

**IMPORTANT INFORMATION ☆ KEEP FOR OPERATOR ☆ IMPORTANT INFORMATION**

## OPERATOR MANUAL

Part Number 145340 Rev A

**OM-BPM-E**

DOMESTIC

**MODELS: BPM-30E, BPM-40E  
BPP-30E, BPP-40E  
Braising Pans**

**Eclipse™ Ergonomic  
Tilting Braising Pans**

*Stainless Steel  
Manual or Power Tilt  
Electrically Heated*



Model BPP-30E Shown



**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.**

### **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**



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.



## IMPORTANT — READ FIRST — IMPORTANT

- CAUTION:** BE SURE OPERATORS READ, UNDERSTAND AND FOLLOW THE OPERATING INSTRUCTIONS, CAUTIONS, AND SAFETY INSTRUCTIONS IN THIS MANUAL.
- WARNING:** THIS UNIT IS INTENDED FOR USE IN THE COMMERCIAL HEATING, COOKING AND HOLDING OF WATER AND FOOD PRODUCTS, PER THE INSTRUCTIONS CONTAINED IN THIS MANUAL. ANY OTHER USE COULD RESULT IN SERIOUS PERSONAL INJURY OR DAMAGE TO EQUIPMENT AND WILL VOID WARRANTY.
- WARNING:** ELECTRICALLY GROUND THE PAN AT THE TERMINAL PROVIDED. FAILURE TO GROUND UNIT COULD RESULT IN ELECTROCUTION AND DEATH.
- WARNING:** THE BRAISING PAN MUST BE INSTALLED BY PERSONNEL WHO ARE QUALIFIED TO WORK WITH ELECTRICITY. IMPROPER INSTALLATION COULD RESULT IN PERSONAL INJURY OR EQUIPMENT DAMAGE.
- CAUTION:** STAND AWAY FROM HOT WATER OR FOOD PRODUCTS WHILE TILTING THE PAN. DIRECT CONTACT COULD RESULT IN SEVERE BURNS.
- 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 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 FIVE MINUTES AT A SETTING HIGHER THAN 300° F.
- WARNING:** AVOID ANY EXPOSURE TO THE STEAM ESCAPING FROM THE COVER VENT. DIRECT CONTACT COULD RESULT IN SEVERE BURNS.
- WARNING:** AVOID ALL DIRECT CONTACT WITH HOT EQUIPMENT SURFACES. DIRECT SKIN CONTACT COULD RESULT IN SEVERE BURNS.
- WARNING:** AVOID ALL DIRECT CONTACT WITH HOT FOOD OR WATER IN THE BRAISING PAN. DIRECT CONTACT COULD RESULT IN SEVERE BURNS.
- WARNING:** IF THE PAN CONTAINS ITEMS IN SAUCE OR MELTED FAT, THEY COULD SLIDE FORWARD SUDDENLY DURING TILTING AND CAUSE HOT LIQUID TO SPLASH OUT.
- WARNING:** USE OF ANY REPLACEMENT PARTS OTHER THAN THOSE SUPPLIED BY GROEN OR ITS AUTHORIZED DISTRIBUTORS VOIDS ALL WARRANTIES AND MAY CAUSE BODILY INJURY OR EQUIPMENT DAMAGE. SERVICE PERFORMED BY OTHER THAN FACTORY AUTHORIZED PERSONNEL WILL VOID ALL WARRANTIES.
- WARNING:** TURN OFF ELECTRIC POWER BEFORE WORKING ON INTERNAL COMPONENTS.
- WARNING:** BEFORE ANY CLEANING OPERATION, TURN THE THERMOSTAT TO “OFF” TO CUT OFF POWER TO THE HEATING ELEMENTS. BEFORE CLEANING ANY PART OTHER THAN THE INSIDE OF THE PAN, DISCONNECT THE ELECTRICAL SUPPLY AT THE CIRCUIT BREAKER OR FUSE BOX.
- WARNING:** BE CAREFUL TO AVOID CONTACT WITH CLEANING PRODUCTS IN ACCORDANCE WITH SUPPLIER AND MANUFACTURER RECOMMENDATIONS. MANY CLEANERS ARE HARMFUL TO THE SKIN, EYES, MUCOUS MEMBRANES AND CLOTHING. READ THE WARNINGS AND FOLLOW DIRECTIONS ON THE CLEANER LABEL.

## IMPORTANT — READ FIRST — IMPORTANT

- CAUTION:** NEVER LEAVE A CHLORINE SANITIZER IN CONTACT WITH STAINLESS STEEL FOR LONGER THAN 30 MINUTES. LONGER CONTACT CAN CAUSE CORROSION.
- WARNING:** DO NOT USE ANY FUSE WITH A HIGHER AMP RATING THAN THE RATING SPECIFIED FOR THAT CIRCUIT.
- WARNING:** KEEP WATER AND SOLUTIONS OUT OF CONTROLS AND ELECTRICAL EQUIPMENT. NEVER USE A HIGH PRESSURE HOSE TO CLEAN THE BRAISING PAN.
- WARNING:** BEFORE REPLACING ANY PARTS, DISCONNECT THE UNIT FROM THE ELECTRIC POWER SUPPLY.
- IMPORTANT:** SERVICE PERFORMED BY OTHER THAN FACTORY AUTHORIZED PERSONNEL WILL VOID WARRANTIES.

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# OM-BPM-E

## Equipment Description

The Groen BPM-E is a stainless steel, electrically heated Braising Pan which is equipped with integrated heating elements, a hand operated or motor powered tilting mechanism, electrical controls and a 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 non-pressure steamer.

