

# OPERATOR MANUAL

IMPORTANT INFORMATION, KEEP FOR OPERATOR

This manual provides information for:

## ***MODELS NHFP & NHFP(E)*** ***BRAISING PANS***

- Stainless Steel
- Power Tilting
- Gas Heated



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

### **FOR YOUR SAFETY**

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

### **POST IN A PROMINENT LOCATION**

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.

### **NOTIFY CARRIER OF DAMAGE AT ONCE**

It is the responsibility of the consignee to inspect the container upon receipt of same and to determine the possibility of any damage, including concealed damage. Unified Brands suggests that if you are suspicious of damage to make a notation on the delivery receipt. It will be the responsibility of the consignee to file a claim with the carrier. We recommend that you do so at once.

Manufacture Service/Questions 888-994-7636.

Information contained in this document is known to be current and accurate at the time of printing/creation. Unified Brands recommends referencing our product line websites, [unifiedbrands.net](http://unifiedbrands.net), for the most updated product information and specifications.

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# GROEN®



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## **IMPORTANT — READ FIRST — IMPORTANT**

- CAUTION:** SHIPPING STRAPS ARE UNDER TENSION AND CAN SNAP BACK WHEN CUT.
- CAUTION:** UNIT WEIGHS 500 TO 600 LB. (230 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 JACKET) 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) WEAR PROTECTIVE OVEN MITT AND PROTECTIVE APRON.
  - 2) USE CONTAINER DEEP ENOUGH TO CONTAIN AND MINIMIZE PRODUCT SPLASHING.
  - 3) PLACE CONTAINER ON STABLE, FLAT SURFACE, AS CLOSE TO PAN AS POSSIBLE.
  - 4) STAND TO SIDE OF PAN WHILE POURING — NOT DIRECTLY IN POUR PATH OF HOT CONTENTS.
  - 5) RETURN PAN BODY TO LEVEL POSITION AFTER CONTAINER IS FILLED OR TRANSFER IS COMPLETE.
  - 6) 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.
- 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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## Equipment Description

Groen NHFP and NHFP(E) Gas Fired Braising Pans provide a stainless steel pan equipped with heat transfer fins, burner/combustion chamber, power tilting mechanism, thermostatic controls, and hinged cover. The Braising Pan serves as a braising unit, griddle, fry pan, oven, kettle, *bain marie*, or food warmer and server. It can also be adapted for use as a steamer.

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

The pan is tilted forward by an electrically powered actuator mechanism. A three-position switch on the front of the control console gives the operator positive, smoothly operating control of tilting. When the pan is tilted, the burners shut off automatically.

The thermostat provides automatic control of cooking temperature. 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 rear condensate drip shield on its underside is standard on the Braising Pan.

A fully enclosed, spring-type actuator counterbalances the cover to keep it opened or closed. The cover opens to the back and is hinged to the frame, so that it moves independently of the pan body.

Different ignition systems distinguish the basic models. Model NHFP uses a thermopile-controlled, standing pilot flame to light the main burner. Model NHFP(E) ignites the main burner directly with an electrically heated hot surface igniter.

The following models and options are available:

Model	Pan Body Dimensions, Inches		
	Left to Right	Depth	Firing Rate
NHFP-3	31 $\frac{3}{4}$	9	104,000 BTU/hr
NHFP(E)-3	31 $\frac{3}{4}$	9	104,000 BTU/hr
NHFP-4	41 $\frac{3}{8}$	9	144,000 BTU/hr
NHFP(E)-4	41 $\frac{3}{8}$	9	144,000 BTU/hr

### Optional Equipment (Any Model)

1. Fill faucet with swing spout
2. Model REJ Steamer Insert
3. Caster mounting kit (factory installation only)
4. Two inch tangent draw-off



## Inspection and Unpacking

The unit will arrive completely assembled, wrapped in protective plastic on a heavy skid, in a heavy cardboard carton. Immediately upon receipt, inspect the carton for damage. Report any apparent shipping damage or an incorrect shipment to the delivery agent.

When installation is to begin, get someone to assist in removing the carton. Lift it straight up and away from the unit. **Do not simply raise it and push backwards - you will break the cover assembly vent handle.** Write down the model number, serial number, and installation date of your unit, and keep this information for future reference. Space for these entries is provided at the top of the Service Log in this manual.

Cut the straps holding the unit on the skid, and lift the unit straight up off the skid.

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

**UNIT WEIGHS 500 TO 660 LB (230 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 JACKET) TO REMOVE THE UNIT FROM THE SKID AND MOVE IT TO THE PLACE OF INSTALLATION.**

## Installation

The NHFP or NHFP(E) Braising Pan should be installed in a ventilated room for efficient performance. Items which might obstruct or restrict the flow of air for combustion and ventilation must be removed. The area directly around the braising pan must be cleared of all combustible material.



**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.**

1. Installation on combustible floors is allowed, with a minimum clearance to combustible and noncombustible construction of six inches at the rear, two inches at the left, and zero inches at the right.
2. Install the unit under a vent hood.
3. Level the unit by adjusting the bullet feet or floor flanges on the legs. Make sure the tilting mechanism has been run all the way to the horizontal position. Check levelness with a spirit level set on the bottom of the pan body. Anchor the rear

legs securely to the floor.

4. Complete the piping to the gas service by using 1/2 inch IPS pipe or approved equivalent.

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

5. For a unit on casters, complete connection to the gas supply with connectors that comply with the standard for Connectors for Moveable Gas Appliances, ANSI Z21.69a-latest edition. Restrain movement of the unit by attaching a cable or chain to the eyelet (provided at the back of the frame) and anchoring the cable or chain to the wall or floor. Make the length and location of the cable such that the unit cannot pull on the gas connection while the cable is connected. The gas connection must be made with a quick disconnect device which complies with ANSI Z21.41b - latest edition.



