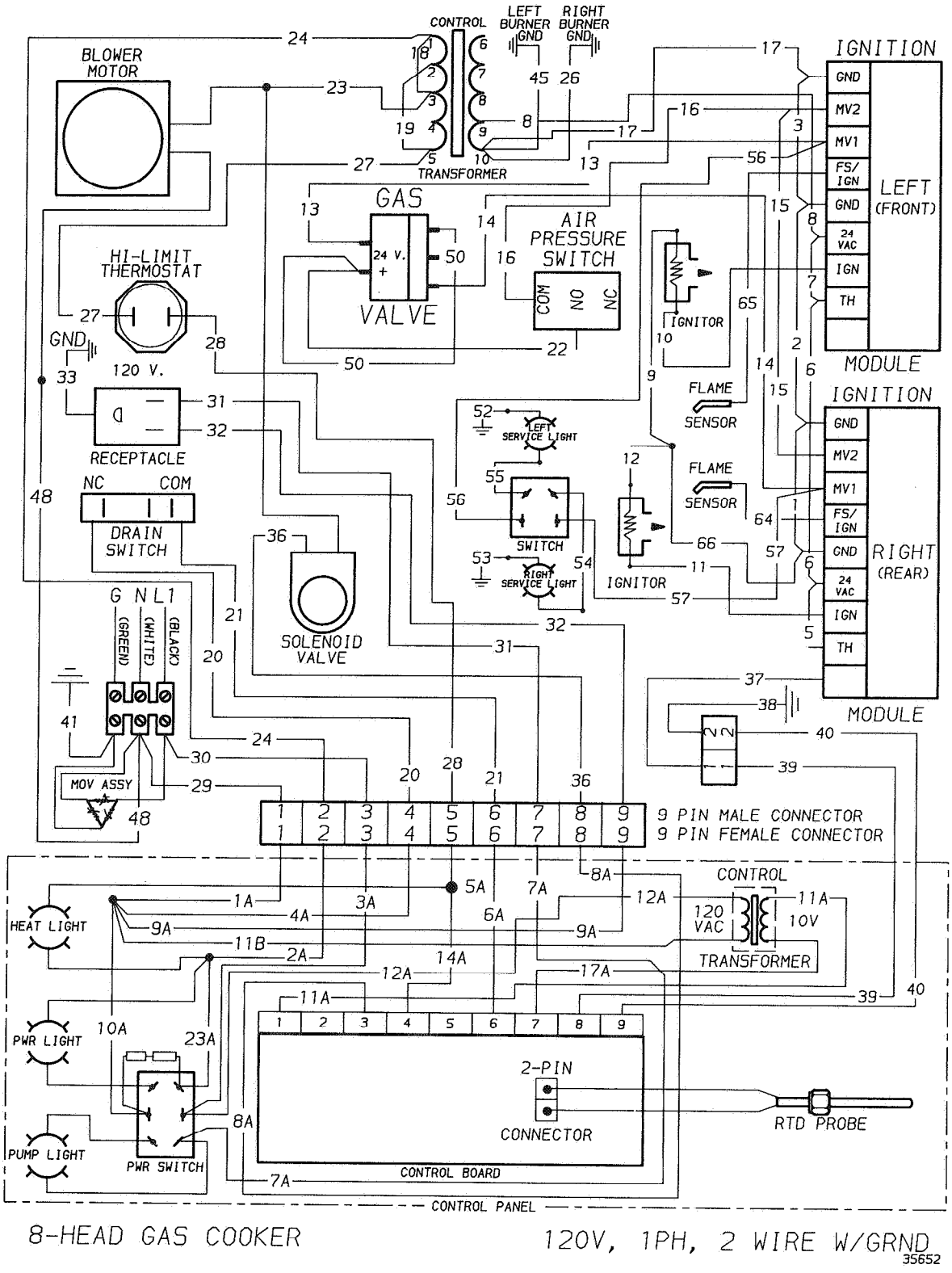
√ recommended parts/*not shown

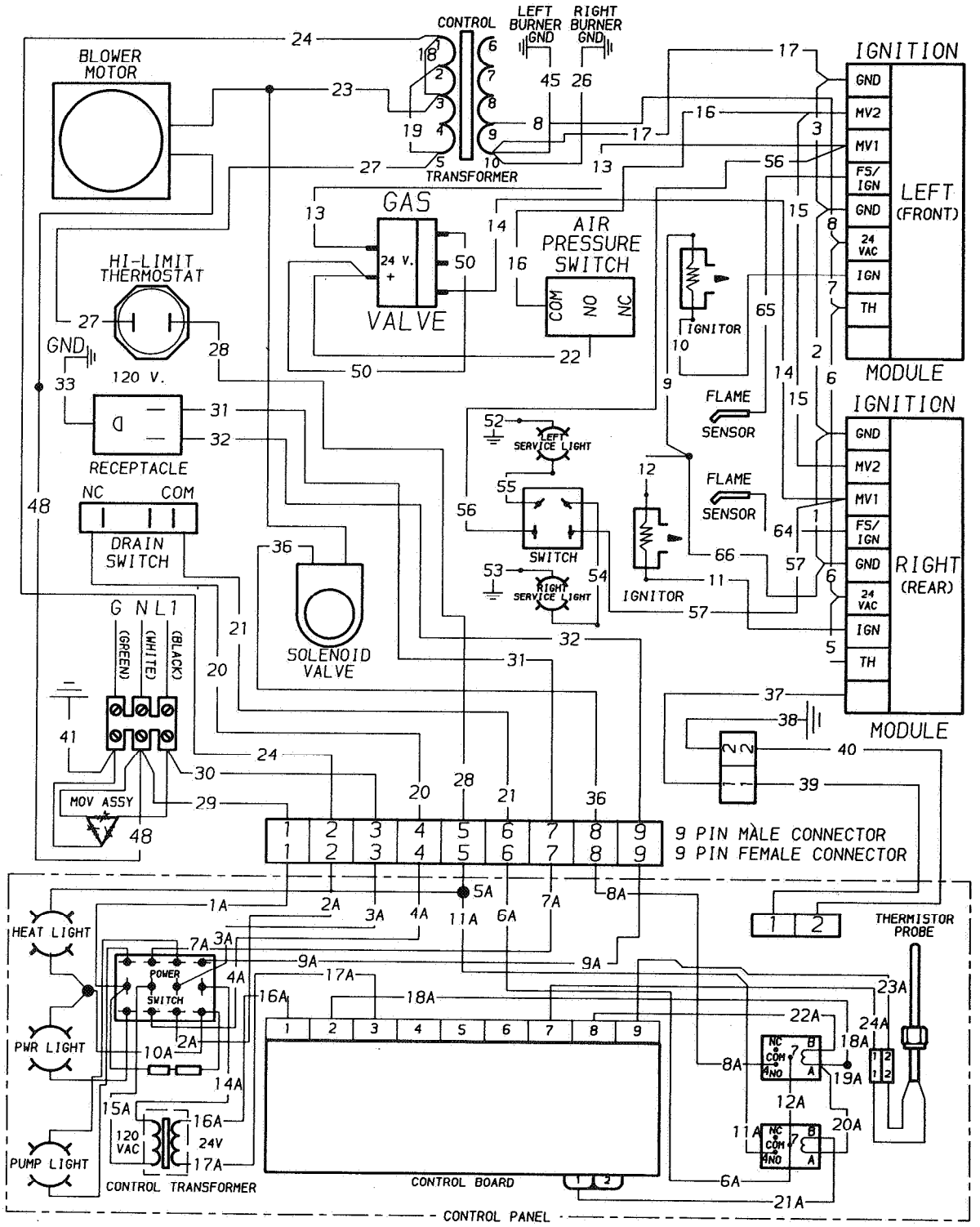


Solenoid Valve Assembly

FIGURE & ITEM NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY.
3-7		SOLENOID VALVE ASSEMBLY	
1	17121	VALVE, SOLENOID 120V, 60 Hz	1
1	18721	VALVE, SOLENOID 208-240V, 60 Hz	1
1	18724	VALVE, SOLENOID 208-240V, 50 Hz	1
√ 2*	17120	KIT, SOLENOID VALVE REPAIR	1
3	17101	CLIP, RETAINER	1
4	17109	RETAINER, SPRING	1
5	17110	SPRING, CORE	1
6	17111	CORE, DISC ASSEMBLY	1
7	17112	GASKET, BONNET	1
8	17114	SEAT, TEFLON	1
9	17115	GUIDE, DISC SPRING	1
10	17116	SPRING, DISC	1
11	17117	RING, SPRING RETAINER	1
12	17122	SEAT, O-RING SEAL	1
√ 13	17102	PLATE, SOLENOID NAME	1
√ 14	17103	COVER, COIL HOUSING	1
√ 15	17104	WASHER, COIL	2
√ 16	17105	YOKE, COIL	1
√ 17	17106	COIL, 120V, 60 Hz	1
√ 17	18706	COIL, 208-240V, 60 Hz	1
√ 17	18726	COIL, 208-240V, 50 Hz	1
√ 18	17123	HOUSING, COIL	1
√ 19	17108	BONNET, SOLENOID	1
√ 20	17113	BODY, SOLENOID VALVE	1
√ 21	17118	ADAPTER, PIPE	1
√ 22	SC01-132	SCREW, ADAPTER	2