The pan body is constructed of heavy-duty stainless steel, welded into a solid piece. It has a polished interior and exterior finish. A pouring lip is welded to the top of the front wall. The cooking surface is a stainless steel clad plate fitted with clamped-on electrical heating elements. The elements are positioned to ensure uniform heat transfer over the entire surface.

Models BPM and BPP are mounted on an open-leg frame which is fabricated from tubular stainless steel. Models MW/BPM and MW/BPP are designed to be wall-mounted with side support arms and a back-splash. They do not have legs.

An easily operated worm and gear mechanism tilts the pan body and provides precise control for pouring or dumping its contents.

This tilting mechanism is located in a stainless steel console to right of the pan body. For power tilt units a three position switch on the front of the control console gives the operator positive, smooth-acting control of tilt. To facilitate cleaning, the pan body can be tilted past the vertical position.

Heating elements and other electrical components are enclosed for safety. The thermostat, heating indicator light and tilting switch are contained in a compact control console which is mounted to the right of the pan body.

The thermostat provides automatic control of cooking temperature. Turning the thermostat dial starts and stops heating and sets the pan temperature. Only one electrical connection is required to install the unit.

A vented, heavy gauge, one-piece, stainless steel cover with a rear condensate drip shield on the underside is standard on the Braising Pan. A fully enclosed torsion bar-type counter-balance provides easy operation to open the cover to maintain it open at any position. The cover opens to the back. It is hinged to the frame, so it moves independently from the pan body.

The following sizes and options are available:

MODELS	Pan Dimensions (Inside)		
	Left to Right	Front to Back	Depth
<b>BPM-30E</b>	26.25	28.25	10"
<b>BPP-30E</b>	26.25	28.25	10"
<b>BPM-40E</b>	35.75	35.75	10"
<b>BPP-40E</b>	35.75	35.75	10"

The following optional equipment may be added to any floor model listed above:

- |   |                                 |
|---|---------------------------------|
| 1. Fill faucet - swing spout<br>single or double pantry                         | 6. Steamer insert set           |
| 2. Fill faucet - 48" or 60" spray<br>hose assembly - single or<br>double pantry | 7. Steamer pan carrier          |
| 3. Caster mounting kit  | 8. Pouring Lip Strainer         |
| 4. Flanged Feet Kit   | 9. Strainer for 2" TDO<br>valve |
| 5. Draw-Off Valve (can not be<br>field installed)                               |                                 |



**Optional 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 - it 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 420 TO 560 LB (190 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.**



**The unit is strapped to a skid and shipped in a heavy cardboard carton.  
(Shown is model BPP-40E with optional right side mounted double pantry faucet assembly.)**

### WARNING

**INSTALLATION OF THE BRAISING PAN MUST BE DONE BY A CERTIFIED ELECTRICIAN OR GROEN AUTHORIZED REPRESENTATIVE QUALIFIED TO WORK WITH ELECTRICITY. IMPROPER INSTALLATION CAN RESULT IN INJURY TO PERSONNEL AN/OR DAMAGE TO EQUIPMENT.**

Internal wiring for the Braising Pan is supplied complete. When you receive the unit, it is ready for connection. A wiring diagram is located inside the control box on the right side of the pan, as well as in this manual (pp. 28-33).

Your pan was performance-tested at the factory to confirm that all controls and heating elements were functioning correctly.

Installation is as follows:

1. Set the unit in place and level it by turning the adjustable feet. Crank the pan body to a completely horizontal position. Check levelness by placing a spirit level on the bottom of the pan. The unit must be level to avoid uneven cooking across the pan.
2. Make a *waterproof* connection with the incoming power line at the electrical service entrance at the bottom of the connection box at rear of control console. A BX connection is **NOT** recommended. **ELECTRICALLY GROUND THE UNIT** at the proper terminal.



3. Provide the proper electrical supply as specified on the electrical information plate. Comply with local codes and the National Electrical Code ANSI/NFPA 7- latest edition.
4. Use only copper wire, rated at least 75°C and of proper gage. See chart on page 8.
5. Standard equipment is shipped ready for 208V, 240V, or 480V, 3-phase operation. Refer to the wiring diagram located on the inside cover of the control box and the instructions below for conversion to single-phase operation.

A jumper wire and “conversion” label are included with the unit. They can be found in a plastic bag attached to the trunnion assembly inside the control box.

### CAUTION

**BEFORE ANY ELECTRICAL CONVERSION, VERIFY THAT THE BRANCH CIRCUIT WIRING IS ADEQUATE TO HANDLE ANY INCREASE IN AMPERAGE REQUIREMENTS. REFER TO THE ELECTRICAL SPECIFICATIONS LISTED BELOW.**

