

OPERATOR/SERVICE MANUAL

Part Number 128431

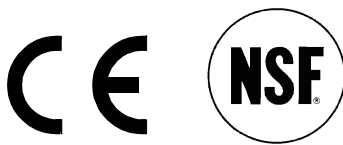
OSM-HFP/2E-CE

INTERNATIONAL

MODELS: HFP/2E CE MARK

Braising Pan

Stainless Steel
Manual Tilting
Gas Heated
Floor Mounted
Stationary



THIS MANUAL MUST BE RETAINED FOR FUTURE REFERENCE. READ, UNDERSTAND AND FOLLOW THE INSTRUCTIONS AND WARNINGS CONTAINED IN THIS MANUAL.

WARNING

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

POST IN A PROMINENT LOCATION

INSTRUCTIONS TO BE FOLLOWED IN THE EVENT USER SMELLS GAS. THIS INFORMATION SHALL BE OBTAINED BY CONSULTING YOUR LOCAL GAS SUPPLIER. AS A MINIMUM, TURN OFF THE GAS AND CALL YOUR GAS COMPANY AND YOUR AUTHORIZED SERVICE AGENT. EVACUATE ALL PERSONNEL FROM THE AREA.

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.



IMPORTANT — READ FIRST — IMPORTANT

THESE APPLIANCES MUST BE INSTALLED BY A COMPETENT PERSON IN CONFORMITY WITH THE INSTALLATION AND SERVICING INSTRUCTIONS AND NATIONAL REGULATIONS IN FORCE AT THE TIME. PARTICULAR ATTENTION MUST BE PAID TO THE FOLLOWING:

I. E. E. REGULATIONS FOR ELECTRICAL INSTALLATIONS
ELECTRICITY AT WORK REGULATIONS
GAS SAFETY (INSTALLATION & USE REGULATIONS
HEALTH AND SAFETY AT WORK ACT
FIRE PRECAUTIONS ACT
LOCAL AND NATIONAL BUILDING REGULATIONS

DETAILED RECOMMENDATIONS ARE CONTAINED IN INSTITUTE OF GAS ENGINEERS PUBLISHED DOCUMENTS: IGE/UP/1, IGE/UP/2, BS6173 AND BS5440.

THESE APPLIANCES HAVE BEEN CE-MARKED ON THE BASIS OF COMPLIANCE WITH THE GAS APPLIANCE DIRECTIVE, EMC AND LOW VOLTAGE DIRECTIVE FOR THE COUNTRIES, GAS TYPES AND PRESSURES AS STATED ON THE DATA PLATE.

WARNING: TO PREVENT SHOCKS, ALL APPLIANCES WHETHER GAS OR ELECTRIC, MUST BE EARTHED.

ON COMPLETION OF THE INSTALLATION, THESE INSTRUCTIONS SHOULD BE LEFT WITH THE ENGINEER-IN-CHARGE FOR REFERENCE DURING SERVICING. FURTHER TO THIS, THE USERS INSTRUCTIONS SHOULD BE HANDED TO THE USERS AND THE INSTALLER SHOULD INSTRUCT THE RESPONSIBLE PERSON(S) IN THE CORRECT OPERATION AND MAINTENANCE OF THE APPLIANCE. EMPHASIS SHOULD BE MADE WITH REGARD TO SAFE OPERATION OF DRAIN VALVE.

IT IS MOST IMPORTANT THAT THESE INSTRUCTIONS BE CONSULTED BEFORE INSTALLING AND COMMISSIONING THE APPLIANCE. FAILURE TO COMPLY WITH THE SPECIFIED PROCEDURES MAY RESULT IN DAMAGE OR THE NEED FOR A SERVICE CALL.

CAUTION: SHIPPING STRAPS ARE UNDER TENSION AND CAN SNAP BACK WHEN CUT.

CAUTION: UNIT WEIGHS 370 TO 560 LB. (165 TO 255 KG). FOR SAFE HANDLING, INSTALLER SHOULD OBTAIN HELP AS NEEDED, OR EMPLOY APPROPRIATE MATERIALS HANDLING EQUIPMENT (SUCH AS A FORKLIFT, DOLLY, OR PALLET JACK) TO REMOVE THE UNIT FROM THE SKID AND MOVE IT TO THE PLACE OF INSTALLATION.

WARNING: INSTALLATION OF THE BRAISING PAN MUST BE DONE BY PERSONNEL QUALIFIED TO WORK WITH GAS AND ELECTRICITY. IMPROPER INSTALLATION CAN RESULT IN INJURY TO PERSONNEL AND/OR DAMAGE TO EQUIPMENT.

WARNING: THIS UNIT IS DESIGNED FOR COMMERCIAL USE. NEVER USE HOME OR RESIDENTIAL GRADE GAS CONNECTIONS. THEY DO NOT MEET GAS CODES AND COULD BE HAZARDOUS.

DANGER: ELECTRICALLY GROUND THE UNIT AT THE TERMINAL PROVIDED. FAILURE TO GROUND UNIT COULD RESULT IN ELECTROCUTION AND DEATH.

WARNING: KEEP THE APPLIANCE AREA FREE AND CLEAR OF COMBUSTIBLE MATERIALS.

CAUTION: BE SURE ALL OPERATORS READ, UNDERSTAND AND FOLLOW THE OPERATING INSTRUCTIONS, CAUTIONS AND SAFETY INSTRUCTIONS CONTAINED IN THIS MANUAL.

CAUTION: KEEP FLOORS IN BRAISING PAN WORK AREA CLEAN AND DRY. IF SPILLS OCCUR, CLEAN IMMEDIATELY TO AVOID THE DANGER OF SLIPS OR FALLS.

WARNING: WHEN TILTING BRAISING PAN FOR PRODUCT TRANSFER:

- 1) USE CONTAINER DEEP ENOUGH TO CONTAIN AND MINIMIZE PRODUCT SPLASHING.
- 2) PLACE CONTAINER ON STABLE, FLAT SURFACE, AS CLOSE TO PAN AS POSSIBLE.

- 3) STAND TO SIDE OF PAN WHILE POURING — NOT DIRECTLY IN POUR PATH OF HOT CONTENTS.
- 4) RETURN PAN BODY TO LEVEL POSITION AFTER CONTAINER IS FILLED OR TRANSFER IS COMPLETE.
- 5) DO NOT OVER FILL CONTAINER. AVOID DIRECT SKIN CONTACT WITH HOT CONTAINER AND ITS CONTENTS.

WARNING: DO NOT HEAT AN EMPTY PAN FOR MORE THAN 5 MINUTES AT A SETTING HIGHER THAN 300°F (150°C).

WARNING: IF THE PAN CONTAINS ITEMS IN SAUCE OR MELTED FAT, THEY CAN SLIDE FORWARD SUDDENLY DURING TILTING AND CAUSE THE HOT LIQUID TO SPLASH OUT.

WARNING: AVOID ALL DIRECT CONTACT WITH HOT FOOD OR WATER IN THE PAN. DIRECT CONTACT COULD RESULT IN SEVERE BURNS.

WARNING: KEEP WATER AND SOLUTIONS OUT OF CONTROLS AND BURNERS. NEVER SPRAY OR HOSE THE CONTROL CONSOLE, OR ELECTRICAL CONNECTIONS.

CAUTION: MOST CLEANERS ARE HARMFUL TO THE SKIN, EYES, MUCOUS MEMBRANES AND CLOTHING. PRECAUTIONS SHOULD BE TAKEN TO WEAR RUBBER GLOVES, GOGGLES OR FACE SHIELD AND PROTECTIVE CLOTHING. CAREFULLY READ THE WARNINGS AND FOLLOW THE DIRECTIONS ON THE LABEL OF THE CLEANER TO BE USED.

WARNING: THE CONTROL BOX IS NOT WATERPROOF. TAKE CARE TO KEEP WATER AND CLEANING SOLUTIONS OUT OF THE BOX. NEVER HOSE OR SPRAY ELECTRICAL CONTROLS, CONNECTIONS OR CONTROL CONSOLE.

WARNING: BEFORE REPLACING ANY PARTS, DISCONNECT THE UNIT FROM THE ELECTRIC POWER SUPPLY AND CLOSE THE MAIN GAS COCK. ALLOW FIVE MINUTES FOR UNBURNED GAS TO VENT.

CAUTION: USE OF ANY REPLACEMENT PARTS OTHER THAN THOSE SUPPLIED BY GROEN OR AUTHORIZED DISTRIBUTORS CAN CAUSE INJURY TO THE OPERATOR AND DAMAGE TO THE EQUIPMENT AND WILL VOID ALL WARRANTIES.

IMPORTANT: Service performed by other than factory authorized personnel will void all warranties.

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References

American Gas Association Laboratories 8501 East Pleasant Valley Rd. Cleveland, Ohio 44131	National Fire Protection Association 60 Battery March Park Quincy, Massachusetts 02269
<i>Z223.1-1984 National Fuel Gas Code</i>	<i>NFPA/54 Installation of Gas Appliances & Gas Piping</i>
American National Standards Institute 1403 Broadway New York, New York 10018	<i>NFPA/70 The National Electrical Code</i> <i>NFPA/96 Ventilating Hoods</i>
Canadian Gas Association 55 Scarsdale Road Don Mills, Ontario M3B 2 R3	National Sanitation Foundation 3475 Plymouth Road Ann Arbor, Michigan 48106
ECOLAB, INC. 370 Wabasha St. Paul, Minnesota 55102	Underwriters Laboratories, Inc. 333 Pfingsten Road Northbrook, Illinois 60062
	ZEP Manufacturing 1390 Lunt Avenue Elk Grove Village, Illinois 60007

Equipment Description

The following dimensions apply to CE model HFP braising pans:

Model	Width	Depth	Height	Weight (Kg)	Weight (lbs)
HFP/2E-3/2E-3	1245 mm	960 mm	1780 mm	241	530
HFP/2E-4/2E-4	1500 mm	960 mm	1780 mm	270	593

Groen Gas Heated Braising Pans provide a stainless steel pan equipped with patented heat transfer fins, burner/combustion chamber, hand-operated tilting mechanism, thermostatic controls, and hinged cover. The Braising Pan serves as braising unit, griddle, fry pan, oven, kettle, bain-marie, or food warmer and server, and it can be adapted for use as a steamer.