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

6. Provide 115 Vac, 60 Hz, 5 Amp electrical service. Local codes and/or National codes should be observed in accordance with ANSI/NFPA70 - latest edition. AN ELECTRICAL GROUND IS REQUIRED. The Electrical Schematic is located on the inside of the Service Panel.  
  
In Canada, provide electrical service in accordance with the Canadian Electrical Code, CSA-C22.1 Part 1, and/or local codes.
7. The installation must conform with the American National Standard Z223.1 - latest edition National Fuel Gas Code. The unit should be installed in an adequately ventilated room with an adequate air supply. The best ventilation will use a vent hood and exhaust fan. DO NOT obstruct the flue or vent.

8. In Canada, the installation must conform to CAN/CGA B149, Installation Codes for Gas Appliances and Equipment, and/or local codes.
9. The braising pan and its shutoff valve must be disconnected from the gas supply piping system during any testing at pressures in excess of ½ psig (3.48 kPa). The appliance 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 ½ psig (3.48 kPa).
9. Space for servicing and operation is required. DO NOT block any air intake spacing to the combustion chamber or obstruct air flow.
10. After the pan has been connected to the gas supply, check each gas joint for leaks. Use a thick soap solution or other suitable leak detector. Do not use a flame to check for leaks.

## Initial Start-Up

Now that the Braising Pan has been installed, you should test it to ensure that the unit is operating correctly.

1. Remove all literature and packing materials from the interior and exterior of the unit.
2. Put enough water into the pan to cover the bottom to a depth of 1/4 to 1/2 inch. With the tilting mechanism run to the horizontal position, note how the water lies in the pan, to confirm that the pan was leveled properly during installation.
3. Following "To Start Pan" instructions for your pan model, begin heating the water at a thermostat setting of 235°F. At this setting, heating should continue until the water boils.

4. To shut down the unit, turn the thermostat dial to "OFF".

**WARNING**  
WATER IS EXTREMELY HOT AND CAN CAUSE SEVERE BURNS. AVOID WATER WHEN EMPTYING UNIT.

5. Press the power tilt switch down to pour out the water and to confirm that the pan body can be tilted from horizontal to vertical. Pull the switch up to lower the pan.

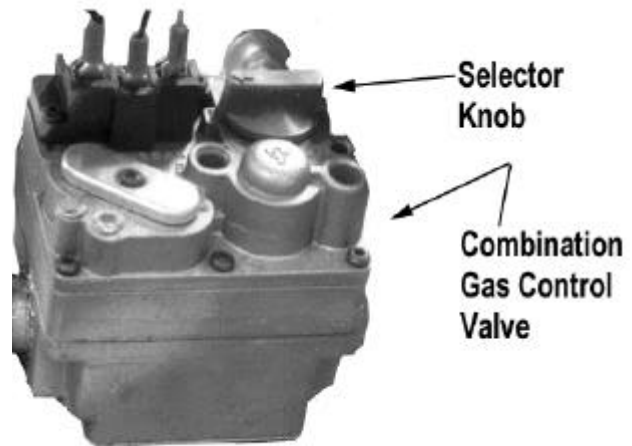
If the unit functions as described above, it is ready for use. If it does not, contact your local Groen Authorized Service Agency.

## Operation

### A. Controls

Operator controls for the Braising Pans are:

1. The thermostat dial, located on the control console to the right of the pan body. This dial is used to turn the thermostat on or off and to set the thermostat for pan temperatures between 175° and 425°F.
2. The power tilt switch, also located on the control console, which is used to raise or lower the pan body
3. The main supply gas cock, installed on the gas line to the unit.
4. For NHFP only, the manual valve on the Combination Gas Control Valve, which is located under the pan on the gas line to the burner manifold. This valve selects settings of "OFF", "PILOT", or "ON" for the Combination Control.



Control for Thermopile System — Model NHFP

### B. Operating Procedure

**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.

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

#### 1. For Model NHFP with Thermopile System

##### a. To Start Pan

- (1) Set thermostat to "OFF".
- (2) Light gas pilot.
  - (a) Set knob on Combination Gas Control Valve to "OFF" by depressing the knob slightly and turning it clockwise.

##### b. To Shut Off Pan

- (1) Set the thermostat dial to "OFF".
- (2) To turn off the gas pilot, depress the knob on the Combination Control and turn it clockwise to "OFF".

##### c. To Relight Pilot

- (1) Close the main supply gas cock.

(b) Open the main supply gas cock.

(c) Tilt the pan, so the pilot burner is easier to reach.

(d) Hold a lighted match at the pilot burner, while you depress the knob on the Combination Control and turn it counterclockwise to the "PILOT" position. Continue to hold the knob down for 60 seconds.

(e) Release the knob. The pilot flame should stay lighted.

(f) Turn the knob counterclockwise to "ON".

(3) Turn the thermostat dial to the desired temperature.

- (2) Set the thermostat to "OFF".
- (3) Depress the knob on the Combination Control and turn it clockwise to "OFF".
- (4) Wait 5 minutes, then proceed as instructed at "To Start Pan" above.

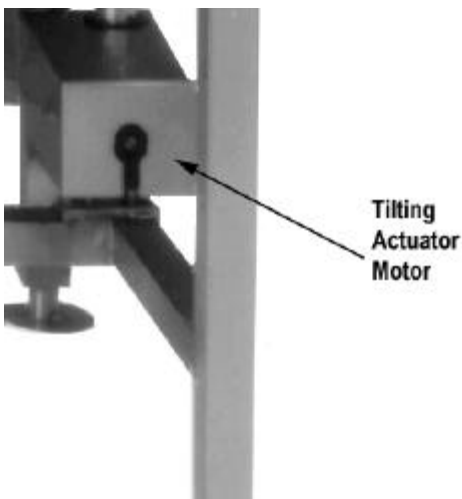
**2. For Model NHFP(E) with Hot Surface Igniter**

**a. To Start Pan**

- (1) DO NOT attempt to light the burner with a flame.
- (2) Turn on the electrical service to the unit.
- (3) Turn the main supply gas cock ON (handle parallel to the gas pipe).
- (4) Turn the thermostat dial to the desired temperature setting.