#### 6. For conversion from 3-phase to 1-phase

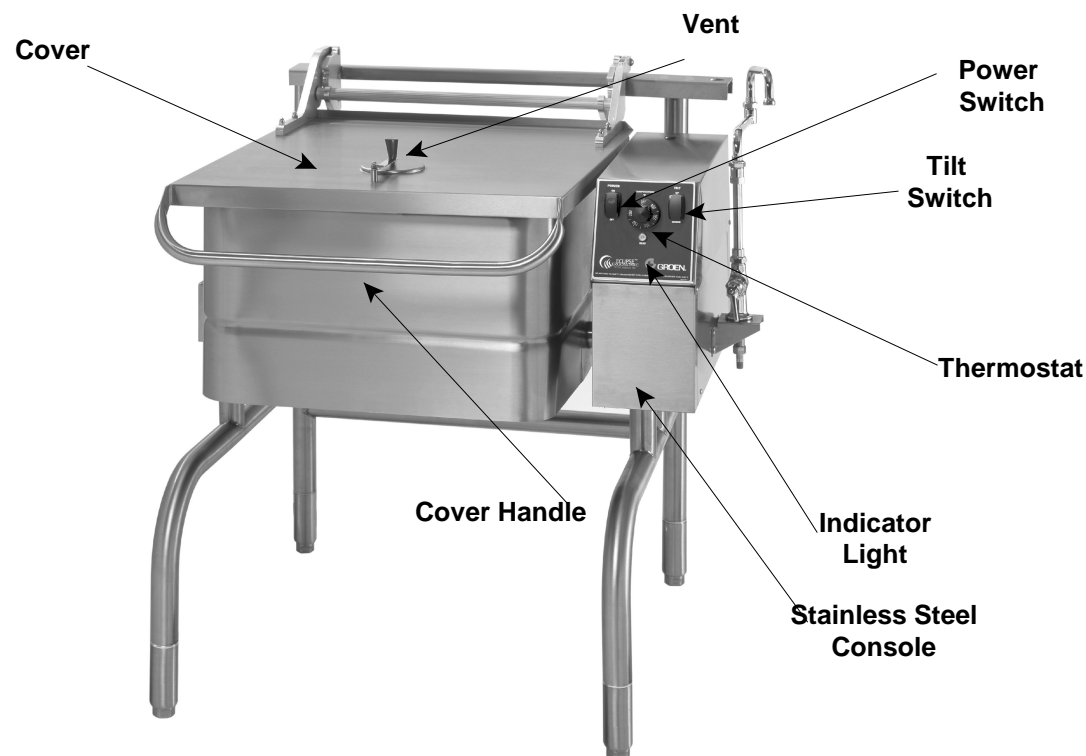
- i. Verify that the branch circuit wiring is adequate for any increased amperage requirements. (See table on next page)
- ii. 1-phase requires two jumper wires. One jumper wire exists on the terminal block for 3-phase input. The second jumper wire is located in a plastic bag inside the control box.
- iii. Attach jumper wires to terminal block as per wiring diagram for 1 phase supply.
- iv. Complete “conversion label” (supplied in bag) and adhere it to the control box near the UL dataplate.

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## Electrical Requirements

**Note: Use only copper wire rated for 75°C or higher**

Model	Power	208 V, 1 Phase		240 V, 1 Phase		208 V, 3 Phase		240 V, 3 Phase		400 V, 3 Ph, 4 Wire		480 V, 3 Phase	
		Amps	Supply Wire	Amps	Supply Wire	Amps	Supply Wire	Amps	Supply Wire	Amps	Supply Wire	Amps	Supply Wire
BPM-30E	11.5 kw	56	#6 AWG	48	#6 AWG	32	#8 AWG	28	#10 AWG	17	#14 AWG	14	#14 AWG
BPP-30E	11.5 kw	56	#6 AWG	48	#6 AWG	32	#8 AWG	28	#10 AWG	17	#14 AWG	14	#14 AWG
BPM-40E	15.3 kw	74	#4 AWG	64	#4 AWG	43	#8 AWG	37	#8 AWG	22.5	#12 AWG	19	#14 AWG
BPP-40E	15.3 kw	74	#4 AWG	64	#4 AWG	43	#8 AWG	37	#8 AWG	22.5	#12 AWG	19	#14 AWG



Model BPP-30E Shown (with optional faucet)



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## 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. Turn on the electrical power to the unit.
3. Put enough water into the pan to cover its bottom to a depth of  $\frac{1}{4}$ " to  $\frac{1}{2}$ " (6 to 13 mm). With the pan body in the horizontal position, note how the water covers the pan bottom. This is a good method to use for confirming that the unit is properly leveled.
4. Set the thermostat to 235° F. The heating indicator light should come on to show that the pan is heating. Heating should continue until the water boils.

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

### WARNING

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

6. Turn the tilting handwheel clockwise to pour out the water and to confirm that the pan body can be tilted smoothly from horizontal to vertical. For BPP models, push the UP/DOWN switch to confirm operation of tilting system.

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

## Operation

### IMPORTANT:

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

### A. Controls

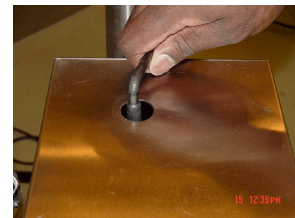
Operator controls for the Braising Pans are:

1. Power ON Switch and Power ON indicator located on the control console.
2. 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 400°.
3. Heating indicator light located on the control console, lights when the burners have ignited.
4. A handwheel controls the worm and gear mechanism that smoothly tilts the pan body and holds it in the desired position.
5. For BPM-30E and BPM-40E models a power tilt switch is located on the control panel. It is used to raise and lower the pan body.

### b. Power Tilt Model -

- (1) Press the power tilt switch marked "up" to raise the pan or "down" to lower the pan.
- (2) The spring loaded switch will return to the OFF (middle) position when you release it.
- (3) 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. Remove the small plug on top of the control box and fit the provided tool into the hole. Turn the tool clockwise to lower it. It may take several minutes to move the pan to the desired position, but the operation can be speeded up by substituting a reversible drill with a  $\frac{1}{4}$  inch hexagonal driver bit in place of the tool.

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



### B. Operating Procedure

1. To Tilt Pan Body

**a. Manual Tilt Model -** Turn the tilting handwheel clockwise to tilt the pan body, or counterclockwise to return the pan body to horizontal. 23 complete turns of the hand-wheel will tilt the body 90 degrees to vertical.