The pan body is made from heavy-duty stainless steel welded into one solid piece, with a polished interior and exterior. A pouring lip is welded to the front wall. The cooking surface is a stainless steel clad plate fitted with welded heat transfer fins which assure uniform heat transfer over the entire surface. The gas burner/combustion chamber supplies the heat.

An easily-operated worm and gear mechanism tilts the pan and provides precise control for pouring or dumping the contents of the pan. This hand-wheel controlled mechanism is located in a stainless steel console to the right of the pan body. To assist cleaning, the pan body can be tilted past the vertical position. When the pan is tilted, the burners shut off automatically. The thermostat provides automatic control of cooking temperature. Operating the thermostat dial on the front of the control console turns the heat on or off and sets the pan temperature.

A vented, heavy gauge, one-piece, stainless steel cover with a condensate drip shield on the rear edge is standard on the Braising Pan. A fully enclosed, spring type actuator counter-balances the cover to keep it in either the opened or closed position. The cover opens to the back and is hinged to the frame, so it moves independently of the pan body.

Options available with the listed models are:

1. Fill faucet with swing spout.
2. Caster mounting kit.
3. Fold-down work tray (pan support) mounted on left or right side. (Factory installed option)
4. 2" Tangent draw-off. (Factory installed option)
5. Model REJ Steamer Insert set.
6. Steamer pan Carrier.
7. Quick gas disconnect with restraining cable

1. Installation

The following information pertains to the CE model HFP/2E, and replaces or augments the information provided in OM-HFP. These appliances must be installed by a competent person in conformity with the installation and servicing instructions and national regulations in force at the time. Particular attention must be paid to the following:

- I. E. E. Regulations for Electrical Installations
- Electricity at Work Regulations
- Gas Safety (Installation & Use Regulations
- Health and Safety at Work Act
- Fire Precautions Act
- Local and National Building Regulations

Detailed recommendations are contained in institute of gas engineers published documents: IGE/UP/1, IGE/UP/2, BS6173 AND BS5440.

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1.1 Installing Clearances

Minimum clearance of 0 mm from the sides and 150 mm from the rear of the appliance are required if the appliance is installed next to combustible surfaces.

Vertical clearance of at least 1000 mm should be allowed between the top edge of the flue outlet and any overlying surface.

Adequate ventilation, whether natural or mechanically induced, must be provided to ensure a supply of fresh air for gas combustion, and to facilitate effective removal of the products of combustion.

Ventilation recommendations for catering appliances are provided in BS 5440 : 2. Furthermore, guidance on the column of ventilation air required for different types of catering equipment to ensure sufficient room ventilation is provided at right.

For multiple installations, the requirements for individual appliances should be added together. Installation should be made in accordance with local and national regulations applying at the time. A competent installer must be employed.

The appliance flue discharges horizontally from the rear of the unit. It must not be directly connected to any flue, mechanical extraction system, ducting, etc., which leads to the outside of the building. The appliance is best discharged under an open canopy connected with a ventilating system.

1.2 Gas Supply

Incoming service must be of sufficient size to supply full rate without excessive pressure drop. A gas meter is connected to the service pipe by the gas supplier.

Any existing meter should be checked by the supplier to ensure that the meter has the capacity for passing the required rate of gas for the braising pan in addition to any other gas equipment installed.

EQUIPMENT	Ventilation Rate Required	
	m ³ /min	ft ³ /min
Range, Unit Type	17	600
Pastry Oven	17	600
Fryer	26	900
Grill	17	600
Steak Grill	26	900
Boiling Pan	17	600
Steamer	17	600
Sterilizing Sink	14	500
Bain-Marie	11	400
Tea/Coffee Machine	8.5-14	300-500

The appliance governor is incorporated in the gas control valve which is situated in the left control cabinet. The control valve governor is suitable for both natural and propane gases without conversion.

Installation pipework should be fitted in compliance with IEGE/UP/2. The pipework should not be smaller than the gas inlet connection (Rp $\frac{1}{2}$ [$\frac{1}{2}$ " B.S.P.]). An isolating cock must be located close to the appliance to allow shut-down during emergencies or service. Installation must be tested for gas soundness and purged as specified in IGE/UP/1.

1.3 Electrical Supply

This unit is designed for connection to fixed wiring. A suitably rated isolating switch with contact separation of at least three millimeters on both poles, must be fitted to the installation. The wiring must be executed in accordance with the regulations listed inside the cover page of this manual supplement. Cable entry is at the control box on the rear left side of the appliance. Access to the terminals is gained by removing top and side panels as described in Paragraphs 3.3.1 and 3.3.2. Power is brought in through the back to the base of the terminal block, where it is connected.

WARNING
THIS APPLIANCE MUST BE EARTHED.

1.4 Water Supply

Not applicable to these appliances.

1.5 Gas System Performance

The tables below provide the total Gas Rates, Injector Diameters and Pressure Adjustments for model HFP/2-CE using natural (G20 & G25) and propane (G30) gas sources.

Total Gas Rate

Model	Natural (G20& G25) KW	Natural BTU/hr	Propane (G31) KW	Propane BTU/hr
HFP/2E-3	27.5	93,900	27.5	93,900
HFP/2E-4	39.0	133,100	39.0	133,100

Injector Diameters-Natural & Propane Gas

Model	Natural Gas G20 (mm)	Natural Gas G25 (mm)	Propane Gas G31 (mm)	No. of Orifices (Injectors)
HFP/2E-3	1.4	1.5	0.89	13
HFP/2E-4	1.4	1.59	0.89	18

Gas Pressure Adjustment

A pressure test point is fitted on the burner manifold and on the gas control valve.

	Model	HFP/2E-3	HFP/2E-4
NATURAL GAS G20	mbar	7	8.75
	in. WC	2.81	3.51
NATURAL GAS G25	mbar	7	7
	in. WC	2.81	2.81
PROPANE GAS G31	mbar	20	20
	in. WC	8.03	8.03

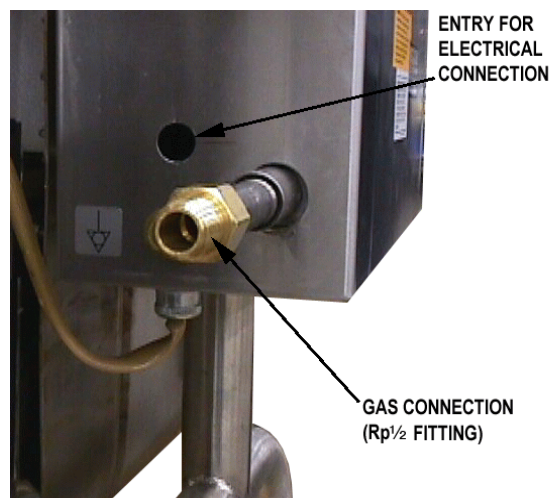
NOTE: With reference to the gas rate, pressure adjustments and conversions, this appliance is CE-approved for use with the following gases:

- G20 natural gas may be supplied to the appliance in Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.
- G25 natural gas may be supplied to the appliance in Belgium, France and the Netherlands.
- G31 propane gas may be supplied to the appliance in France, Germany, Ireland, the Netherlands, Portugal, Spain, Switzerland, and the United Kingdom.

Use of the appliance with non-approved gases in a listed country, or use in other countries will void CE certification.

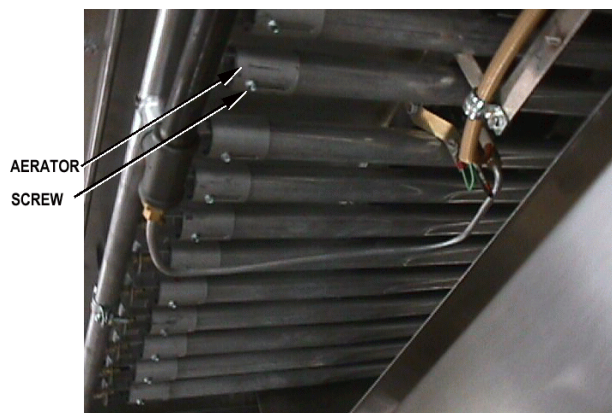
1.6 Burner Adjustment

The burner primary airflow may be adjusted by loosening the screw and sliding the aerator forward or backward. (See photograph)



CONTROL CONSOLE
REAR VIEW

Gas is connected at the rear of the control console.



Each burner may be adjusted by loosening the screw and sliding the aerator forward or back.

2. Assembly and Commissioning

2.1 Electrical Supply

Before commissioning the appliance, ensure that the electrical installation has been performed in compliance with relevant regulations. See Paragraph 1.3, above.

WARNING
THIS APPLIANCE MUST BE EARTHED.

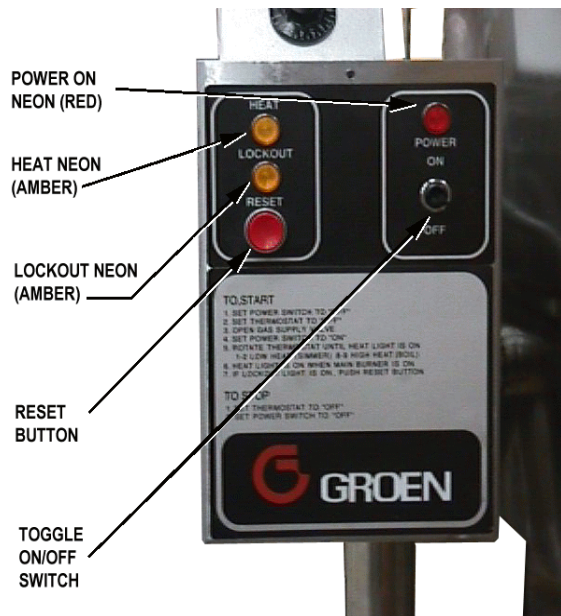
2.2 Pre-Commissioning Check

- Remove literature and packing materials from the interior and exterior of the unit.
- Put enough water into the pan to cover the bottom to a depth of $\frac{1}{4}$ to $\frac{1}{2}$ inch. With the pan body in the horizontal position, note how the water lies in the pan, to confirm that the pan was leveled properly during installation.