√ recommended parts
* not shown

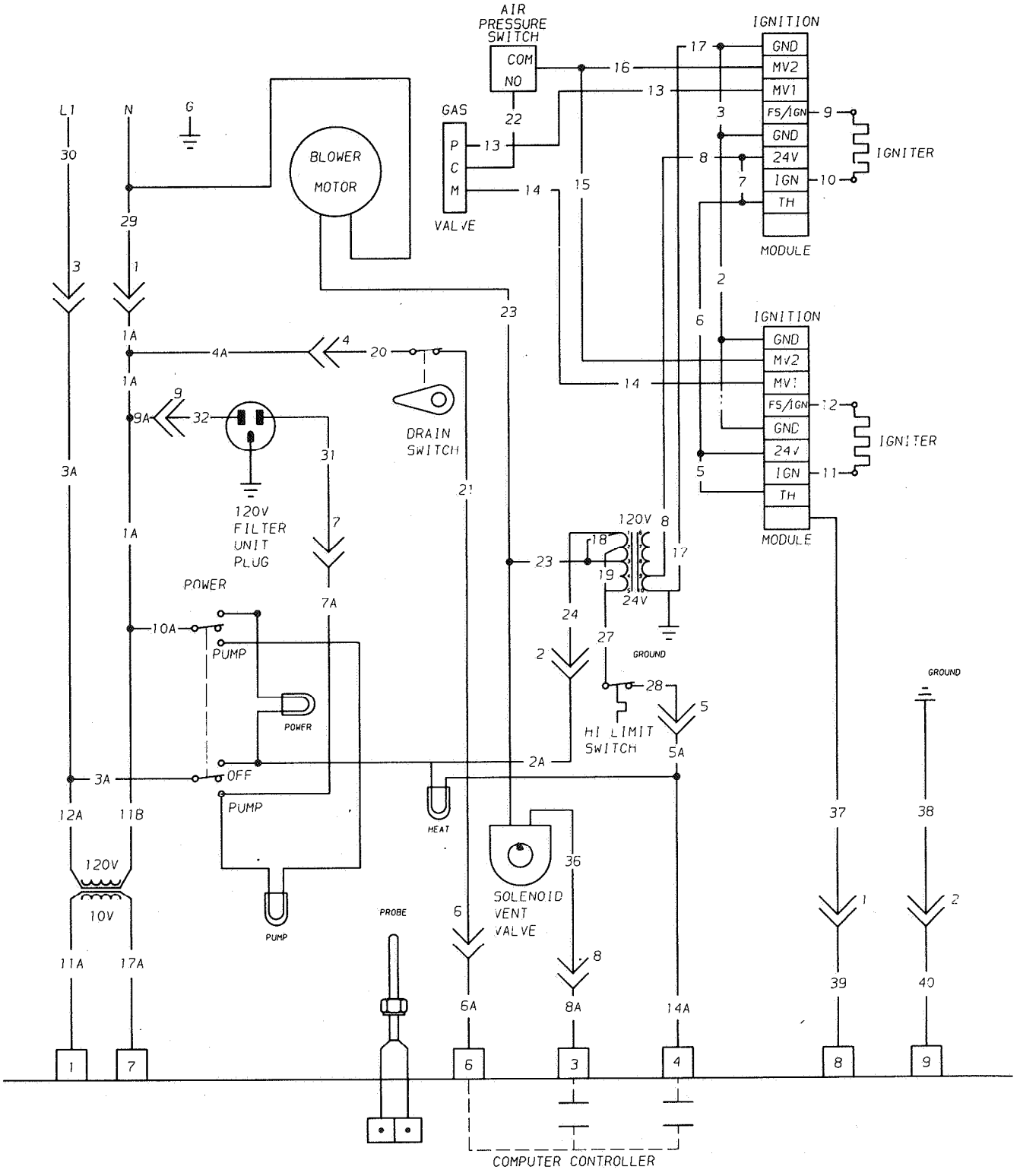

BLOWER MOTOR
CONTROL TRANSFORMER
LEFT BURNER GND
RIGHT BURNER GND
IGNITION MODULE
LEFT (FRONT)
RIGHT (REAR)
GAS VALVE
24 V.
AIR PRESSURE SWITCH
COM NO NC
IGNITOR
HI-LIMIT THERMOSTAT
120 V.
RECEPTACLE
GND
NC COM
DRAIN SWITCH
SOLENOID VALVE
FLAME SENSOR
LEFT SERVICE LIGHT
RIGHT SERVICE LIGHT
SWITCH
G N L1
(GREEN) (WHITE) (BLACK)
MOV ASSY
9 PIN MALE CONNECTOR
9 PIN FEMALE CONNECTOR
HEAT LIGHT
PWR LIGHT
PUMP LIGHT
PWR SWITCH
CONTROL TRANSFORMER
120 VAC
10V
2-PIN CONNECTOR
RTD PROBE
CONTROL BOARD
CONTROL PANEL
8-HEAD GAS COOKER
120V, 1PH, 2 WIRE W/GRND
35652