**CAUTION**  
**REPLACE THE HOLE PLUG BEFORE CLEANING OTHERWISE WATER COULD ENTER THE ELECTRICAL CONTROL BOX AND DAMAGE THE PARTS.**

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## CAUTION

**DO NOT OVERFILL THE BRAISING PAN WHEN COOKING, HOLDING OR CLEANING. KEEP LIQUIDS AT LEAST 2-3" (5-8 cm) BELOW THE PAN BODY RIM TO ALLOW CLEARANCE FOR STIRRING, BOILING PRODUCT AND SAFE TRANSFER.**

## WARNING

**WHEN TILTING PAN BODY FOR PRODUCT TRANSFER:**

- 1) WEAR PROTECTIVE OVEN MITT AND PROTECTIVE APRON
- 2) USE DEEP CONTAINER TO CONTAIN AND MINIMIZE PRODUCT SPLASHING.
- 3) PLACE CONTAINER ON STABLE, FLAT SURFACE, AS CLOSE TO KETTLE AS POSSIBLE.
- 4) STAND TO LEFT OR RIGHT OF PAN BODY WHILE POURING - NOT DIRECTLY IN POUR PATH OF HOT CONTENTS.
- 5) POUR SLOWLY, MAINTAIN CONTROL OF PAN BODY HANDLE AT ALL TIMES, AND 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 ITS CONTENTS.



## CAUTION

**KEEP FLOORS IN FRONT OF THE KETTLE WORK AREA CLEAN AND DRY. IF SPILLS OCCUR, CLEAN AT ONCE TO AVOID SLIPS OR FALLS.**

2. Set the thermostat dial to the desired temperature between 100 and 400° F. The Heat Indicator Light shows that the pan is heating. When the light cycles on and off, it indicates that the pan is holding at the set temperature. During these cycles you may hear the contactors in the control box make a clicking sound. This is normal.
3. For best results when braising or frying, preheat the pan before putting in any food. For 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 thermostat.

## WARNING

**DO NOT HEAT AN EMPTY PAN FOR MORE THAN FIVE MINUTES AT SETTINGS ABOVE 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 it up to help dry or reduce the product. Set the thermostat higher to cook or drive moisture off faster. The thermostat may be adjusted to any setting in its range to cook exactly as you wish.
2. Leave the cover vent open to allow excess steam to escape. For longer simmering, you may wish to close the vent to retain moisture.



## WARNING

**AVOID ANY EXPOSURE TO THE STEAM ESCAPING FROM THE COVER VENT. DIRECT CONTACT COULD RESULT IN SEVERE BURNS**

3. To check cooking progress when the cover has been closed, grasp the plastic handle of vent cover and lift it slightly while moving it quickly to either side. Standing at one side of the pan to avoid the steam that will be released, grasp the nearest corner of the cover handle and raise the cover. The cover will stay in the open position until you put it down.

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4. To pour or dump product, remove grease, or assist cleaning, first raise the cover, then tilt the pan up and forward by turning the handwheel clockwise. Whenever you stop turning the wheel, the pan body will hold its position.



**WARNING**  
**AVOID ALL DIRECT CONTACT WITH HOT EQUIPMENT SURFACES. DIRECT SKIN CONTACT COULD RESULT IN SEVERE BURNS.**  
**AVOID ALL DIRECT CONTACT WITH HOT FOOD OR WATER IN THE BRAISING PAN. DIRECT CONTACT COULD RESULT IN SEVERE BURNS.**

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

5. To return the pan to the horizontal position, turn the wheel counter-clockwise.
6. To turn the pan off, turn the thermostat to the "OFF" position.

### D. Routine Clean Up

After each use, turn the thermostat to "OFF" and clean all food contact surfaces to ensure proper sanitation. At the end of the day, or at least once every 24 hours, turn off the heat and shut off electric power to the unit and clean both the interior and exterior of the pan. See Page 13 for more detailed cleaning instructions.

## Sequence of Operation

The following "action-reaction" outline is provided to help you understand how the braising pan actually functions.

When you start up the pan by turning the thermostat from "OFF" to a desired temperature, the thermostat switch closes. This causes the contactors to close, and allows power to flow to the heating elements and the indicator light.

When the pan temperature reaches the value set on the thermostat dial, the thermostat switch opens and causes the contactors to open. This stops the flow of power to the heating elements and the indicator light.

As soon as the thermostat senses that the pan is cooling below the set temperature, the thermostat closes, the contactors close, and the heaters and indicator light come on again.

This on and off cycle continues, maintaining the pan at the set temperature. This is why the indicator light on and off cycling is seen during normal operation.

If the pan temperature exceeds 425° F for any reason, a high-limit thermostat shuts off the power until the pan cools. At that point, the thermostat automatically resets to permit normal operation to start again.

Turning the thermostat to "OFF" shuts down all control and heating circuits.

The thermostat controls heating by alternating between feeding full power and completely cutting power off. The pan heats as fast as it can until it reaches the set temperature, no matter what that temperature is. Turning the thermostat to a higher setting will cause heating to continue longer, until the pan reaches a higher temperature, but it cannot make the pan heat any faster.

Manual tilt models, turning the hand wheel rotates a worm, which turns a gear wheel on one of the trunnions supporting the pan body. Turning the gear produces the tilting action.

Power tilt models, pushing the up/down switch operates a gear motor which turns worm and gear wheel as described above.

For all braising pans, the power to the heaters is cut off when the pan is tilted past a slight inclination of 10° degrees. It is acceptable to cook with the pan tilted forward at a small angle (about 5 - 7 degrees) to let liquids collect to front of pan or allow them to drain out of the draw off valve.

## Cleaning

### 1. Suggested Tools

- a. A good stainless steel cleaner
- b. Brushes in good condition
- c. Cloth for cleaning controls
- d. Chlorine sanitizer
- e. Heavy Duty Cleaner (if required)

### 2. Procedure



**WARNING**  
BEFORE ANY CLEANING OPERATION, TURN THERMOSTAT DIAL TO "OFF" TO CUT ANY POWER TO THE HEATING ELEMENTS. BEFORE CLEANING ANY PART OTHER THAN THE INSIDE OF THE PAN, DISCONNECT ELECTRICAL SUPPLY AT CIRCUIT BREAKER OR FUSE BOX.