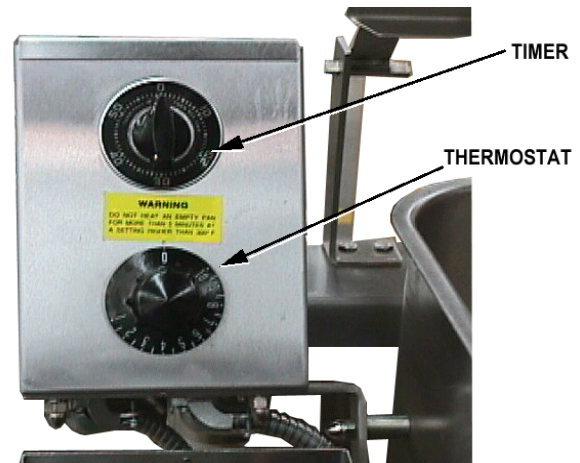
2.3 Operating the Braising Pan

2.3.1 Lighting Sequence

- Put water in the pan (6 to 12 mm deep)
- Check that gas and electricity mains are on.
- Turn the toggle switch (Main Control Box) to the "ON" position. The power neon (Main Control Box) will illuminate.
- Turn the thermostat (Upper Control Box) to the desired setting.
- Observe that the burners light by the lighting of the heat neon (Main Control Box) (approximately 10-15 seconds).



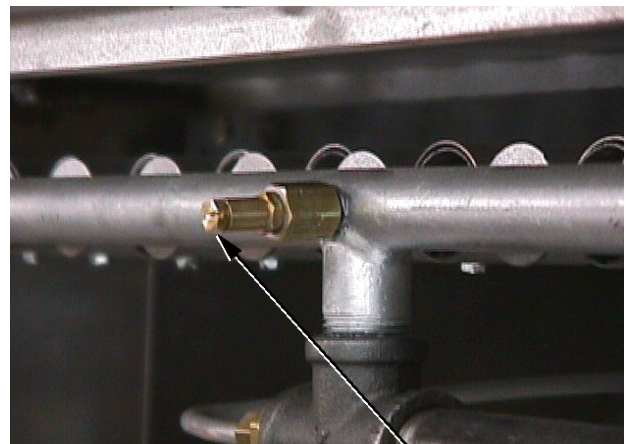
Main (Lower) Control Box



Upper Control Box

- Should the unit fail to light, it will lock-out, and the lockout neon will illuminate (Main Control Box). Turn the unit off and wait for one or two minutes before attempting to switch it on again.
- Repeat steps b through e.
- To switch off the unit, put the toggle switch in the Off position.
- Turn gas and electricity mains off.

2.3.2 Setting the Gas Pressure



Connect a gauge to check pressure at the gas manifold.

- During commissioning, a gas pressure check is essential. Connect a suitable pressure gauge to the gas manifold to perform this test. The pressure gauge should be connected to the test nipple (See photograph above).
- Turn the gas and electricity mains on.

- c) Light the burners as described in Paragraph 2.3.1, above.
- d) Manifold gas pressure should be as noted in Section 1.5 of the manual. If adjustment is necessary, follow steps e through j, below.
- e) Remove the screws which secure the control cabinet lid and remove the control cabinet side panel.
- f) Remove the governor cap screw on the gas control valve to gain access to the screw inside the turret. (See photograph at right)
- g) The governor is suitable for both natural and propane gas.
- h) Turn the screw inside the turret clockwise to increase the pressure, anti-clockwise to reduce it. Check the burner pressure again after 15 minutes operation, and adjust if necessary.
- i) Disconnect the pressure gauge from the test point. Reseal the test point and test for gas soundness.
- j) Replace governor cap screw, and replace control box panel and lid.

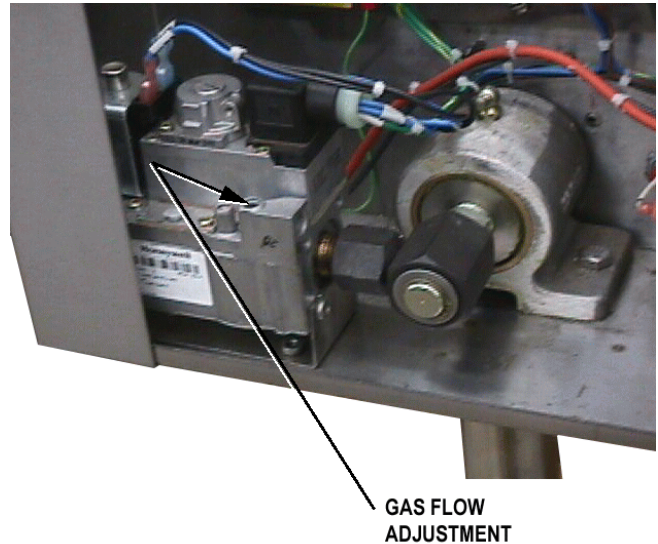
2.3.3 Checking Performance of Controls

- a) Light the unit as described in Paragraph 2.3.1, above. Check that the controls produce a healthy spark from the electrode to the earthing post, and that ignition is smooth and without delay.
- b) Turn the thermostat off and then on. Check that the burners go out when the thermostat is turned off, and that they reignite smoothly when it is switched back on. Repeat several times.
- c) Fill the pan with unused oil up to the mark in the pan.



WARNING
DO NOT OVERFILL WITH OIL OR FIRE MAY RESULT!

- d) Set the thermostat knob at "10" and allow the oil to heat up. Immerse a thermometer or thermocouple 25 mm below the oil surface at the center of the pan. Check that the temperature stabilizes at 190°C, (± 5°C).



Adjust flow by turning the screw on the gas valve governor.

CAUTION
THE TEMPERATURE MUST NOT EXCEED 200°C OR THE HIGH LIMIT THERMOSTAT WILL TRIP.

- e) If the unit fails to operate as described, the unit should be serviced by an Engineer.

IMPORTANT
These appliances must be installed by a competent person in conformity with the installation and servicing instructions and national regulations in force at the time. Particular attention must be paid to the following:
I. E. E. Regulations for Electrical Installations
Electricity at Work Regulations
Gas Safety (Installation & Use Regulations
Health and Safety at Work Act
Fire Precautions Act
Local and National Building Regulations
Detailed recommendations are contained in institute of gas engineers published documents: IGE/UP/1, IGE/UP/2, BS6173 AND BS5440.

2.4 Instructions to Installer

IMPORTANT: After installing and commissioning the appliance, the User's Instructions should be handed to the user or purchaser. Ensure that the instructions for lighting, turning off, correct use and cleaning are properly understood. Emphasize the location of the main gas isolating valve and demonstrate the emergency shut down procedure.

3. Servicing and Conversion

3.1 Servicing

IMPORTANT

BEFORE ATTEMPTING ANY SERVICING, ENSURE THAT THE ISOLATING COCK IS TURNED OFF AND CANNOT BE INADVERTENTLY TURNED ON. ENSURE ALSO THAT THE ELECTRICITY SUPPLY IS DISCONNECTED.

AFTER ANY SERVICING OR EXCHANGE OF GAS CARRYING COMPONENTS — ALWAYS CHECK FOR GAS SOUNDNESS!

Note: When replacing wiring connections refer to the wiring diagram in the unit or this manual.

3.1.1 After Servicing

- a) Test for gas soundness as specified in IGE/UP1 as appropriate after any gas connection has been disturbed.
- b) Check for correct operation as appropriate (see Installation, Section 1.5).

3.1.2 Regular Servicing Procedures

The following must be checked at regular intervals:

a) Burners

Clean the burners periodically to maintain maximum performance. Burners are best cleaned with a stiff bristle brush, or if necessary with a wire brush. Take care not to damage the burner.

Clean the injector orifice with a wooden splinter or toothpick. Avoid metal reamers, which may distort or increase the orifice size.

b) Gears

The gear housing has been fitted for proper lubrication of moving parts. Since the gears do not run in oil, periodic lubrication with grease is essential. Frequency of lubrication depends on operating conditions, but should occur at least once every six months. Groen recommends the use of a Number Two grade LGI lithium grease. Add grease through the Zerk fittings on the gear housing until grease flows out of the bearings around the trunnion shaft. Place a liberal amount of grease on the gear to cover the arc that is in contact with the worm gear.

3.2 Conversion — NOTE: See Para 1.5 (Page 7) for important gas conversion information. VERIFY THE TYPE OF GAS TO BE USED. In the countries listed in Paragraph 1.5 all conversions must be for approved gas.

To change the type of gas used (e.g. G20 to G25 or G31 or the like), change the following:

Burner injector
Pilot orifice
Pressure setting
Data Plate

The governor spring does not need to be changed—only the pressure setting.