8-HEAD GAS COOKER

120V, 1PH, 2 WIRE W/GRND

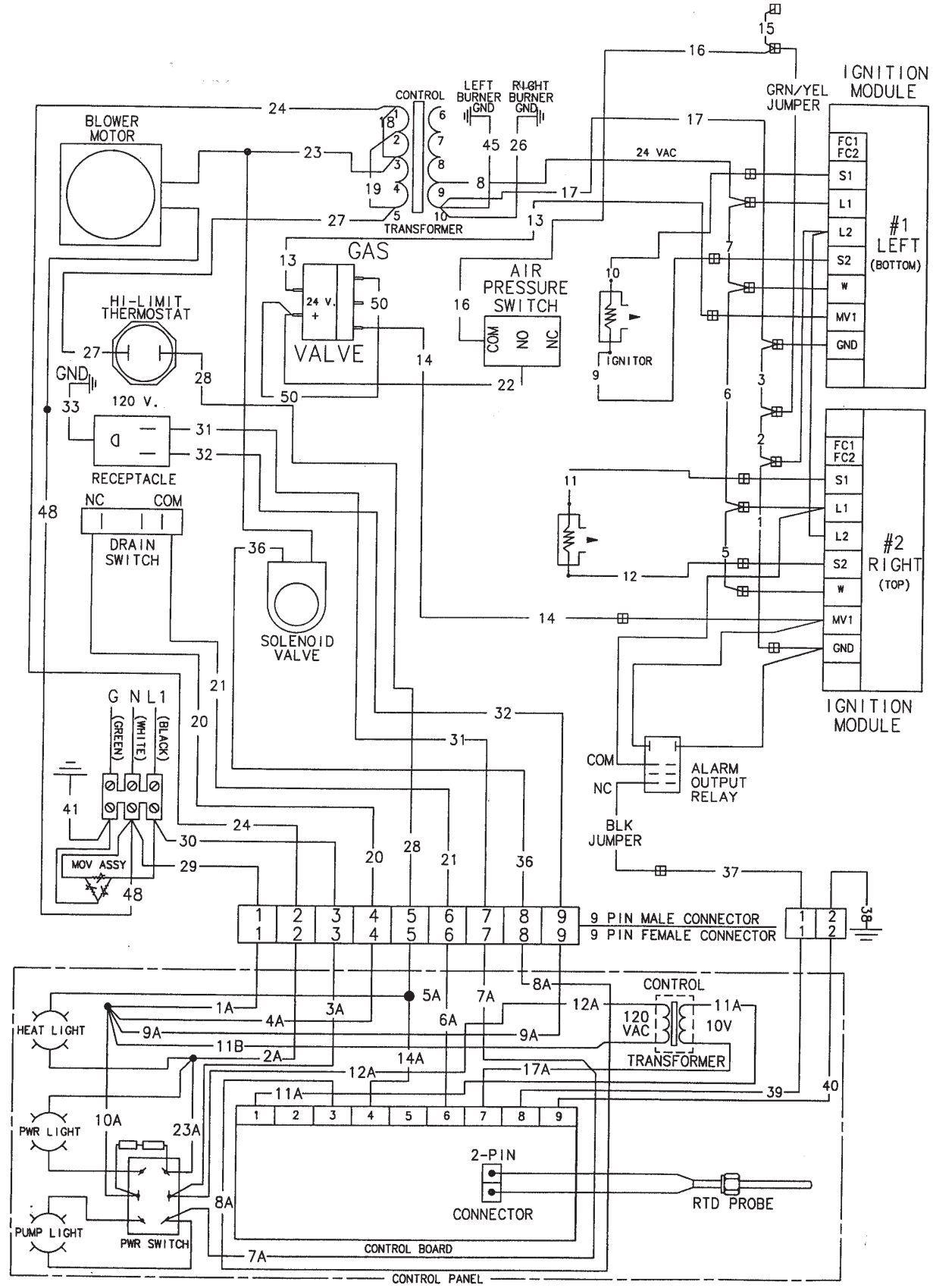
35712



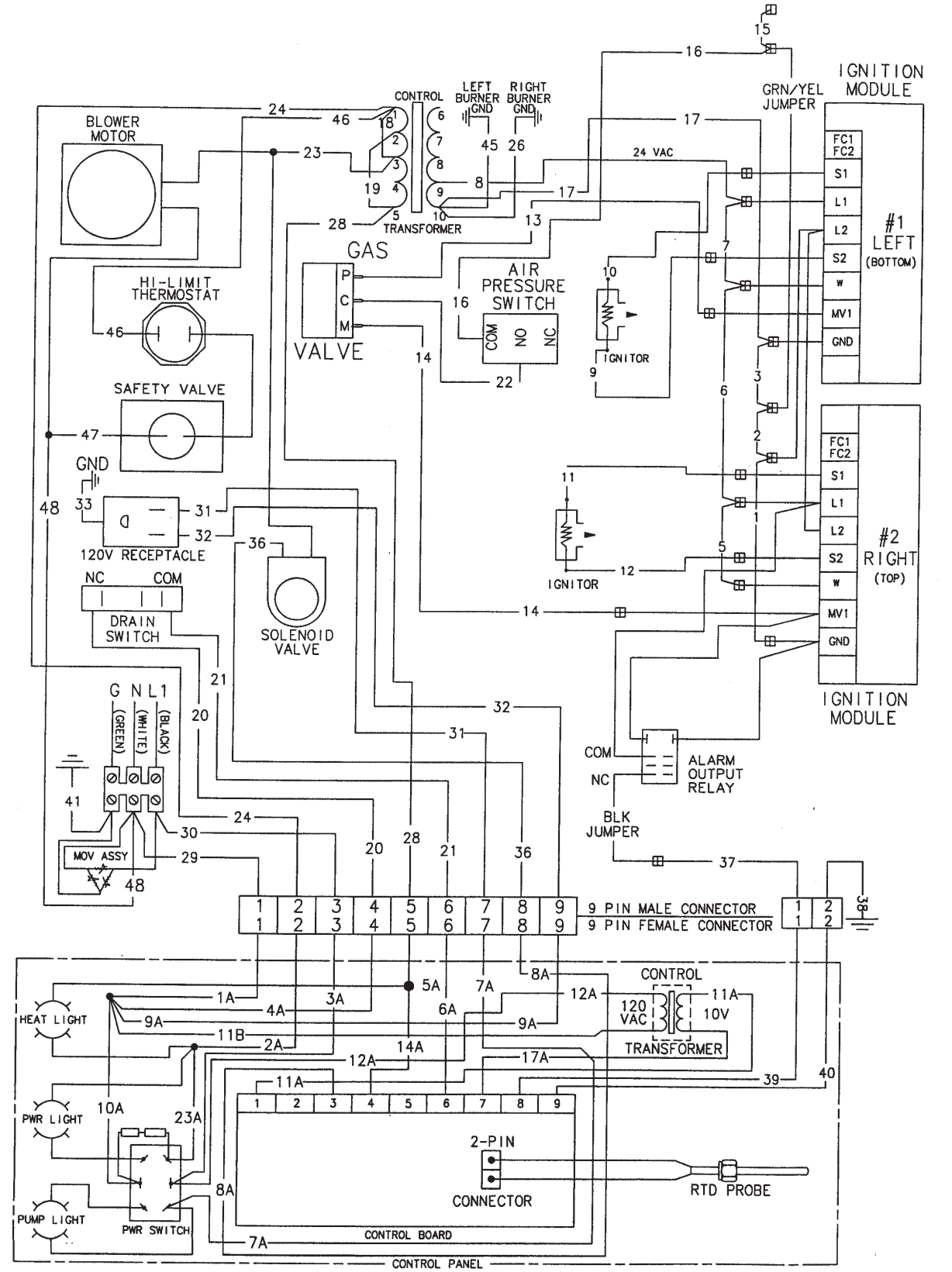
MODEL 680 GAS FRYER

120V, 1PH, 2WIRE W/GRND

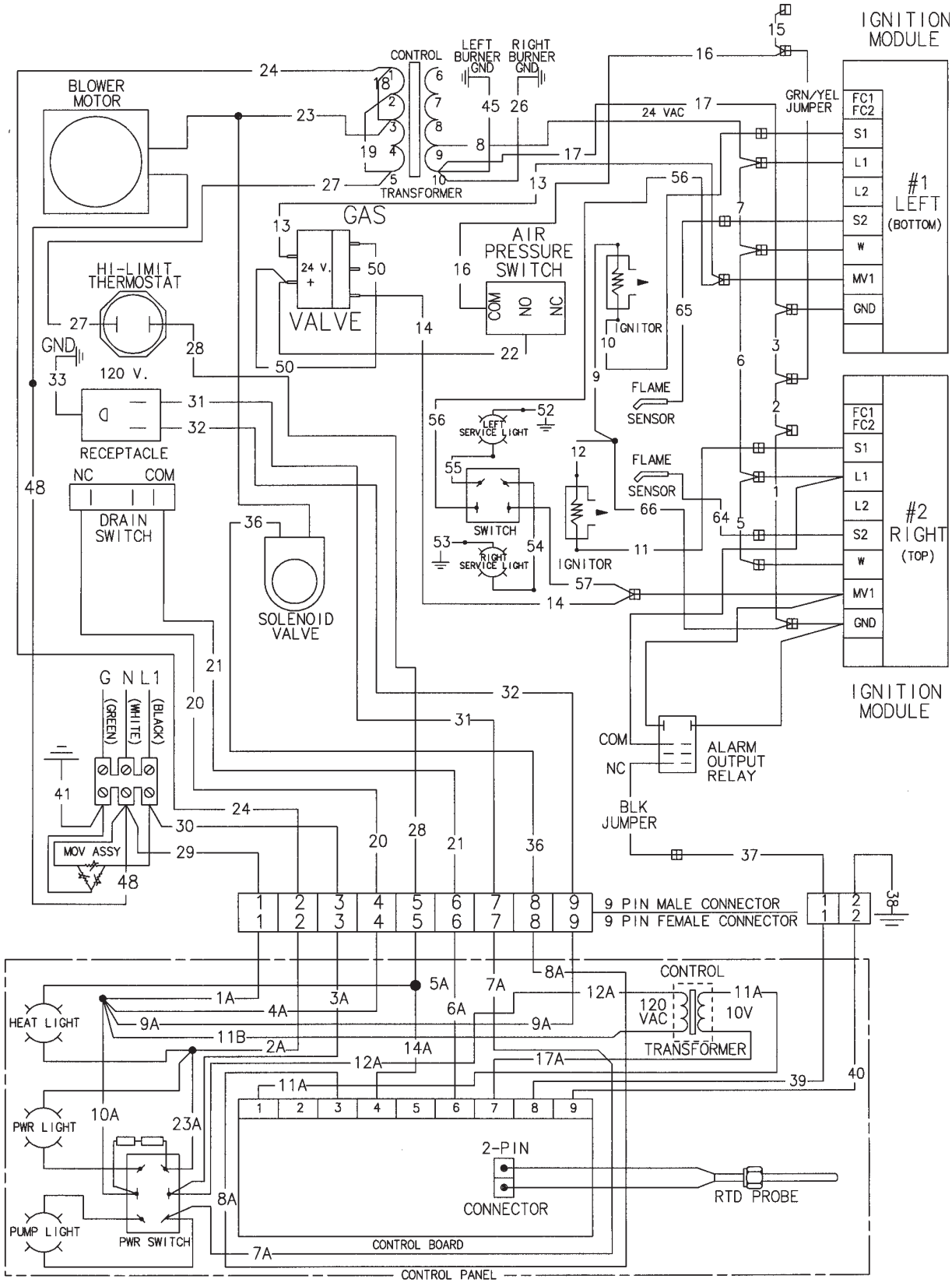
36805



8-HEAD GAS COOKER W/LOCAL FLAME SENSING 120V 1PH 2W + G 54788

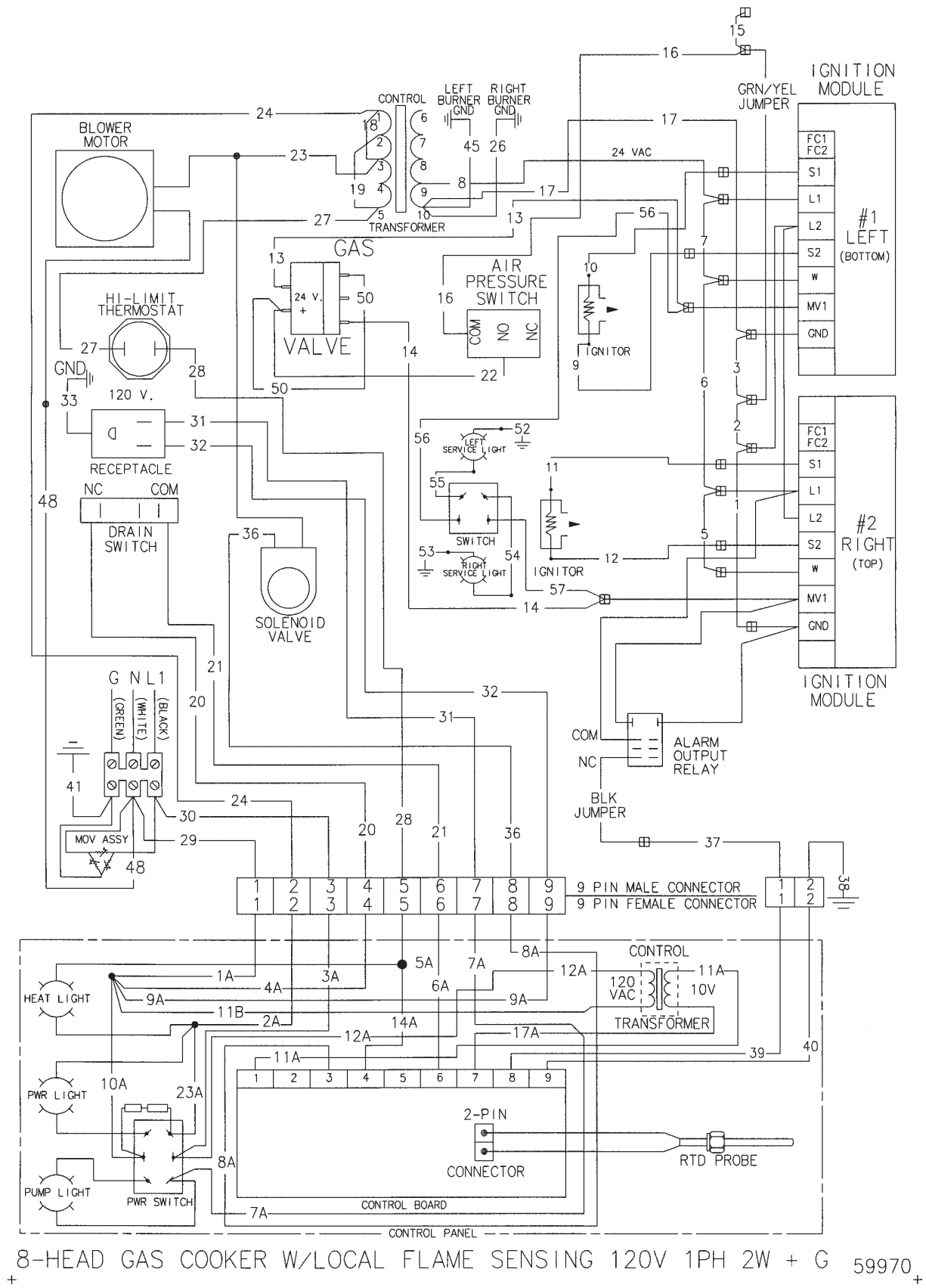


8-HEAD GAS COOKER W/LOCAL FLAME SENSING 120V 1PH 2W + G 54789



MODEL 680 FRYER WITH REMOTE FLAME SENSING, DUAL STAGE GAS CONTROL VALVE, & SERVICE LIGHTS; 120V, 1PH, 2W+G

59743



8-HEAD GAS COOKER W/LOCAL FLAME SENSING 120V 1PH 2W + G 59970

SMS PROGRAMMING (If Applicable)

1. Press and hold the Function button for two seconds. "REG PROGRAM" will show in the display, followed by "CODE".

2. Press the code 1,2,3. "SELECT PRODUCT" will scroll across the display.

   NOTE

   If no buttons are pressed, within approximately 1 minute while in the program mode, the controls will revert back to the cook mode.

3. Press the appropriate product button (1-0) to identify what product you want to program.

4. "INT1" and "TIME" will flash on the left side of the display. The right side will show the starting time of the cook cycle and can be changed by pressing the appropriate numbers. Ex: Press 1,0,0,0 and 10:00 will flash on the right side of the display, setting the start time at minutes.