- a. Clean all food-contact surfaces soon after use. It is best to clean the pan before it has completely cooled. If the unit is in continuous use, completely clean and sanitize both the inside and outside at least once every 12 hours.

**CAUTION**  
KEEP WATER AND CLEANING SOLUTIONS OUT OF CONTROLS AND ELECTRICAL EQUIPMENT. DO NOT SPRAY OR HOSE THE CONTROL BOX OR OTHER ELECTRICAL CONNECTIONS. THEY ARE NOT WATER-PROOF.

- b. To remove any large amount of food left in the pan, tilt the pan all the way up and flush it with lukewarm water. Do not damage the surface of the pan by scraping it with a metal tool. Scratches make the surface more difficult to clean, and provide ideal **breeding places for bacteria**.



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

- c. Following the supplier's directions, make up a warm solution of the cleaner. Carefully wash the inside and outside of the pan body with the cleaning solution.
- d. Use a cloth moistened with cleaning solution to clean controls, the control console, and electric conduit.



Use a brush, sponge, cloth, plastic or rubber scraper, or plastic wool to clean.



Don't use metal implements or steel wool when cleaning.

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- e. Rinse the pan very well with lukewarm water, and drain it completely.
- f. As part of the daily cleaning program, clean all inside and outside surfaces that may have been soiled. Remember to check such parts as the undersides of the cover, the electrical console and other more remote spots. Clean between the pan body and the consoles using the brush provided (P/N 058705).
- g. Controls and the control console may be cleaned with a damp cloth or sprayed with a garden hose spray connected to city water supply. Do not use a pressure sprayer directly on the unit or electrical parts.
- h. To remove materials stuck to the equipment, use a brush, sponge, cloth, plastic or rubber scraper, or plastic wool with the cleaning solution. To make washing easier, let the cleaning solution sit in the unit and soak into the residue, or heat the solution briefly. Do not use any gritty cleaner or metal tool that might scratch the surface. Scratches make the surface harder to clean, and also provide places for bacteria to grow. Do not use steel wool. Small bit of steel wool left in the surface of the unit can cause rusting and pitting.
- i. The outside of the unit may be polished with a recognized stainless steel cleaner such as Zepper from the Zep Manufacturing Company.
- j. When the equipment needs to be sanitized, use a sanitizing solution equivalent to one that supplies 100 parts per million available chlorine. Get advice about the best sanitizing agent from you supplier of sanitizing products.

- k. Following supplier instructions, apply the sanitizing agent after the unit has been cleaned and drained. Thoroughly drain off the sanitizer.

### CAUTION

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

- l. After the unit has been cleaned, sanitized and drained, let all surfaces air dry unless the unit must be used again right away.
- m. It is recommended that the unit be sanitized just before use. Follow the directions of the sanitizer supplier.
- n. About once a week (more often if the water is very hard), use a heavy duty cleaner to remove any mineral deposits or film left by hard water or foods. Follow the supplier's directions very carefully, and rinse the unit off thoroughly, as soon as cleaning is finished.

### CAUTION

**KEEP CAUSTIC COMPOUNDS SUCH AS FRYER BOILOUT CLEANERS AWAY FROM ALUMINUM PARTS OF THE LID HINGE SYSTEM AND THE COUNTERBALANCE ASSEMBLY. HIGHLY CAUSTIC COMPOUNDS COULD DAMAGE THIS MATERIAL.**

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

## 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 wires and connections and cleaning inside the control console. At least twice a year grease the two trunnion bearings and worm gear.

Groen recommends the use of number two grade LGI lithium grease. Add grease through the zerk fittings on the gear housing until grease flows out of the bearings around trunion shaft. Also, add grease in the gear to cover arc that is in contact with the worm gear. Clean up excess grease.

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

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.

**WARNING**  
**ELECTRICAL POWER MUST BE SHUT OFF BEFORE WORK IS DONE ON INTERNAL COMPONENTS.**

**WARNING**  
**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.**  
**SERVICE PERFORMED BY OTHER THAN FACTORY-AUTHORIZED PERSONNEL WILL VOID ALL WARRANTIES.**

## 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 authorized 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 **X**, the work should only be performed by a qualified service representative.

SYMPTOM	WHO	WHAT TO CHECK
		<b>X</b> indicates items which must be performed by an authorized technician.
Pan will not heat, but indicator light comes on.	Auth Service Rep Only	a. Heating elements for short circuit. <b>X</b>

## OM-BPM-E

SYMPTOM	WHO	WHAT TO CHECK  ✕ indicates items which must be performed by an authorized technician.
Pan will not heat, and indicator light will not light	User	a. That power supply is on.
	Auth Service Rep Only	b. Fuses, accessible by removing caps on the side of the control box.
	Auth Service Rep Only	c. For loose or broken wires.✕ d. Thermostat functioning, by listening for a click when the switch opens or closes.✕ e. Contactor functioning.✕
Pan continues to heat after it reaches desired temperature	User	a. Thermostat dial setting. Turn down if too high.
	Auth Service Rep Only	b. Thermostat functioning.✕
		c. Thermostat calibration.✕ d. Contactor, to determine if it is de-energized.✕
Pan does not reach desired temperature.	User	a. Thermostat dial setting. Turn up if too low.
	Auth Service Rep Only	b. Heating elements for ground short or open (burned out) element.✕
		c. Thermostat functioning, by listening for a click when the switch opens or closes.✕
		d. Thermostat calibration.✕ e. Contactor functioning.✕
Rapid clicking noise (chattering)	User	a. For low voltage.
	Auth Service Rep Only	b. Contactor for dirt or corrosion on the contacts.✕
Uneven cooking due to "hot spots."	User	a. That the pan body is level
Uneven cooking due to "cold spots."	Auth Service Rep Only	a. For open (burned out) heating element.✕
Pan is hard to tilt (Manual Tilt Models)	User	b. Gears for foreign materials, lubrication and alignment.
Pan will not tilt (Power Tilt Models)	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 blown fuse on motor control circuit - Replace fuse with Groen approved equal.✕ d. For damaged DC rectifier and operating relays.✕ e. Correct setting of upper and lower limit switches.✕