**b. To Turn Off Pan**

- (1) Set the thermostat to "OFF".
- (2) For a prolonged shut-off period:
  - (a) Set the thermostat to "OFF".
  - (b) Turn the main gas cock OFF



(handle at right angles to the gas pipe).

- (c) Disconnect the electrical power from the unit.



**WARNING**  
**WHEN TILTING BRAISING PAN FOR PRODUCT TRANSFER:**

- 1) WEAR PROTECTIVE OVEN MITT AND PROTECTIVE APRON.
- 2) USE CONTAINERS DEEP ENOUGH TO CONTAIN AND MINIMIZE PRODUCT SPLASHING
- 3) PLACE CONTAINER ON A STABLE, FLAT SURFACE, AS CLOSE TO THE BRAISING PAN AS POSSIBLE.
- 4) STAND TO THE SIDE OF THE PAN WHILE POURING — NOT DIRECTLY IN THE POUR PATH OF HOT CONTENTS.
- 5) RETURN PAN BODY TO UPRIGHT POSITION AFTER CONTAINER IS FILLED OR TRANSFER IS COMPLETE.
- 6) DO NOT OVERFILL CONTAINER. AVOID DIRECT SKIN CONTACT WITH HOT CONTAINER AND CONTENTS

**3. To Tilt Either Model**

- a. Press the power tilt switch down to raise the pan or up to lower the pan.
- b. The spring loaded switch will return to the OFF (middle) position when you release it.
- c. If the power tilt mechanism stops working (see the Troubleshooting section) and you must raise or lower the pan body without delay, you can tilt the body by hand. Fit the provided hand crank onto the slotted shaft end that sticks out of the actuator motor (the end facing the front of the unit). Turn the crank clockwise to lower the pan or counterclockwise to raise the pan. It may take several minutes to crank the pan to the desired position, but the operation can be speeded up by substituting a reversible electric drill with screwdriver bit in place of the hand crank.

#### 4. To Move a Unit on Casters

The unit must be anchored with a cable or chain to avoid accidentally breaking or pulling loose the gas connection. When the unit is to be moved, first turn off and disconnect the gas connection. Disconnect the cable from its anchor point on the floor or wall. Anchor the unit again as soon as it is in its new operating location or returned to the previous location. Turn on the gas supply and check for leaks with a soap solution. If leaks are found do not operate the equipment. Call for service.

#### 5. To Preheat the Pan

- a. For best braising or frying results, preheat pan before you put in any food.
- b. To get an even temperature across the pan, preheat at a setting of 300°F or less for 15 minutes or through several on-off cycles of the burner.

**WARNING**  
DO NOT HEAT AN EMPTY PAN FOR MORE THAN FIVE MINUTES AT A SETTING HIGHER THAN 300°F. DAMAGE TO THE PAN COULD RESULT.

#### c. Cooking

1. To simmer or slowly heat an item, set the dial at about 210°F or lower. Put the cover down to keep moisture loss at a minimum, or leave the cover up to help dry the product. Set the thermostat higher to cook or drive off moisture faster. You may adjust the thermostat to any setting in the thermostat range to cook the item exactly as required.

2. Leave the cover vent open to let excess steam escape. For long simmering operations, you may wish to close the vent. To check cooking progress when the cover has been closed, grasp the plastic handle of the vent cover, lift it slightly, and move it quickly to either side.
2. Standing to one side of the pan (to avoid the steam that will be released) grasp the nearer corner of the cover handle and raise the cover. The cover will stay in the open position until you push it down.
4. To pour or dump product, remove grease, or assist cleaning, first raise the cover, then tilt the pan up and forward by pressing down on the power tilt switch. When you release the switch, the pan body will hold its position.

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

#### D. Cleaning

After each use, turn the thermostat to "OFF" and clean all food-contact surfaces to maintain proper sanitation. At the end of each day or at least once every 12 hours, turn off the heat and shut off the electric power to the unit, then clean both the interior and the exterior of the pan. See page 11 for cleaning instructions.

## Sequence of Operation

The following "action-reaction" outline is provided to help the user understand the functioning of the equipment.

#### A. Model NHFP

When the operator presses down the knob on the Combination Gas Control Valve and turns it to "PILOT", gas from the supply line is admitted to the pilot

burner. Depressing the knob in this position overrides the automatic control, which otherwise shuts off the gas supply when the thermopile is cold.

Lighting and maintaining the pilot flame

for sixty seconds heats the thermopile to operating temperature, so the thermopile begins to provide electric current at 750 millivolts. Electricity from the thermopile powers the control circuit and the Combination Gas Control Valve. When the thermopile begins operating at full capacity, the knob may be released.

When the knob is turned "ON", the automatic valve for the main burner becomes able to open. Setting the thermostat causes a signal to be sent to the valve, which opens and admits gas to main burner. Gas from the main burner is ignited by the pilot flame. When the pan reaches the set temperature, the thermostat switch opens, stopping the signal to the main burner valve.

This causes the valve to close. When the pan cools below the set temperature, the thermostat switch closes and starts another heating cycle. On-off cycling continues and maintains the pan at the set temperature.

## **B. Model NHFP(E)**

When the operator sets the desired temperature on the thermostat dial, the thermostat switch closes and causes electric current to heat the Hot Surface igniter. When the igniter gets hot enough to ignite gas, a sensor built into the electronic module signals the automatic gas control valve, which admits gas to the burner. Gas flowing from the burner is ignited directly by the igniter. A separate sensor detects flame at the burner and sends a signal that turns off electric power to the igniter. If flame is not sensed within 30 seconds, a timer shuts off the gas flow.