3.3 Removal of Control Panels

3.3.1 Removal of Control Cabinet Lid

- a) Remove the two screws which secure the lid to the control cabinet around its edge.
- b) Remove the lid.
- c) Replace in reverse order

3.3.2 Removal of Control Cabinet Side Panel

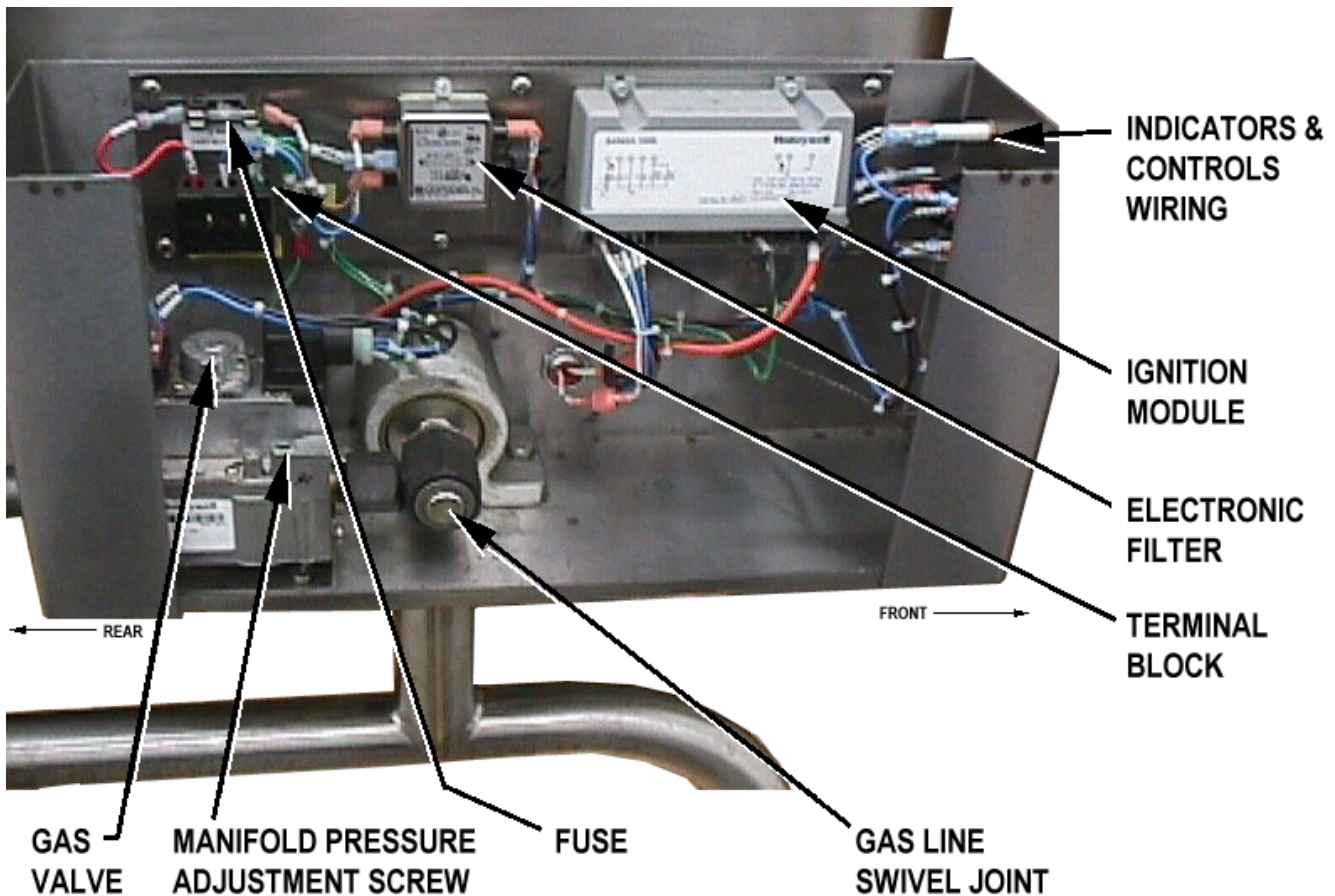
- a) Remove lid as described above.
- b) Lift off the removable side panel.
- c) Replace in reverse order

3.3.3 Removal of Upper Control Box Panels

- a) Remove thermostat knob and timer knob.
- b) Remove screw from bottom of panel.
- c) Remove panel.
- d) Repeat steps (b) and (c) for back panel.
- e) Replace in reverse order.

3.4 Removal of Spark Ignition Module (Turn gas and electricity mains off)

- a) Remove control panel lid and side cover as described in Paragraph 3.3.1 and 3.3.2, above.
- b) Disconnect electrical leads from spark ignition module.



- c) Remove retaining screws securing spark ignition module.
- d) Withdraw spark ignition module from control compartment.
- e) Replace in reverse order.

3.5 Removal of Tilt Switch (Turn gas and electricity mains off)

- a) Remove upper control panel front and rear covers as described in Paragraph 3.3.3, above.
- b) Disconnect electrical leads from tilt switch.
- c) Remove tilt switch from the spring clip.
- d) Withdraw the tilt switch from control compartment.
- e) Replace in reverse order.

3.6 Removal of Gas Control Valve (Turn gas and electricity mains off)

- a) Remove control panel lid and side panel as described in Paragraph 3.3.1 and 3.3.2, above.
- b) Disconnect electrical leads from gas control valve.
- c) Undo and remove inlet gas pipe from gas control valve
- d) Remove the spring clip which secures the trunion gas fitting.
- e) Remove the control valve from control compartment.
- f) Replace in reverse order.

3.7 Removal of On/Off Switch and Reset Button (Turn gas and electricity mains off)

- a) Remove control panel lid and side panel as described in Paragraph 3.3, above.
- b) Disconnect electrical leads from On/Off switch or Reset button.

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- c) Undo and remove the retaining collar which secures the On/Off switch to the outer surface of the control cabinet, and/or which secures the Reset button to the inner surface of the control panel.
- d) Withdraw the On/Off switch or the Reset button from control compartment.
- e) Replace in reverse order.

3.8 Removal of Neons (Turn gas and electricity mains off)

- a) Remove control panel lid and side panel as described in Paragraph 3.3.1 and 3.3.2, above.
- b) Disconnect the neons' flying leads.
- c) Undo and remove the retaining collar which secures the neon to the control cabinet.
- d) Withdraw the neon from the control compartment.
- e) Replace in reverse order.

3.9 Removal of Operating Thermostat (Turn gas and electricity mains off)

To Replace

- a) Remove upper control box panels as described in Paragraph 3.3.3, above.
- b) Remove thermostat from front panel.
- c) Remove electrical leads from operating thermostat.
- d) Remove operating thermostat phial from the underside of the pan, and remove retaining clips.
- e) Remove the retaining clip which secures the flexible conduit to the pan side.
- f) Pull thermostat phial through the flexible conduit (or cut if scrap).
- g) Replace in reverse order.

To Calibrate

If calibration is required, use the following procedures:

- a) Fill the pan with unused oil to the indicated mark. Place a thermocouple 25 mm below the oil surface in the middle of the pan.

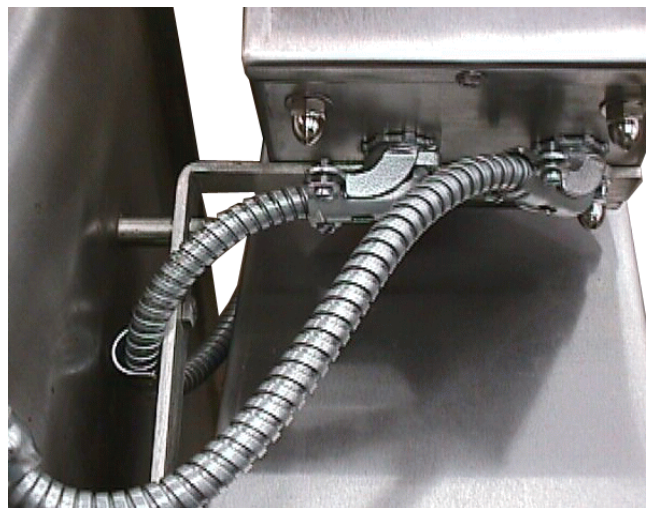


WARNING
DO NOT OVERFILL WITH OIL OR FIRE MAY RESULT!

- b) Remove the control knob and place a screwdriver down the centre of the spindle.
- c) Light the unit and allow the oil to heat.
- d) Adjust the thermostat by turning the screwdriver clockwise to decrease, and anti-clockwise to increase temperature. Ensure that the temperature settles at 190°C (±5°C). (**Note:** Thermostat may cycle seven or eight times before oil temperature settles at 190°C).
- e) Replace control knob.

3.10 Removal of High Limit Thermostat (Turn gas and electricity mains off)

This device is set to shut off the flow of gas to the burners to prevent oil temperature from exceeding 230°C. Manual intervention is required to reset the control in the event of a lockout.



Both the Operating Thermostat and the High Limit Thermostat connect to the braising pan by means of flexible conduit. (Rear of Upper Control Box)

To Reset

Remove the upper control box rear panel as described in 3.3.3, above. Push the reset button on the body of the high limit thermostat.

To Replace

- a) Remove high limit thermostat following the same procedure as for the operating thermostat (Paragraph 3.9, above)
- b) Replace in reverse order following the same procedures.

To Check Operation

Operation of the high limit thermostat must be checked regularly. Use the following procedure:

- a) Remove the upper control box from panel as described in Paragraph 3.3, above.
- b) Fill the pan with unused oil to the indicated mark. Place a thermocouple or thermometer 25 mm below the oil surface in the middle of the pan.



WARNING
DO NOT OVERFILL WITH OIL OR FIRE MAY RESULT!

- c) Ensure that the electrical power is off before continuing. Disconnect the leads from the operating thermostat. Connect the leads together using the terminal block. This effectively removes the operating thermostat from the circuit. It may also be bypassed with a jumper across the thermostat terminals.
- d) Switch the unit back on and light the unit as described in the lighting instructions, above. The burners will light and heat up the pan.

DO NOT LEAVE THE APPLIANCE DURING THIS TEST.

- e) If the high limit thermostat is functioning correctly, the gas supply will cut off as the temperature reaches 205 to 225°C. Once the high limit thermostat has tripped, switch off the mains electricity. Reconnect the operating thermostat and replace all panels.

- f) If the high limit thermostat switches, but not at the specified temperatures, the thermostat requires replacement. Rejected thermostats must be logged and returned.
- g) To remove, see replacement procedures above.
NOTE: After this test, reconnect the regulating thermostat wires.