### WARNING

**ELECTRICAL POWER MUST BE SHUT OFF BEFORE WORK IS DONE ON INTERNAL COMPONENTS.**

### WARNING

**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.**

**SERVICE PERFORMED BY OTHER THAN FACTORY-AUTHORIZED PERSONNEL WILL VOID ALL WARRANTIES.**



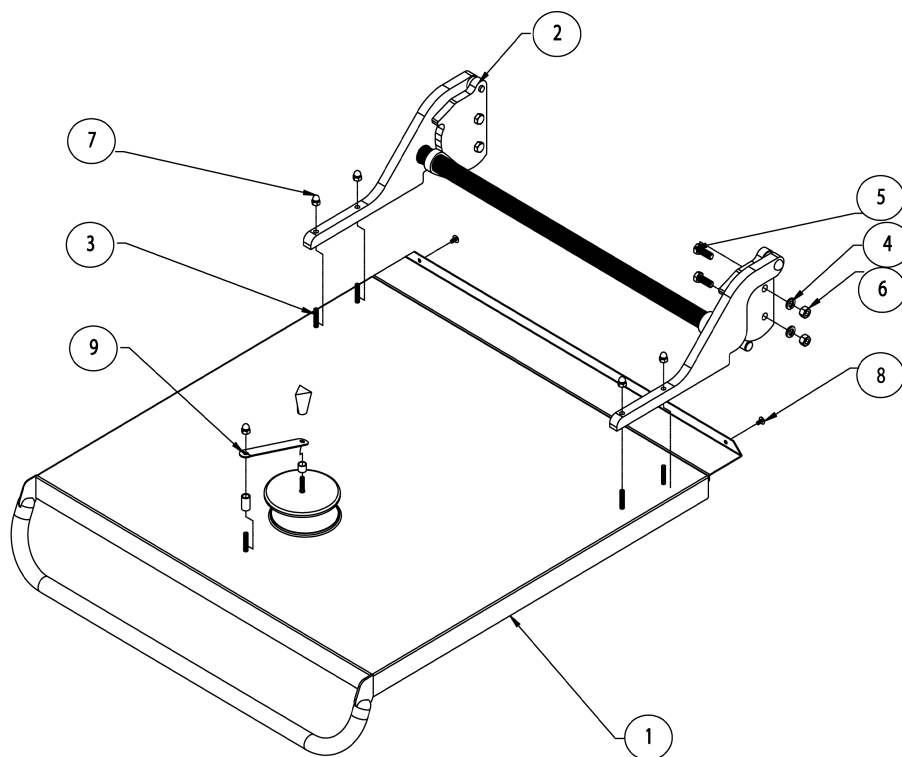
## Stand and Foot Assembly Parts List



STAND & FOOT ASSEMBLY		
Key		Part #
1	CASTER KIT (SET OF 2 WITH BRAKE AND 2 W/O BRAKE)	146354
1	CASTER WITH BRAKE (W/O FOOT ADAPTER)	146513
1	CASTER WITHOUT BRAKE (W/O FOOT ADAPTER)-NOT SHOWN	146515
2	FOOT ADAPTER	146516
3	FLANGED FOOT (W/O FOOT ADAPTER)	146521
4	BULLET FOOT (W/O FOOT ADAPTER)	146628
5	FRICTION RING	146520



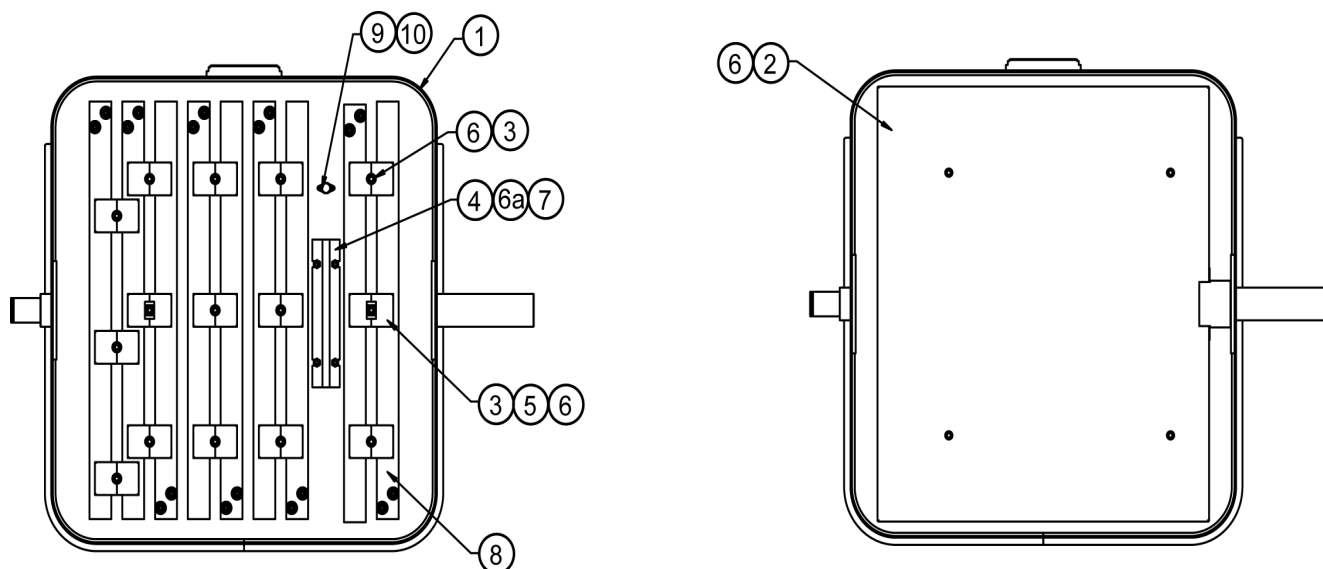
## Cover and Counter Balance Assembly Parts List