When the pan reaches the set temperature, the thermostat switch opens, stopping the signal to the gas control valve and causing the valve to close. When the pan cools below the set temperature, the thermostat switch closes and starts another heating cycle. On-off cycling continues and maintains the pan at the desired temperature.

## **C. Both Models**

The thermostat controls heating by alternately calling for flames at the full capacity of the main burner and then signaling the control to shut the burner off completely.

Because the control works in this "all or nothing" manner, the pan heats as fast as it can until it reaches the set temperature, no matter what that temperature is. Turning the thermostat dial to a higher setting will cause heating to continue longer, until the pan reaches the higher temperature, but it cannot make the pan heat any faster.

The pans are protected from overheating by the high-limit thermostat. If the pan temperature rises above 425°F, the high-limit thermostat causes the automatic gas control valve to close. When the pan cools, the thermostat automatically resets and permits normal operation to continue.

The power tilt switch controls a reversible motor that drives a ball screw mechanism. When the switch is held in the lowered position, the mechanism raises the pan body. The body rests on trunnions near the front corners, so it tilts forward until the switch is released or the body reaches the vertical limit. Any time the pan is tilted more than ten degrees from the horizontal, a tilt limit switch automatically turns off the gas flow to the main gas burner.

If the tilting motor gets too hot during operation, an overheat protection switch will open and stop the motor. When the motor cools sufficiently, the switch will reset automatically and permit tilting to begin again.

## Cleaning



**WARNING**  
KEEP WATER AND SOLUTIONS OUT OF CONTROLS AND BURNERS. NEVER SPRAY OR HOSE THE CONTROL CONSOLE OR 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.

**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.

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.

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.

5. 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.



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

7. Exterior surface of the unit may be polished with a recognized stainless steel cleaner, such as "Zepper" from Zep Manufacturing Co.

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



Use a sponge, cloth or plastic brush to clean the braising pan.

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.

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, like Lime-Away from ECOLAB, in accordance with the manufacturer's directions. Rinse and drain the unit before further use.

10. If especially difficult cleaning problems persist, contact your cleaning product representative for assistance. The supplier has a trained technical staff with laboratory facilities to serve you.



Scrapers or steel wool can harm the braising pan surface.

## 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.



**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 ther equipment.

## 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 •, 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 COCK. ALLOW FIVE MINUTES FOR UNBURNED 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
• indicates items which must be performed by an authorized technician.		
<b>A. All Models</b>		
Pan will not tilt	User	a. That electrical power supply is on. b. For overheated actuator motor. Wait 15 minutes for motor to cool, then operate the power tilt.
	Auth Service Rep Only	c. For burned out capacitor or motor. •
Burners will not light	User	a. That the main gas supply cock 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. • e. That the tilt limit switch is closed when the pan body is within 10° of horizontal. •
Pan continues to heat after it reaches desired temperature	User	a. Thermostat dial setting
	Auth Service Rep Only	b. Thermostat calibration. • c. Thermostat operation. The thermostat should click when the dial is rotated to settings above and below the temperature of the pan. •
Pan stops heating before reaching desired temperature.	User	a. Thermostat dial setting.
	Auth Service Rep Only	b. Thermostat calibration. • c. Thermostat operation. The thermostat should click when the dial is rotated to settings above and below the temperature of the pan. •
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.

SYMPTOM	WHO	WHAT TO CHECK • indicates items which must be performed by an authorized technician.
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**B. Model NHFP with Thermopile Ignition System**

Pilot will not light.	User	a. Lighting procedure, to ensure that the instructions in the Operation section of this manual are followed
	Auth Service Rep Only	b. That the pilot gas supply line is purged of air. • c. Pilot gas adjustment screw, to ensure that it is open. • d. Pilot tubing and orifice for clogging. •
Pilot flame goes out when Combination Control knob is released.	Auth Service Rep Only	a. Pilot gas adjustment. • b. That electrical connections from Powerpile generator to Pilotstat power unit and to Powerpile operator are clean and secure. • c. Open and closed circuit output voltages of the generator against the Acceptable Range Charts in the manual for the W720 Systems Tester. • d. Resistance of the Pilotstat power unit. • e. If an appropriate meter is not available, replace first the generator, than the power unit. •
Pan will not heat, and pilot light is out	User	a. That the knob on the Combination Gas Control Valve is in the "ON" position. b. Pilot tubing and orifice for clogging.
	Auth Service Rep Only	c. That electrical connections from Powerpile generator to Pilotstat power unit and to Powerpile operator are clean and secure. • d. Open and closed circuit output voltages of the generator against the Acceptable Range Charts in the manual for the W720 Systems Tester. • e. If an appropriate meter is not available, replace the generator. •
Pan will not heat, but pilot light is burning.	Auth Service Rep Only	a. <b>That high-limit thermostat switch is closed. •</b>