Calibration

The high limit thermostat is of the fixed type. Its calibration point may not be adjusted.

WARNING
IF THE HIGH LIMIT THERMOSTAT FAILS TO CUT OFF AT 230°C IMMEDIATELY TURN OFF THE GAS SUPPLY. CONDUCT AN INVESTIGATION TO DETERMINE THE FAULT, AND CORRECT IT BEFORE USING THE APPLIANCE AGAIN.

3.11 Removal of Burners (Turn gas and electricity mains off)

- a) Undo and remove the front two retaining nuts of the burner guard.
- b) Undo the two retaining nuts at the side of the burner guard. Do not fully remove. The burner guard will swivel back to allow access to the burners.
- c) Undo and remove the retaining screws holding the burners.
- d) Remove burner.
- e) Replace in reverse order.

3.12 Removal of Ignition Electrode (Turn gas and electricity mains off)

- a) Disconnect electrical leads from ignition electrode.
- b) Remove ignition electrode from bracket.
- c) Replace ignition electrode.
- d) Replace electric leads.
- e) Check that the distance between the igniter and burner is within specified tolerances. Ensure that smooth, rapid ignition is achieved once the new spark igniter is in place.

3.13 Removal of Sensing Electrode (Turn gas and electricity mains off)

OSM-HFP/2E-CE

- Disconnect sensing electrode electrical leads.
- Remove sensing electrode from bracket.
- Replace sensing electrode.
- Replace electric leads.
- Ignite burners. Ensure that the sensing electrode is properly positioned in the burner flame and that burners remain lit. If the burners go out, adjust the sensing electrode to suit.

3.14 Removal of Burner Orifices (Injectors) (Turn gas and electricity mains off)

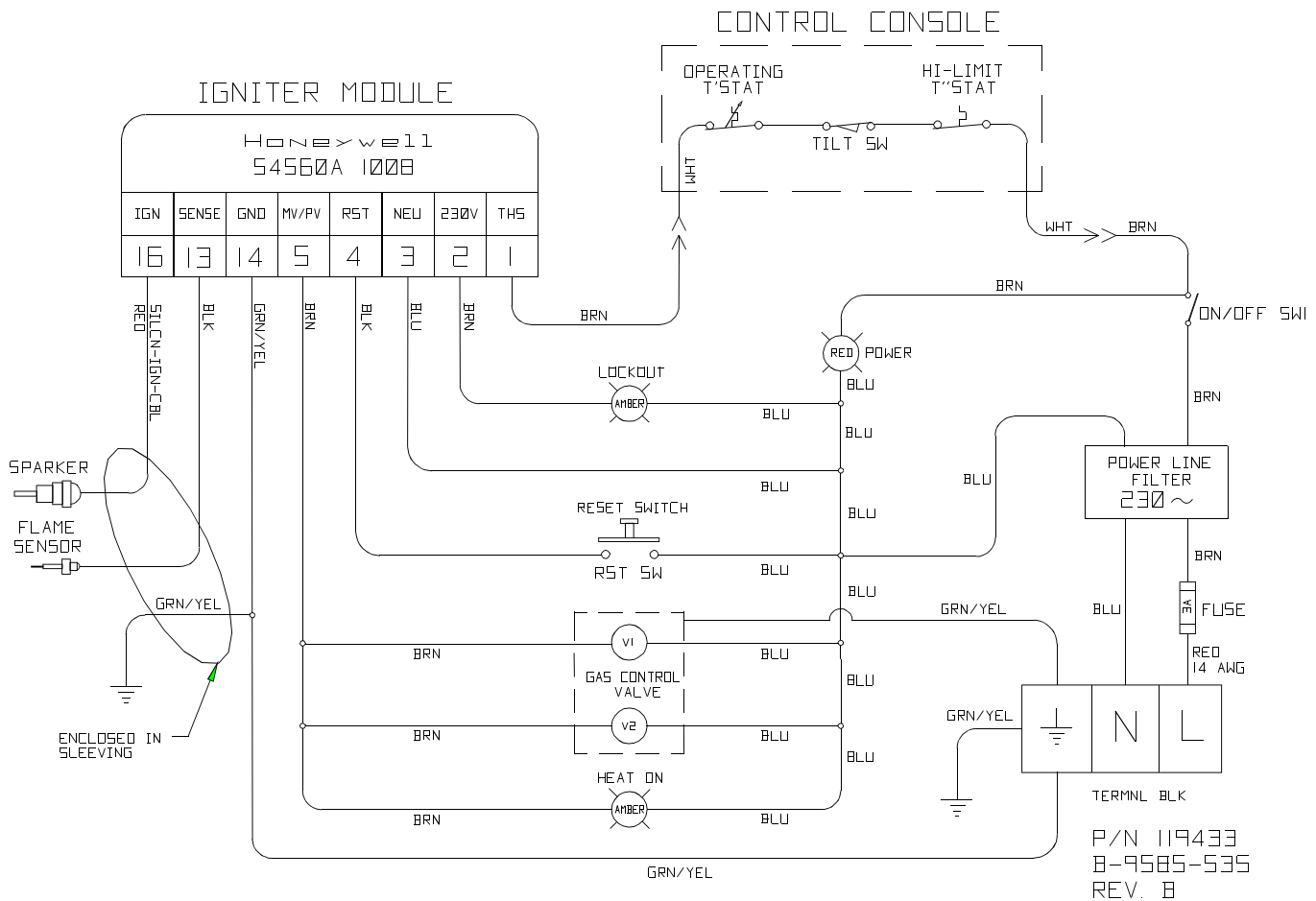
- Remove burners (Paragraph 3.11).

- Remove orifices from burner manifold.
- Replace in reverse order.

3.15 Fuse Replacement

- Remove the control cabinet lid and side as described in Paragraph 3.3.1 and 3.3.2
- Remove fuse from fuse holder. (See photograph, Page 11).
- Replace fuse with an identical fuse.
- Replace in reverse order.

3.16 Wiring Diagram, HFP/2-E CE Model



4. User Instructions

4.1 Lighting and Operation

- a) Check that gas and electricity mains are on.
- b) Turn the toggle switch (Main Control Box) to the "ON" position. The power neon (Main Control Box) will illuminate.
- c) Turn the thermostat (Upper Control Box) to the desired setting.
- d) Observe that the burners light by the lighting of the heat neon (Main Control Box) (approximately 10-15 seconds).
- e) Should the unit fail to light, it will lock-out, and the Lockout neon will illuminate (Main Control Box). Turn the unit off and wait for one or two minutes before attempting to switch it on again.
- f) Press the Reset Button once.
- g) Repeat steps b through e.

CAUTION
IF THE RESET LIGHT COMES ON REPEATEDLY, DO NOT OPERATE THE APPLIANCE. CALL FOR SERVICE OR A QUALIFIED PERSON TO INVESTIGATE.

4.2 To Shut Down Braising Pan

- a) Turn thermostat dial to the Off position.
- b) Switch the On/Off switch to the Off position.
- c) For a prolonged shut down —
 - Follow steps a and b
 - Turn the gas and electricity mains off
- d) Turn the tilting handle clockwise to pour out the water or contents.

4.3 Filling the Braising Pan

Using hot water and detergent, clean out the pan thoroughly prior to operation.

The pan should not be overfilled, and an allowance should always be made for expansion and foaming of the food being cooked.

For frying, the depth of oil in the pan must never exceed the maximum oil level mark on the inner pan wall.



WARNING
DO NOT OVERFILL WITH OIL OR FIRE MAY RESULT.

4.4 Users' Thermostat

Provides automatic control of the braising pan temperature at selected temperatures up to a maximum of 190°C.

4.5 Sequence of Operation

The following "sequence of operation" is provided to help the user understand how the unit functions.

- a) Switching the On/Off switch to the On position to start the appliance causes the power neon to illuminate.
- b) Turning the thermostat sends a signal to the ignition module.
- c) The ignition module opens the multi-functional control valve which allows gas to flow at a low rate to the main burner. It simultaneously starts a sparking sequence at the burner.
- d) The spark ignites the main burner on low flow. Once this occurs, the flame sensing probe detects the flame. This confirms that lighting has been successful.
- e) The sparking/ignition sequence shuts off, and the "Heat" neon illuminates.
- f) After a short period of time the multi-functional control valve opens to full flow and brings the burners up to their maximum rate.
- g) If, however, a burner flame is not detected within 15 seconds, the ignition module goes into lock-out mode, and the lockout neon is lit.
- h) To restart the ignition sequence the unit must be reset by depressing the Reset button on the front of the control cabinet.
- i) In addition to the gas lockout, other safety features include:

OSM-HFP/2E-CE

- A high limit safety thermostat which cuts off the gas supply should the operating thermostat fail (i.e., should the temperature exceed operating limits).
 - A tilt switch which automatically cuts off the gas supply when the unit is tilted when in operation.
- j. When the pan reaches a set temperature, the thermostat switch opens. This halts the signal to the gas control valve and causes the valve to shut off the flow of gas.
- k) When the pan cools below its set temperature, the thermostat switch closes and starts another heating cycle. This on-off cycling continues, keeping the pan at the desired temperature.

4.6 To Empty the Pan

Turn the hand crank on the front of the cabinet clockwise to tilt the pan body forward. The pan will stay in position when you stop turning the handle. To return it to the upright position, turn the crank anti-clockwise.

WARNING
DO NOT STAND IN FRONT OF THE PAN WHEN TILTING IT. BE CAREFUL TO KEEP HOT CONTENTS FROM SPILLING. KEEP PEOPLE AWAY FROM WHEN EMPTYING THE PAN.

4.7 Power Failure

- a) If power to the unit is lost, do not attempt to operate the appliance until the electricity has been restored.
- b) When the power comes on again, follow the steps in Paragraph 4.1, Lighting and Operation.

5. Cleaning

WARNING
DISCONNECT ELECTRICAL SUPPLY BEFORE ANY CLEANING. KEEP WATER AND SOLUTIONS OUT OF CONTROLS AND BURNERS. NEVER SPRAY OR HOSE THE CONTROL CONSOLE OR ANY ELECTRICAL CONNECTIONS.