Key	Qty	COVER & COUNTERBALANCE ASSEMBLIES	Part #
1	1	COVER ASSEMBLY, 30 GALLON	144812
1	1	COVER ASSEMBLY, 40 GALLON	144453
2	1	COUNTERBALANCE ASSEMBLY, 30 GALLON	145480
2	1	COUNTERBALANCE ASSEMBLY, 40 GALLON	144790
3	4	STUD WELD, 1/4"-20 X 1-1/4"	012589
4	4	WASHER, LOCK 3/8"	005618
5	4	SCREW, HEX HEAD CAP 3/8"-16 X 1"	005612
6	4	NUT, HEX 3/8"-16	005619
7	4	DOME NUTS, 1/4"-20	090567
8	2	SCREW, TRUSS HEAD, #10-32 X 3/8"	004173
9	1	VENT COVER ASSY.	MS17494

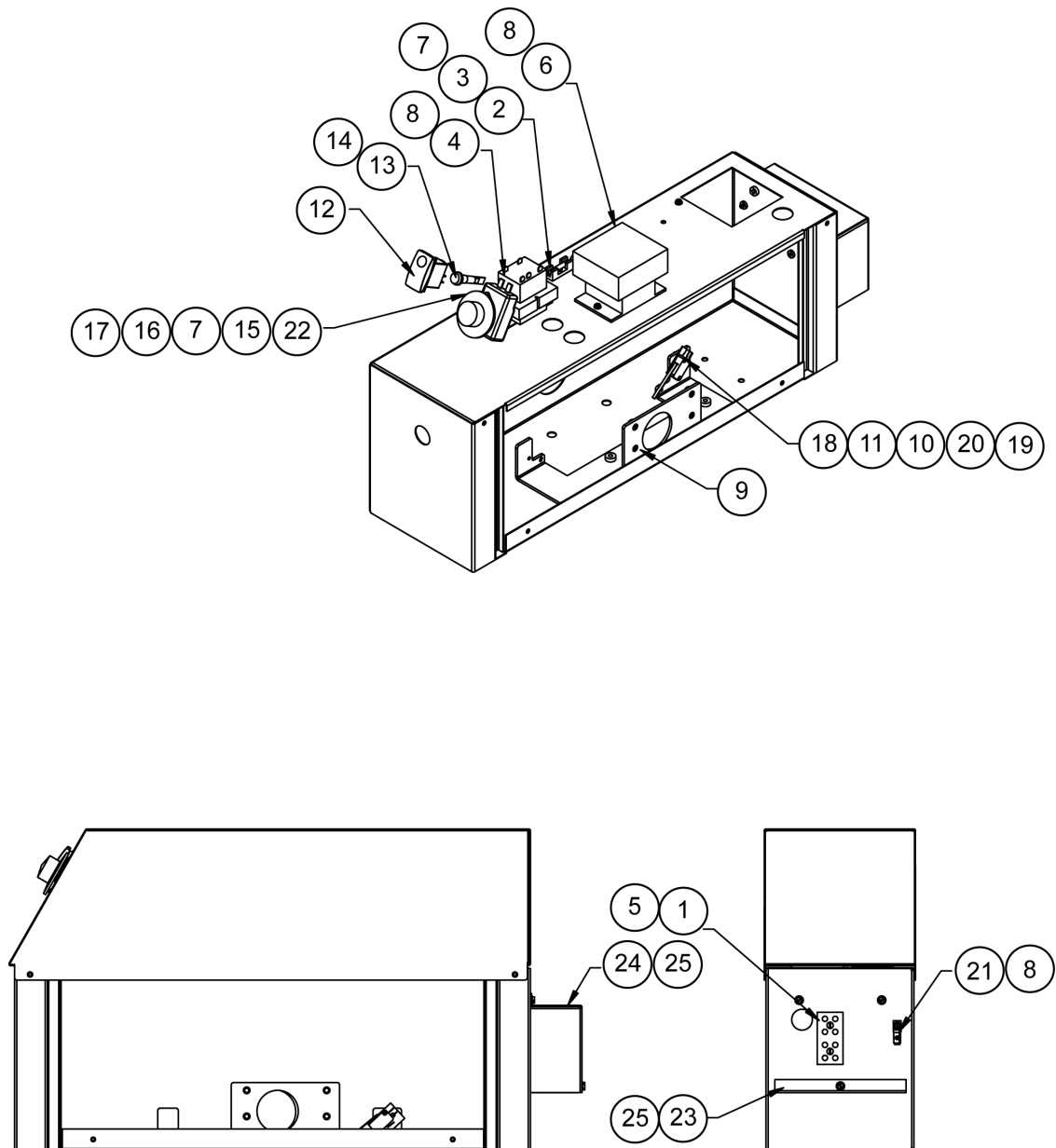
## Pan and Element Cover Assembly

### Parts List



KEY	QTY	DESCRIPTION	PART NO.
<b>PAN &amp; HEATING ELEMENTS</b>			
1	1	PAN WELDMENT, 30 GALLON	145654
1	1	PAN WELDMENT, 40 GALLON	144789
2	1	ELEMENT COVER WELD ASSY., 30 GALLON	146186
2	1	ELEMENT COVER WELD ASSY., 40 GALLON	144343
3	15	HEATER CLAMPS, 30 GALLON	012844
3	18	HEATER CLAMPS, 40 GALLON	012844
4	1	CLAMP THERMOSTAT BULB	012968
5	2	CONDUIT HANGER, 30 GALLON	012852
6a	4	NUT, HEXAGON KEPS 1/4"-20	012940
6b	19	NUT, HEXAGON KEPS 5/16"-18, 30 GALLON	012941
6b	22	NUT, HEXAGON KEPS 5/16"-18, 40 GALLON	012941
6c	4	WASHER, FLAT	
7	15 IN.	WOVEN GLASS TAPE	045226
8	9	HEATER ELEMENTS, 30 GALLONS, 208V	145656
8	9	HEATER ELEMENTS, 30 GALLONS, 240V	146185
8	9	HEATER ELEMENTS, 30 GALLONS, 480V	145657
8	12	HEATER ELEMENTS, 40 GALLONS, 208V	145656
8	12	HEATER ELEMENTS, 40 GALLONS, 240V	146185
8	12	HEATER ELEMENTS, 40 GALLONS, 480V	145657