**C. Model NHFP(E) with Hot Surface Ignition System (Refer to Schematic)**

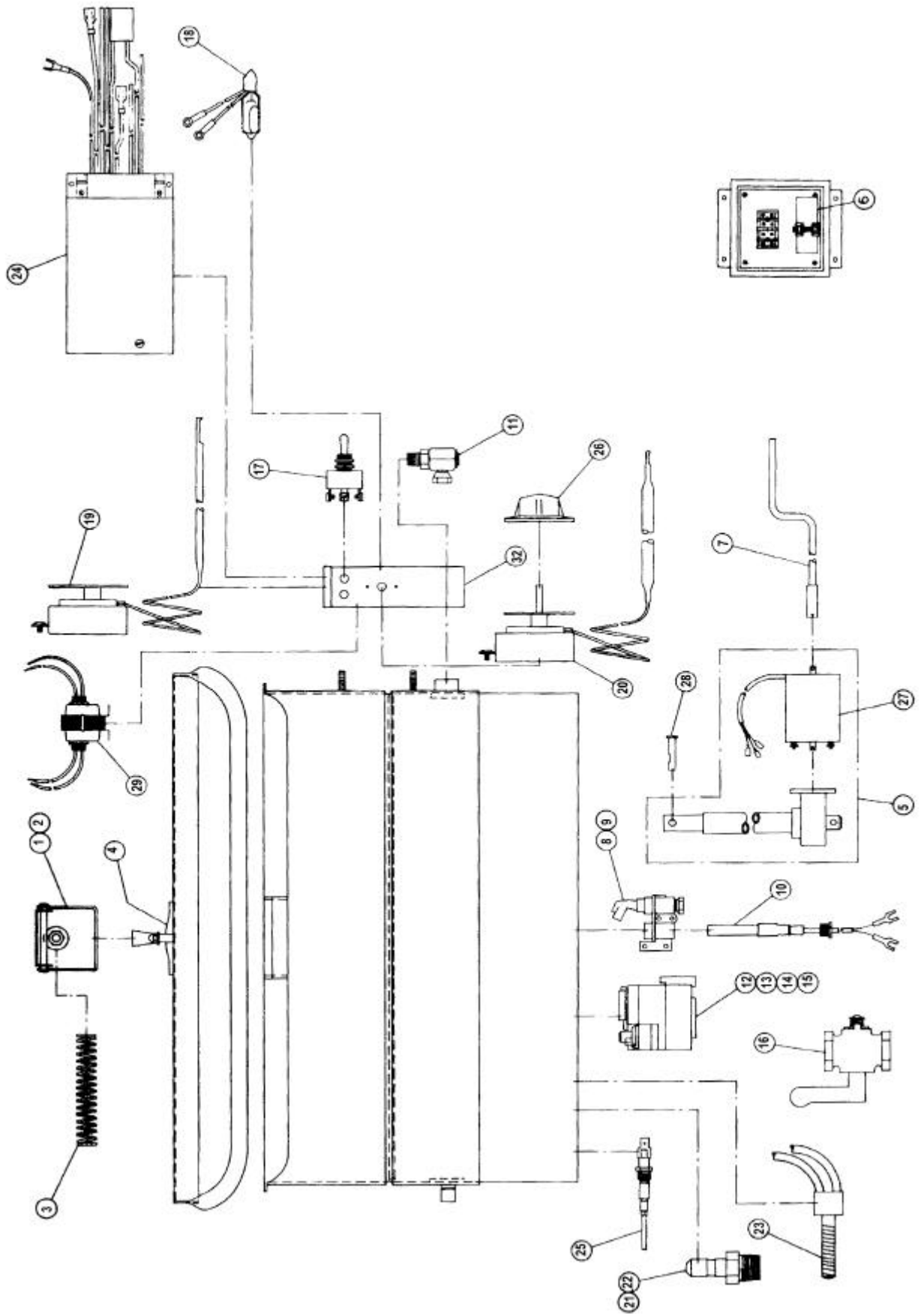
Burner does not come on, and glow coil does not heat.	User	a. That electric power is being supplied to the unit.
	Auth Service Rep Only	b. For 115V input to the control module. • c. For a 24V supply at the transformer. • d. For 24V between pins "2" and "4" of the control module. If not present, check the thermostat/high-limit circuit for open thermostat switches . • e. Voltage of supply to the igniter by removing the igniter plug from the receptacle of the control module and reading voltage across the pins of the igniter receptacle. If 115V is present, replace the igniter. If 115V is not present, replace the control module. • f. Voltage across the terminals of the main gas valve solenoid. If 24 VAC is present, replace the gas valve assembly. If not, replace the control module. •

SYMPTOM	WHO	WHAT TO CHECK
Burner does not come on, but the igniter heats.	Auth Service Rep Only	<p style="text-align: center;">• indicates items which must be performed by an authorized technician.</p> <ul style="list-style-type: none"> <li>a. Voltage across the terminals of the gas valve solenoids. If 24 VAC is present, replace the gas valve assembly. If not, replace the control module. •</li> <li>b. Ground connection of module terminal "12" (green wire) for firm attachment. •</li> <li>c. Flame sensing probe and wire "11" (blue) for a short to ground. If necessary, correct the short or replace the probe. •</li> <li>d. For a short to ground at 24V source. If the transformer is shorted, remove the short and replace the control module. •</li> <li>e. After the transformer has been replaced, check the flame sensing function. If flame sensing is not working, reverse the leads of either the 115V or 24V side of the control transformer. •</li> </ul>