5. After the time is set, press and release the Function button and "INT1" and "TEMP" will flash on the left side of the display. The right side will show the starting temperature and can be changed by pressing the appropriate numbers. Ex: Press 2,5,0 and "250° F" will show on the right side of the display, setting the start temperature at 250° Fahrenheit.

6. After the temperature is set, press and release the Function button and "INTI" and "PRESS" will flash on the left side of the display. Press any of the product buttons, (1-0), to turn the pressure on or off.

7. After the pressure is set, press and release the Function button and "INTI", "LOAD", and "COMP." will flash on the left side of the display. The factory preset load compensation value shows in the right side of the display.

SMS PROGRAMMING (Continued)

8. After the load compensation, press and release the Function button. “PROP” and “CONTROL” shows on the left side of the display and the factory preset proportional control temperature shows on the right side of the display.

9. After the proportional control, press and release the Function button. “ALM 1” and “TIME” flashes in the left side of the display, and the first alarm time shows on the right side of the display. To change the time the alarm sounds, press the appropriate product buttons to set the time. Ex: Press 1,0,0,0. 10:00 will flash on the right side of the display, which means when the timer counts down to 10 minutes, an alarm will sound.

10. After alarm is set, press and release the Function button. “ALM 1”, “SELF-”, and “CANCEL” flashes in the left side of the display and “YES” or “NO” shows on the right side of the display. The yes and no can be toggled by pressing any of the product buttons, (l -0). “YES” means the alarm tone will automatically stop after several beeps. “NO” means someone must manually press the appropriate product button to stop the alarm tone.

11. Repeat steps 9 and 10 for alarms 2 and 3.

12. After alarm 3 is set, press and release the Function button. “FILTER” and “CYCLES” show on the left side of the display and the filter cycle value is on the right side of the display. The value is the number of cook cycles that must completed before the control signals the operator that the shortening needs filtered

SMS PROGRAMMING (Continued)

13. After the filter value is set, press and release the Function button. "EOC" and "EXIT" flashes on the left side of the display and "COOL" shows on the right side of the display. The end-of-cycle, (EOC), exit point can be set to COOL, SETP, or FITR, by pressing any of the product buttons (EOC). At the end of a cook cycle the controls can be set to return to COOL, the setpoint temperature, or to signal the operator to filter the shortening.

14. After the end-of-cycle point is set, press and release the Function button. "HEAD" and "COUNT" flashes on the left side of the display and a number shows on the right side of the display. The number on the right is the number of head of chicken to be cooked when that product button is pressed. The number can be changed by pressing the appropriate product button.

NOTE

Another product can be programmed while in the program mode by following these procedures:

Press and hold the SCAN button at any time while in the Program mode and the display will scroll "SELECT PRODUCT". Then press any of the product buttons, (1-0), and now that product can be programmed.