1. Before any cleaning operation, shut off the burner by turning the thermostat dial to "OFF". If water or cleaning solution will be sprayed, unplug the unit from the electric power source, or shut off the power at the circuit breaker or fuse panel.
2. Clean all food-contact surfaces soon after use, before the pan has cooled completely. If the unit is in continuous use, thoroughly clean and sanitize both interior and exterior **at least once every 12 hours**.
3. Scrape or rinse out large amounts of food residues, then wash the inside of the pan body with a mixture of hot water and soap or an appropriate detergent, such as Mikro-Quat from ECOLAB. Follow the detergent supplier's recommendations on strength of the solution to use. Rinse the pan thoroughly with hot water and drain completely.

CAUTION
MOST CLEANERS ARE HARMFUL TO THE SKIN, EYES, MUCOUS MEMBRANES AND CLOTHING. PRECAUTIONS SHOULD BE TAKEN TO WEAR RUBBER GLOVES, GOGGLES OR FACE SHIELD AND PROTECTIVE CLOTHING. CAREFULLY READ THE WARNINGS AND FOLLOW THE DIRECTIONS ON THE LABEL OF THE CLEANER TO BE USED.

4. To remove materials stuck to the equipment, use a brush, sponge, cloth, plastic or rubber scraper, or plastic wool along with the detergent or soap solution. To minimize the effort required in washing, let the detergent solution sit in the pan and soak into the residue, or heat the detergent solution briefly in the pan. Do NOT use any abrasive materials or metal implement that might scratch the surface, because scratches make the pan hard to clean and provide places for bacteria to grow. Do NOT use steel wool, which may leave particles imbedded in the pan surface and cause eventual corrosion and pitting.

4. As part of the daily cleaning program, clean all external and internal surfaces that may have been soiled. Remember to check such parts as the underside of the cover, control console, etc.
6. Controls and the control console may be cleaned with a damp cloth.
7. The exterior surface of the unit may be polished with a recognized stainless steel cleaner, or with water and detergent.
8. If the equipment needs to be sanitized, use a sanitizing solution equivalent to one that supplies 200 parts per million available chlorine. Obtain advice on the best sanitizing agent from your supplier of sanitizing products. Following the supplier's instructions, apply the sanitizing agent after the unit has been cleaned and drained. Rinse off the sanitizer thoroughly.



Don't use metal implements or steel wool to clean the braising pan.

NOTICE
NEVER LEAVE A CHLORINE SANITIZER IN CONTACT WITH STAINLESS STEEL SURFACES LONGER THAN 30 MINUTES. LONGER CONTACT CAN CAUSE CORROSION.

9. If there is difficulty removing mineral deposits or a film left by hard water or food residues, clean the pan thoroughly and then use a deliming agent, such as Groen De-limer De-Scaler (Part Number 114800) or Lime-Away from ECOLAB, in accordance with manufacturer directions. Rinse and drain the unit before further use.
10. If especially difficult cleaning problems persist, contact your cleaning product representative for assistance.



Use a brush, cloth, sponge or other non-abrasive tool for cleaning.

6. Safety Precautions

A stop-cock will be fitted in the gas pipe supplying the appliance. The user must be familiar with its location and operation, and able to turn it off in an emergency.

If there is a smell of gas, immediately turn off the gas, ventilate the area, and call the gas supplier.

NEVER USE NAKED FLAME TO SEARCH FOR GAS LEAKS.

7. Maintenance

Your Braising Pan is designed to require minimum maintenance, but certain parts may need replacement after prolonged use. After installation, no user adjustment should be necessary. If a service need arises, only authorized personnel should perform the work.



WARNING
ELECTRIC POWER ALWAYS SHOULD BE
SHUT OFF BEFORE WORK IS DONE ON
INTERNAL COMPONENTS.

Service personnel should check the unit at least once a year. This periodic maintenance should include inspecting electrical wires and connections, cleaning the inside of the control

console, and possible adjustment of the pilot light. At least twice a year, grease the two trunnion bearings. (See Paragraph 3.1.2.b Gears).



WARNING
DISCONNECT ELECTRICAL POWER FROM
THE UNIT BEFORE ATTEMPTING TO
GREASE THE TRUNNION BEARINGS.

A Service Log is provided with the warranty information at the back of this manual. Each time service is performed on your Groen equipment, enter the date on which the work was done, what was done, and who did it. Keep the manual with the equipment for quick and easy reference.

8. Troubleshooting

Your Groen Braising Pan will operate smoothly and efficiently if properly maintained. However, the following is a list of checks to make in the event of a problem. If the actions suggested do not solve the problem, call your qualified Groen Service Representative. For the phone number of the nearest agency, call your area Groen representative or the Groen Parts and Service Department. If an item on the list is followed by Y, the work should only be performed by a qualified service representative.

WARNING

BEFORE REPLACING ANY PARTS, DISCONNECT THE UNIT FROM THE ELECTRICAL POWER SUPPLY AND CLOSE THE MAIN GAS VALVE. ALLOW FIVE MINUTES FOR GAS TO VENT. USE OF ANY REPLACEMENT PARTS OTHER THAN THOSE SUPPLIED BY GROEN OR THEIR AUTHORIZED DISTRIBUTORS CAN CAUSE INJURY TO THE OPERATOR AND DAMAGE TO THE EQUIPMENT AND WILL VOID ALL WARRANTIES.

Important: Service performed by other than factory authorized personnel will void all warranties.

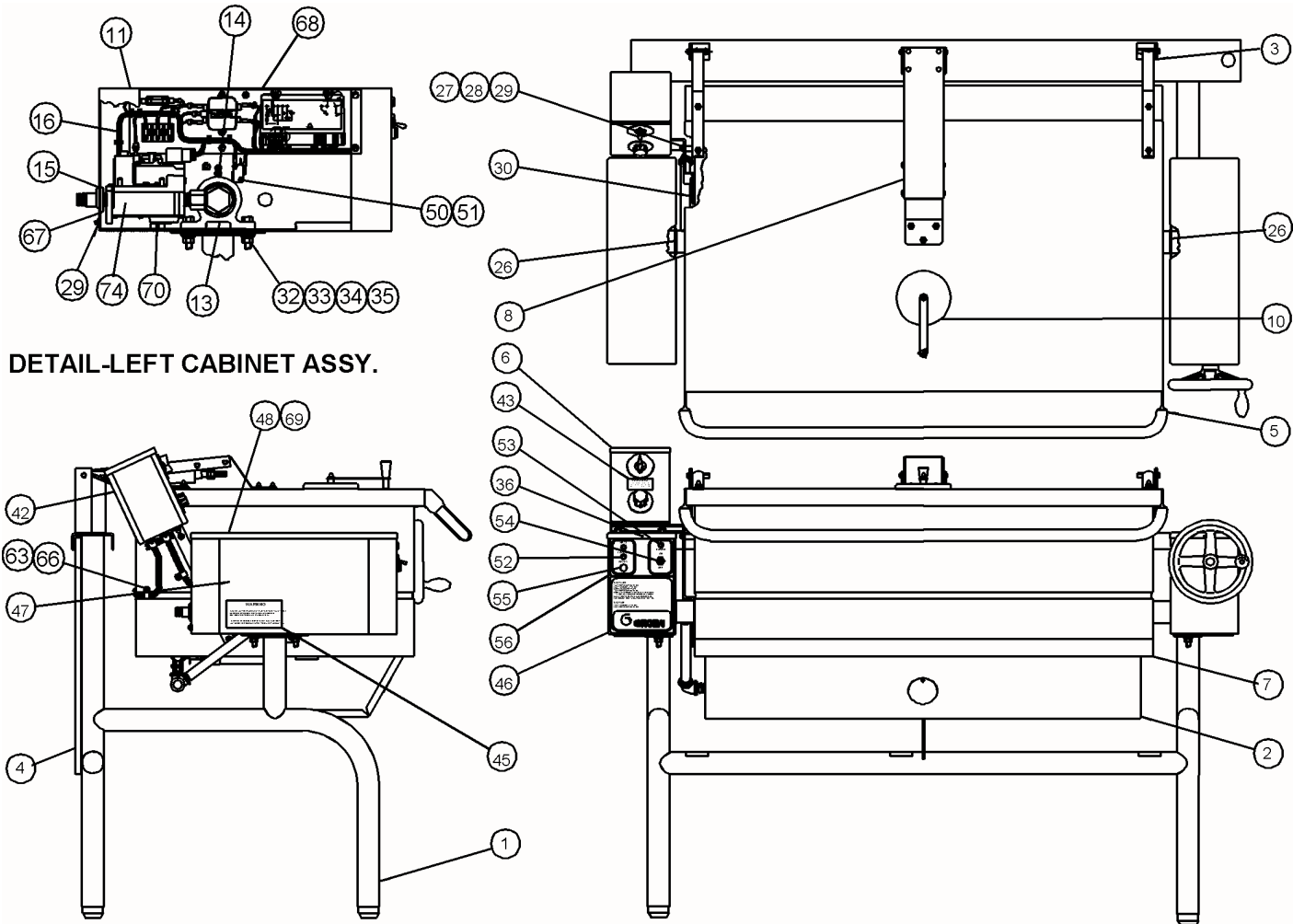
SYMPTOM	WHO	WHAT TO CHECK X indicates items which must be performed by an authorized technician.
System does not produce a spark	Auth Service Rep Only	a. Thermostat, and close the contacts if they are open X b. AC voltage between terminals on secondary side of transformer. If it is not 24 Volt, replace the transformer X c. That the high tension cable is in good condition. If cracked or brittle, replace. X d. Pilot electric ceramic for crack or break. X e. Pilot spark gap. Regap. X
Spark is present but the pilot will not light.	Auth Service Rep Only	a. That the pilot valve is securely connected to terminals. X b. For 24 VAC at terminals PV and PV/MV. If 24V is not present, replace the ignition control module. X b. That gas pressure is at least 3.5" W.C.(8.7818 : b). X c. For gas at the pilot. If it is not flowing: (1) Check the pilot gas line for kinks and obstructions. X (2) Clean orifice, if necessary. X (3) Check magnetic operator for pilot valve on gas valve. Repair or replace as necessary. X d. That the pilot spark gap is located in the pilot gas stream. If not, adjust or replace the pilot burner. X e. For drafts. Shield the pilot burner, if necessary. X
Pilot lights, but main burner will not come on and spark does not stay on.	Auth Service Rep Only	a. Check operating thermostat to see that it is closed at temperature setting higher than that of the current pan temperature. X b. For 24 V between terminals MV and PV/MV. If 24V is not present, replace the ignition control module. X c. That gas pressure is at least 3.5" W.C.(8.7818 : b). X d. Electrical connections of the main valve to terminals, to assure that they are securely attached. Check magnetic operator for main valve on gas valve. Repair or replace as necessary. X e. That secondary thermostat switch is closed.X

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Important: Service performed by other than factory authorized personnel will void all warranties.