**CAUTION**

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

# Parts List



## Parts List

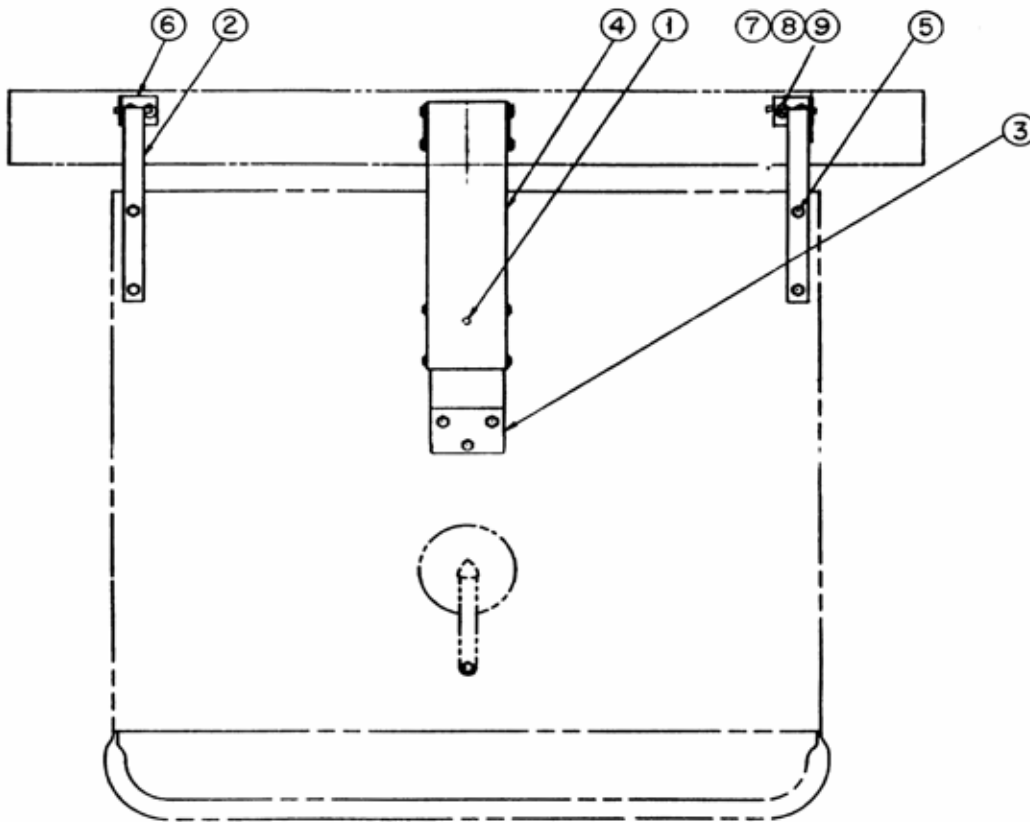
To order parts, contact your authorized Groen Service Agency. Supply the model designation, part description, part number, quantity, and, where applicable, voltage and phase.

Key	Description	Part No.	Key	Description	Part No.
1, 2	Actuator Cover	014085	*	Igniter, 24V	088254
3	Spring	012533	*	Ignition Control 24V	088253
4	Cover Assembly, Vent	017494	*	Bracket	066013
5	Actuator Assembly - Gray Motor/Gray Shaft	132413	25	Flame Sensing Probe	003328
5	Actuator Assembly - Black Motor/Silver Shaft	045880	26	Thermostat Knob	003908
6	Capacitor	099243	27	Actuator Motor	054716
—	Capacitor Box Enclosure	049068	*	Actuator Motor Bracket	049904
7	Crank, Manual, Actuator	050242	28	Support Pin	056909
8	Burner, Pilot, Natural Gas	001125	29	Transformer	074839
9	Burner, Pilot, Propane Gas	001129	30	Orifice Igniter Tube	see table
10	Thermopile	001126	31	Runner Tube, Size 2	073190
11	Joint, Swivel, ½ NPT	076680	31	Runner Tube, Size 3	055008
12	Valve Ctrl Nat Gas Standing Pilot	002648	31	Runner Tube, Size 4	046406
13	Valve Ctrl Propane Standing Pilot	002649	32	Box	050378
14	Valve Ctrl Nat Gas Carb Ignition	049555	*	Spacers	012733
15	Valve Ctrl Propane Carb Ignition	049557	*	Back Panel, Size 3	054678
16	Valve, Manual Gas Shut-off	005429	*	Back Panel, Size 4	054679
*	Combustion Chamber, Complete	050381	*	Casters	049279
*	Lower Combustion Chamber	070152	*	Casters	049280
17	Switch, Toggle	002664			
18	Tilt Switch	007517			
19	Thermostat, High-limit	013481			
20	Thermostat, Operating	041700			
21	Nat Gas Jet Main Burner	045897			
22	Propane Jet Main Burner	050047			
23	Hot Surface Igniter 115V	054285			
24	Hot Surface Ignition Control Unit	088252			

ORIFICE IGNITER TUBE	
Three Pan, Natural Gas	101622
Four Pan, Natural Gas	101621
Three Pan, Propane Gas	101624
Four Pan, Propane Gas	101623