15. To program second interval, press and release the SCAN button while in the Time Mode of the first mode. "INIT 2" and "TIME" will flash on the left side of the display. Then follow the steps above, starting with step 4.

SMS SPECIAL PROGRAM MODE

Review Usage

1. Press and hold the Function button for two seconds until "REG PROGRAM" shows in the display. As soon as "REG PROGRAM" shows in the display, press and release the Function button 1 time until "REVIEW USE" shows in the display.

2. "DAILY" shows in the display. Press any of the Product buttons to view the usage of that product. Press and hold the Function button to exit Special Program mode.

SMS SPECIAL PROGRAM MODE (Continued)

Reset Usage

1. Press and hold the Function button for two seconds until "REG PROGRAM" shows in the display. As soon as "REG PROGRAM" shows in the display, press and release the Function button 2 times until "RESET USE" shows in the display.

2. When "CODE" shows in the display, press 1-3-5. "DAILY will show in the display, and press any of the Product buttons to reset them to 0.

Factory Presets (F/C, Gas/Electric, Speaker Volume, Speaker Frequency, Codes, Initialize System)

1. Press and hold the Function button for two seconds until "REG PROGRAM" shows in the display. As soon as "REG PROGRAM" shows in the display, press and release the Function button 3 times until "FAC PRESET" shows in the display.

2. When "CODE" shows on the display, enter 2957. "DEG" and "MODE" flashes in the display. Press any of the product buttons to toggle from ºF to ºC, vice versa.

3. Press and release the Function button and "TYPE" and "FRYR" flashes in the display. Press any of the product buttons to toggle from "GAS" to "ELEC", or vice versa.

4. Press and release the Function button twice, and "SPKR" and "VOL" flashes in the display. The volume can be changed from 01 to 10, 10 being the loudest.

5. Press and release the Function button 3 times, and "SPKR" and "FREQ" will flash in the display. The frequency can be set from 100 to 2000.

6. Press and release the Function button 10 times, and "INTITIALIZE SYSTEM" scrolls across the display. Press and hold any of the Product buttons and the display will count down from 5. Once the display counts down, release the Product button, and the control will set factory preset parameters into the controls.

NOTE

Before attempting to change the other modes in the Factory Preset mode, please call Technical Service Department at Henny Penny. 1-800-417-8405.

SMS SPECIAL PROGRAM MODE (Continued)

Tech I/O Mode

1. Press and hold the Function button for two seconds until "REG PROGRAM" shows in the display. As soon as "REG PROGRAM" shows in the display, press and release the Function button 4 times until "TECH I-O" shows in the display.

2. When "CODE" shows in the display, press 2-4-6. "HEAT', "PRESSURE", and "PUMP" will show, alternately, in the display. Also, the LEDs over 1, 2 and 3 will flash alternately.

3. To test the heat circuit, press and hold the 1 button.

4. To test the pressure system, press and hold the 2 button.

5. To test the pump system, press and hold the 3 button.

Appliance Test

Press and hold the Function button for two seconds until "REG PROGRAM" shows in the display. As soon as "REG PROGRAM" shows in the display, press and release the Function button 5 times until "APPL TEST" shows in the display.

With the power switch on, the display will show "CURR=", along with the time it took the unit to heat from 250º to 300º F (121ºto 149º C). This is normally recorded from the initial heat up in the morning.

Heat Control

1. Press and hold the Function button for two seconds until "REG PROGRAM" shows in the display. As soon as "REG PROGRAM" shows in the display, press and release the Function button 6 times until "HEAT CNTRL" shows in the display.

2. When "CODE" shows in the display, press 1-2-3-4. "MELT", "EXIT", and "TEMP" will flash in the display, along with the shortening temperature at which the unit will exit the melt cycle. This should be set at 180º F (82º C), and should not be changed until the factory is consulted.

SMS SPECIAL PROGRAM (Continued)

3. Press and release the Function button and "MELT", **MODE** "CYCLE", and "100s" shows alternately in the display, along with the period (pulse) length of 4000. This should not be changed until the factory is consulted.

4. Press and release the Function button twice and "MELT", "ON-", "TIME", and "100s", shows alternately in the display, along with the length of time the heat is on. This should be set at 1700, and should not be changed until the factory is consulted.

5. Press and release the Function button three times and "COOL", "SET-", and "POINT" shows alternately in the display, along with the temperature at which the control exits the melt cycle. This is set at 250º F (121º C), and should not be changed until the factory is consulted.

6. Press and release the Function button four times and "AUTO", and "IDLE" shows alternately in the display, along with "OFF". This should not be changed until the factory is consulted.

7. Press and release the Function button five times and "AUTO", "IDLE", and "MMSS" shows alternately in the display, along with "0:00". This should not be changed until the factory is consulted.

8. The last 3 functions in the Heat Control mode are used by the factory only, and should not be changed.