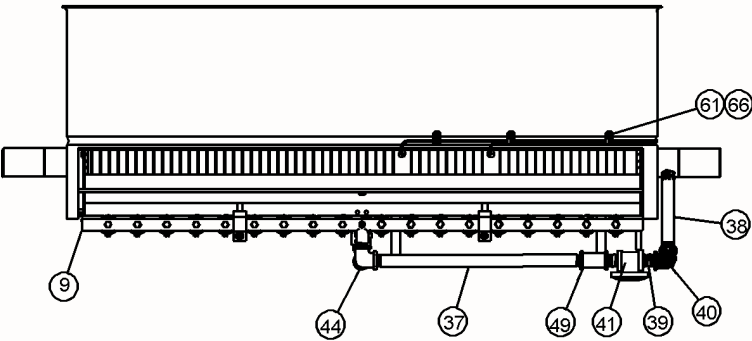
SYMPTOM	WHO	WHAT TO CHECK X indicates items which must be performed by an authorized technician.
Pilot lights, but main burner will not come on, the spark stays on.	Auth Service Rep Only	a. Check for bad burner ground. If necessary, repair with high temperature wire. X b. Pilot burner ceramic insulator for cracks. X c. That high tension cable is not grounded out. If it is, correct the ground-out condition or the pilot burner. X d. For proper gas pressure. X e. Clean pilot assembly, or replace if necessary. X f. Tighten all mechanical and electrical connections. X g. If the pilot flame is weak, increase pilot orifice size. X h. Replace ignition control module. X
Main burner comes on but will not stay on.	Auth Service Rep Only	a. Check burner ground for bad wire or connection. Replace if necessary with high temperature wire. X b. Check for low gas supply pressure. If necessary, replace ignition control module. X
Pan is hard to tilt.	Auth Service Rep Only	a. Gears for foreign materials, lubrication, and alignment. X b. Broken tilt or worm gears. X
Burners will not light	User	a. That the main gas supply valve is open (handle is in line with the gas pipe) b. Gas supply to the building. c. That the pan body is horizontal.
	Auth Service Rep Only	d. Thermostat operation. The thermostat should click when the dial is rotated to settings above and below the temperature of the pan. X
Pan continues to heat after it reaches desired temperature	User	a. Thermostat dial setting
	Auth Service Rep Only	b. Thermostat calibration. X c. Thermostat operation. The thermostat should click when the dial is rotated to settings above and below the temperature of the pan. X
Pan stops heating before reaching desired temperature.	User	a. Thermostat dial setting.
	Auth Service Rep Only	b. Thermostat calibration. X c. Thermostat operation. The thermostat should click when the dial is rotated to settings above and below the temperature of the pan. X
Pan heats unevenly	User	a. That the pan body is horizontal. b. That the pan is preheated properly in accordance with the instructions in the Operation section of this manual.

9. Parts List - HFP/2E-CE

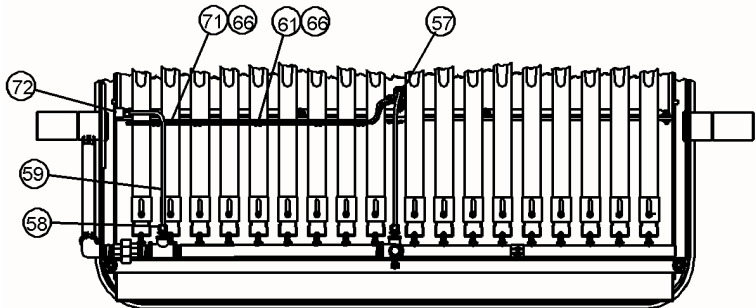


DETAIL-LEFT CABINET ASSY.

DETAIL-RIGHT CABINET ASSY.



REAR VIEW OF COMBUSTION CHAMBER/BURNER ASSY.



BOTTOM VIEW OF COMBUSTION CHAMBER/BURNER ASSY.

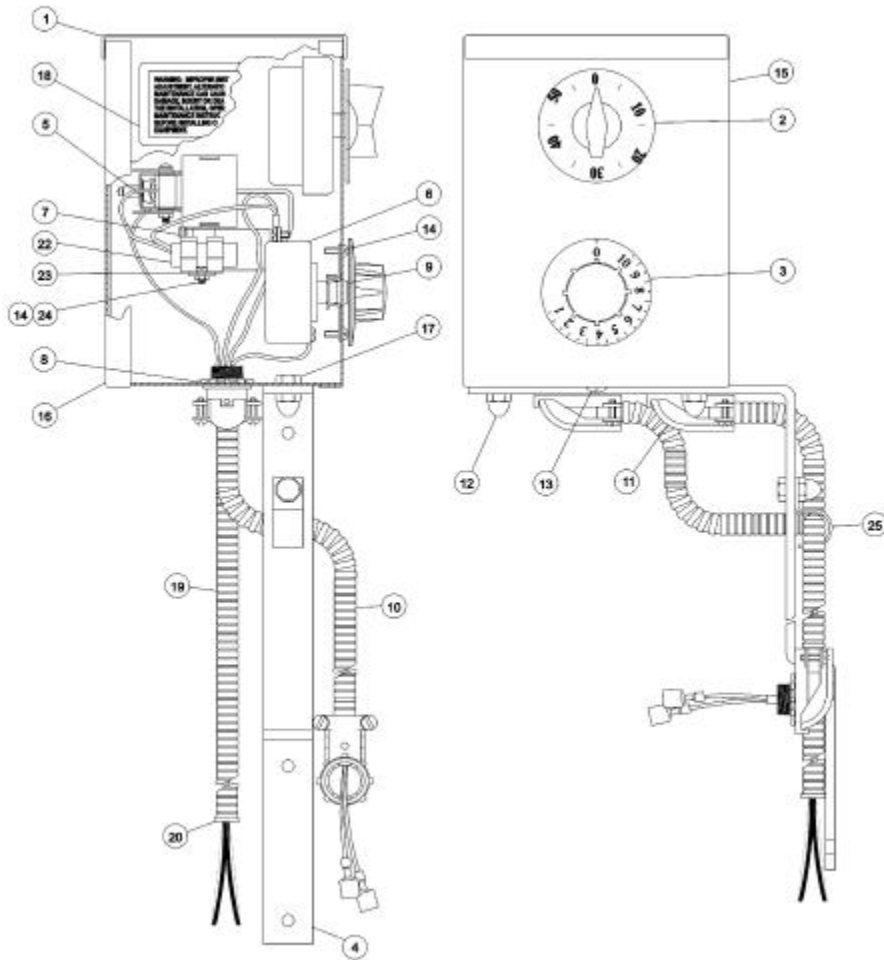
OSM-HFP/2E-CE

9. Parts List - HFP/2E-CE

Key	Description	Part No.	Key	Description	Part No.
1	Stand Assy. FPC/1-4 & HFP/2-4 Pans	068887	37	Nipple, 1/2 NPT-14", Black	127465
2	Radiation Shield Assy.	054691	38	Nipple, 1/2 NPT-10" Black	005558
3	Bracket Assy., Cover	068639	39	Nipple, 1/2 NPT-1-1/2" Black	004184
4	Shield, Heat Assy	068900	40	Union Elbow, 1/2 NPT 90	005495
5	Fry Pan Cover Assy.	046450	41	Gas Cock, 1/2"	098458
6	Control Console Assy.	119415	43	Label, Preheating Warning	060312
7	Pan Sub-assy	119406	44	Elbow, 90, Side Outlet 1/2 NPT Black	N64333
8	Bracket & Actuator Assy.	069702	45	Label, Warranties Void	059201
9	Combustion Chamber & Burner Assy	119405	46	Label, Operating Instructions	119420
10	Vent Cover Assy	017494	47	Cabinet, Ignition Control Side Panel	119440
11	Cabinet, Ignition Control Panel L.h.	119403	48	Cabinet, Ignition Control Cover	119441
13	Casting Assy.-2" Trunnion Race	013488	49	Tee, Black Iron 1/2 X 1/2 X 1/4 NPT	096921
14	Fitting, Grease 90 1/8 NPT	012195	50	Switch, SPDT Micro	119454
15	Grommet	007400	51	Nut, Hexagon KEPS 4-40	071297
16	Harness, Braising Pan	119432	52	Light, Indicator Amber 220 VAC	116382
18	Gear Carrier Assy.	014079	53	Light, Indicator Red 220VAC	116381
19	Spacer Washer & Worm Gear	084956	54	Switch, Toggle SPDT	113059
20	Key, Gib Head 1/4 X 1-1/4 lg	012031	55	Switch, Pushbutton Momentary	113061
21	Pin, Roll 1/4 X 1-1/4 lg	012614	56	Label, Indicator Lights	113076
22	Cabinet Assy. R.H.	119443	57	Tubing, Pilot HFP2E	119451
23	Gear Sector Assy	049861	58	Male Connector 1/8 NPT(1/4 Tubing)	097194
24	Handwheel, Shaft & Worm Assy.	049868	59	Tube, Igniter	119467
25	Bushing, Snap 3/4 I.d. X 1" O.D.	000453	60	Wire Assembly, Sensor Probe	119453
26	Ring, Retaining 2" Shaft	012826	61	Clamp, Conduit 1/4 Rigid	009754
27	Spacer 1/2 O.D. X 7/8 lg	012733	62	Bushing, Strain Relief	119455
28	Stud, 1/4-20 X 1-1/4	012598	63	Clamp, Conduit 1/2" TNCL-50	006777
29	Nut, Keps 1/4-20	012940	64	Nipple, Close, 1/2"	008877
30	Screw, Hex Hd. Cap 1/4-20 X 1/2	005608	66	Nut, Hexagon KEPS 10-32	071256je
31	Screw, Hex Hd. Cap 3/8-16 X 1"	005612	67	Label, Equipotential	113078
32	Screw, Hex Hd. Cap 3/8-16 X 1-1/2	005615	68	Screw, Round Hd. 8-32 X 3/8	006971
33	Washer, Flat 3/8	005830	69	Label, Wiring Diagram	119433
34	Washer, Lock 3/8	005618	71	Bracket, Cable Routing	119468
35	Net, Hex 3/8-16	003566	72	Elbow F 90 1/8 NPT Tube Comp.	050500
36	Screw, Round Hd. 6-32 X 3/8	009697	74	Gas Valve	114505