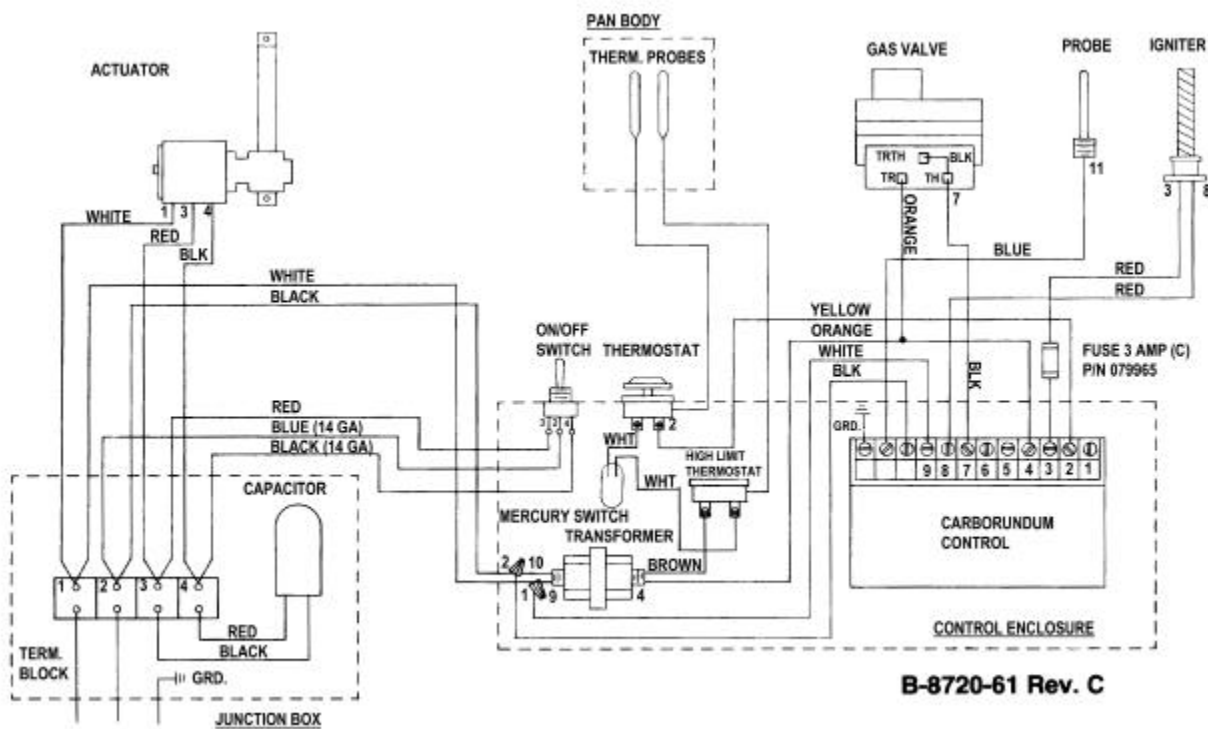
\*Not Shown

## Cover Hinges and Actuator

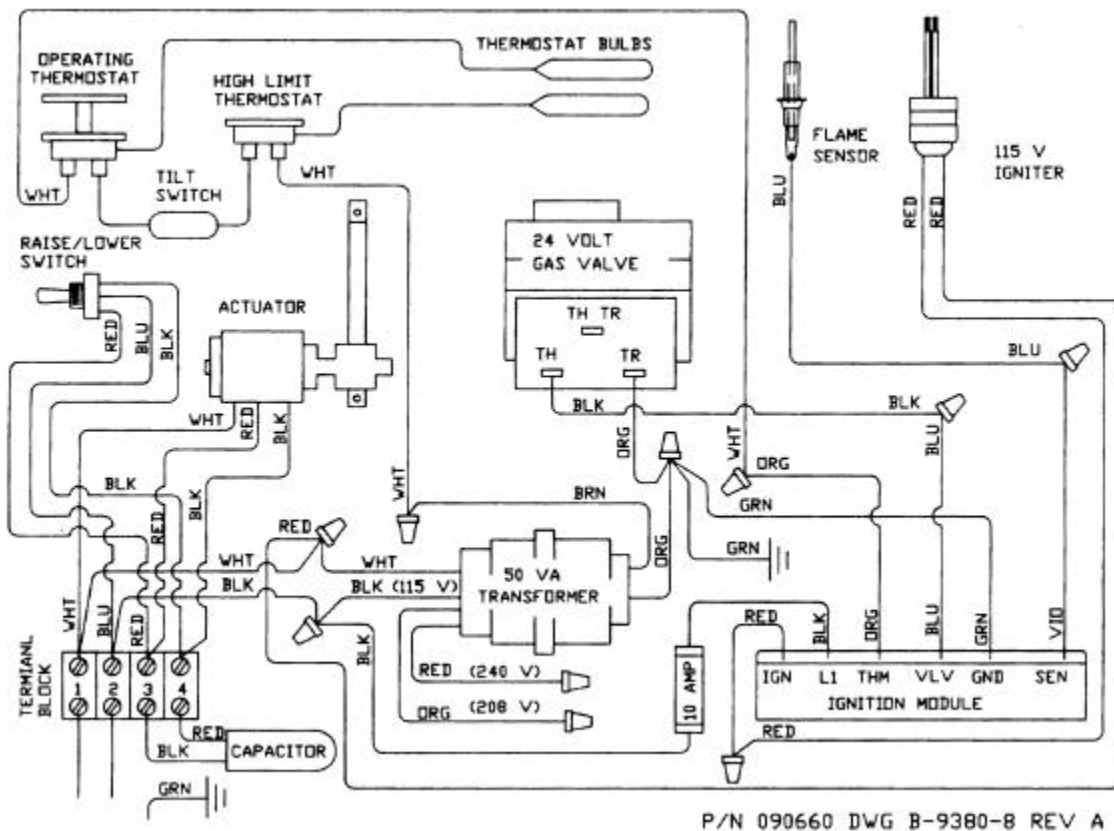


Key	Description	Part No.	
		Size 3 Pan	Size 4 Pan
1	Stud-Weld	012590	012590
2	Hinge, Cover	013485	013485
3	Bracket, Cover Attachment	013277	013277
4	Actuator Assembly	014085	014085
5	Nut, Dome	005471	005471
6	Bracket, Hinge	054876	004556
7	Nut, Hex, 5/16 - 18	003823	003823
8	Washer, Lock 5/16	005656	005656
9	Screw, 5/16 - 18 x 3/4" Long	006014	006014

## Model NHFP(E) with Electronic Coil Ignition

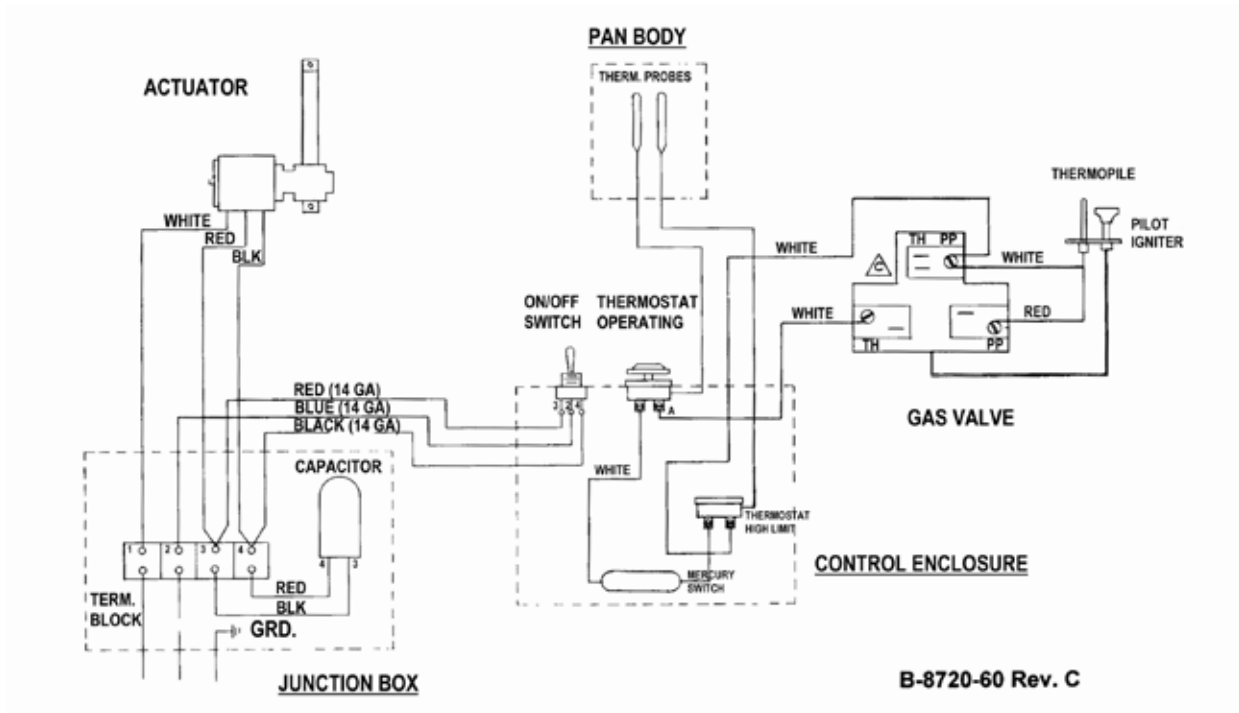


### Wiring Diagram for units built *before* May, 1991

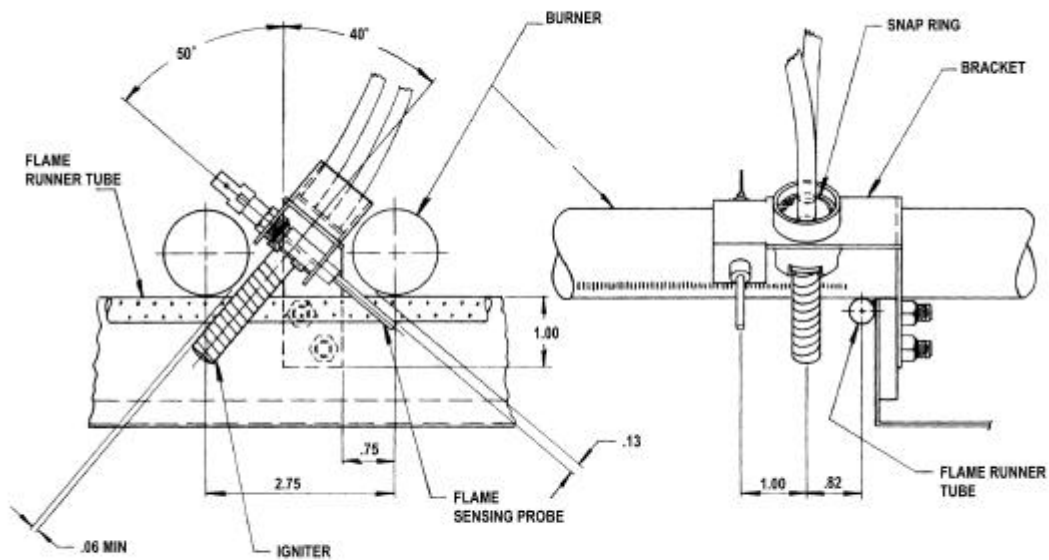


### Wiring Diagram for units built *after* April, 1991

## Model NHFP with Standing Pilot



## Wiring Diagram



## Carborundum Igniter Assembly

## References

American Gas Association Laboratories  
8501 East Pleasant Valley Rd.  
Cleveland, Ohio 44131

*Z223.1-1984 National Fuel Gas Code*

American National Standards Institute  
1403 Broadway  
New York, New York 10018

Canadian Gas Association  
55 Scarsdale Road  
Don Mills, Ontario M3B 2 R3

ECOLAB, INC.  
370 Wabasha  
St. Paul, Minnesota 55102

National Fire Protection Association  
60 Battery March Park  
Quincy, Massachusetts 02269

*NFPA/54 Installation of Gas Appliances &  
Gas Piping*

*NFPA/70 The National Electrical Code*

*NFPA/96 Ventilating Hoods*

National Sanitation Foundation  
3475 Plymouth Road  
Ann Arbor, Michigan 48106

Underwriters Laboratories, Inc.  
333 Pfingsten Road  
Northbrook, Illinois 60062

ZEP Manufacturing  
1390 Lunt Avenue  
Elk Grove Village, Illinois 60007



# Warranty

## Limited Warranty To Commercial Purchasers \*

(Domestic U.S., Hawaii &  
Canadian Sales Only)

Groen Foodservice Equipment ("Groen Equipment") has been skillfully manufactured, carefully inspected and packaged to meet rigid standards of excellence. Groen warrants its 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 the continental United States, Hawaii and Canada.
- II. Damage during shipment is to be reported to the carrier, is not covered under this warranty, and is the sole responsibility of 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, 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 Foodservice Equipment Ordered After October 1, 1995)

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