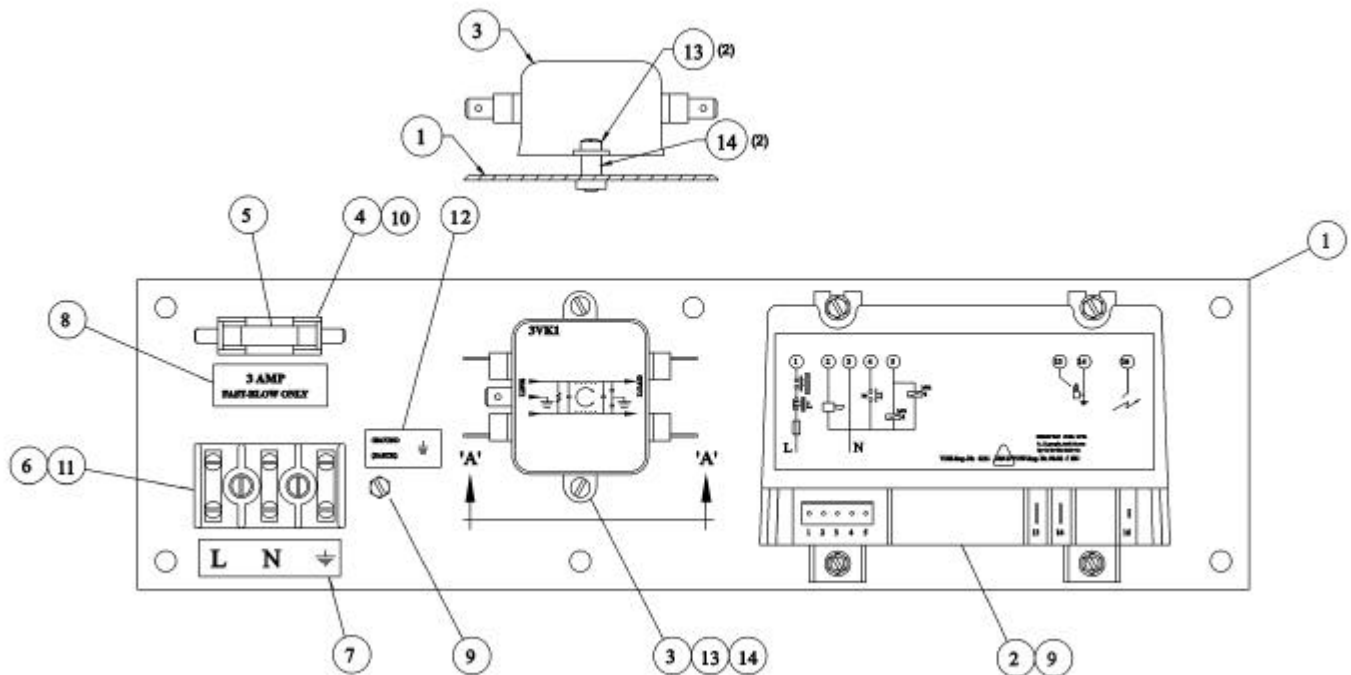
9. Parts List

Control Console Assembly



Key	Description	Part No.	Key	Description	Part No.
1	Control Console Weldment	122174	14	Screw, Rd. Hd. #6-32 x 3/8"	009697
2	Timer 0-60 minute w/Dial & Knob	001154	15	Control Console Front Cover	000434
3	Knob, Thermostat	122000	16	Control Console Back Cover	000433
4	Bracket, Control Console Mounting	122175	17	Screw, hex hd. 1/4-20 x 1/2"	005608
5	Thermostat, High Limit	119464	18	Label, Warning AGA Addenda B	099961
6	Thermostat 100° to 450° w/Dip Seal	041700	19	Conduit, Flexible 5/16 DSL-6 9"	006940
7	Hex slot washer head #6-32 x 1/4"	069777	20	Conduit, Insulator	071934
8	Nut, Hex Jam 3/8-24	003473	21	Locktite #242 non-vibration (not shown)	073282
9	Grommet 1/4" IDx1/2" ODx1/16 Groove	001518	22	Switch, Mercury	122176
10	Wire, Control Console Kit	119459	23	Mounting Bracket for 122176	122177
11	Elbow, 90° 3/8" Conduit Connect #266	004098	24	Nut, Hex 6-32	012630
12	Nut, Dome, High Profile 1/4-20	090567	25	1/2" Clamp, Rigid Conduit	068687
13	Screw, truss hd. #8 x 3/8 SS	005764			

9. Parts List Electrical Panel Assembly - P/N 119416



Key	Description	Part No.
1	Chassis, Electrical	119434
2	Pilot, Ignition Controller 220/240V	113060
3	Filter, Line 3VK1	119456
4	Fuse Holder	077854
5	Fuse, Three Amp (250V)	079965
6	Terminal Block (3 Pole)	003888
7	Label, Supply Voltage	114316

Key	Description	Part No.
8	Label, 3 Amp (Fast Blow Only)	102251
9	Screw, hex washer hd. #8-32 x 3/8	069789
10	Screw, hex slotted washer hd #6-32 x 1/4	069777
11	Screw, Rd. hd. #8-32 x 1-1/4	005056
12	Label, Ground	003384
13	Screw, Nylon #8-32 x 1/2"	127421
14	Spacer, Nylon 0.174 x 1/4 OD x 1/4	127420

9. Parts List, Fuel Gas Conversion

(For conversion of a natural gas unit to propane, or a propane model to natural gas)

HFP/2E WITH ELECTRONIC IGNITION

DESCRIPTION	QTY	G20 NAT GAS	G25 NAT GAS	G31 LP GAS
Pilot Orifice	1	119449	119449	098647
Main Burner Orifice Size 3	13	045897	128158	050047
Main Burner Orifice Size 4	18	045897	128157	050047
Ignition Tube Orifice Size 3	1	101622	101622	114340
Ignition Tube Orifice Size 4	1	101621	101621	101623

NOTE: Gas Valve Part Number remains P/N 114505

10. Service Log

Model No. _____ Purchased From _____

Serial No. _____ Location _____

Date Purchased _____ Date Installed _____

Purchase Order No. _____ For Service Call _____

Date	Maintenance Performed	Performed by

Limited Warranty To Commercial Purchasers*
(for Areas Outside of the U.S. and Canada)

Groen Foodservice Equipment ("Groen Equipment") has been skillfully manufactured, carefully inspected and packaged to meet rigid standards of excellence. Groen warrant their Equipment to be free from defects in material and workmanship for (12) twelve months, with the following conditions and subject to the following limitations.

- I. This parts and labor warranty is limited to Groen Equipment sold to the original commercial purchaser/ users (but not original equipment manufacturers), at its original place of installation, in areas outside the U.S. and Canada.
- II. Damage during shipment is to be reported to the carrier, and is not covered under this warranty, and is the sole responsibility of the purchaser/user.
- III. Groen, or an authorized service representative, will repair or replace, at Groen's sole election, any Groen Equipment, including but not limited to, draw off valves, safety valves, gas and electric components, found to be defective during the warranty period. As to warranty service in the territory described above, Groen will absorb labor and portal to portal transportation costs (time & mileage) for the first twelve (12) months from date of installation or fifteen (15) months from date of shipment from Groen.
- IV. This warranty does not cover boiler maintenance, calibration, or periodic adjustments as specified in operating instructions or manuals, and consumable parts such as scraper blades, gaskets, packing, etc., or labor costs incurred for removal of adjacent equipment or objects to gain access to Groen Equipment. This warranty does not cover defects caused by improper installation, abuse, careless operation, or improper maintenance of equipment. This warranty does not cover damage caused by poor water quality or improper boiler maintenance.
- V. THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, EACH OF WHICH IS HEREBY EXPRESSLY DISCLAIMED. THE REMEDIES DESCRIBED ABOVE ARE EXCLUSIVE AND IN NO EVENT SHALL GROEN BE LIABLE FOR SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR THE BREACH OR DELAY IN PERFORMANCE OF THIS WARRANTY.
- VI. Groen Equipment is for commercial use only. If sold as a component of another (O.E.M.) manufacturer's equipment or if used as a consumer product, such Equipment is sold AS IS and without any warranty.

*** (Covers All Food Service Equipment Ordered After October 1, 1995)**



1055 Mendell Davis Drive
Jackson, MS 39212
Telephone 601 372-3903
FAX 601 373-9587

OSM-HFP/2E-CE

Revised 10/99
Part Number 128431