9	1	THERMOSTAT, HI-LIMIT	142755
10	2	NUT, HEXAGON KEPS #4-40	003121
11	1	HEATER ELEMENT HARNESS, 30 GALLON (NOT SHOWN)	144964
11	1	HEATER ELEMENT HARNESS, 40 GALLON (NOT SHOWN)	144976

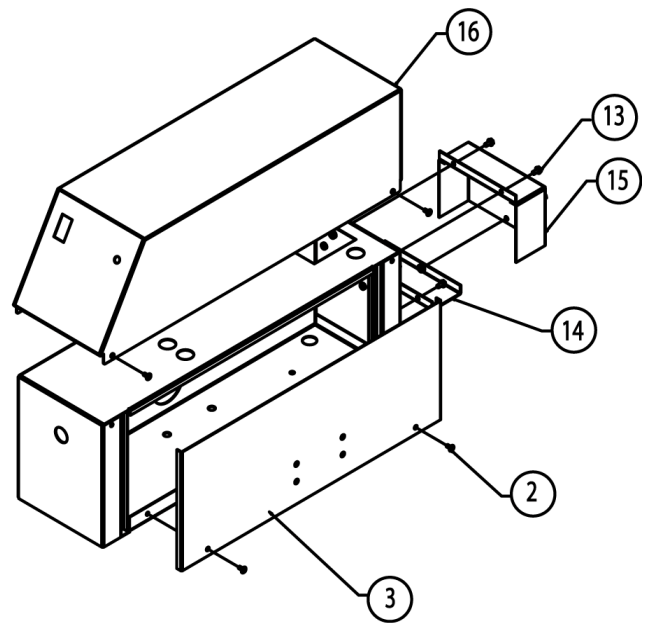
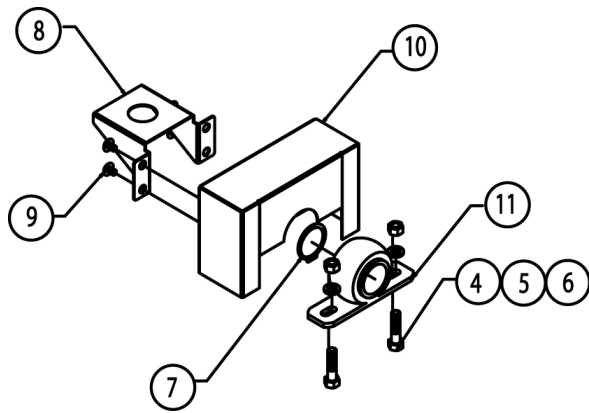
## Electrical Control Components Parts List



## Electrical Control Components Parts List

ELECTRICAL CONTROL COMPONENTS			
KEY	QTY		PART NO.
1	1	TERMINAL BLOCK [4-POLE]	088214
2	1	FUSE HOLDER [MAIN CONTROLS]	077854
3	1	FUSE [24VAC CONTROL, 3A, TYPE AG]	077853
4	1	TRANSFORMER, 208 OR 240 V UNITS	137441
4	1	TRANSFORMER, 480 V UNITS	137694
5	2	SCREW, ROUND HEAD #8-32 X 1-1/4"	005056
6	1	CONTACTOR [4-POLE, 24VAC COIL VOLTAGE], 208/240/480V, 1/3 PH	119811
7	1	SCREW, ROUND HEAD #6-32 X 3/8"	009697
8	6	SCREW, SLOTTED HEX HEAD #8-32 X 3/8"	069789
9	1	TILT SWITCH BRACKET WELD ASSY.	145689
10	1	INSULATION BARRIER	003490
11	1	TILT LIMIT SWITCH (HEAT CUT-OFF)	002982
12	1	POWER SWITCH WITH RED INDICATOR	144857
13	1	LIGHT, INDICATOR AMBER 24V	116384
14	1	LAMP GASKET	137434
15	1	THERMOSTAT ADAPTER	107172
16	1	THERMOSTAT GASKET	123585
17	1	CONTROL THERMOSTAT (ELECTRIC)	002180
18	2	SCREW, ROUND HEAD #4-40 X 3/4"	003122
19	2	NUT, HEXAGON KEPS #4-40	003121
20	2	WASHER, #6 INTERNAL TOOTH	013418
21	1	GROUND LUG	119829
22	1	THERMOSTAT KNOB	003908
23	1	TERMINAL BLOCK BOX BOTTOM	146207
24	1	TERMINAL BLOCK BOX	146205
25	1	SCREW HEX SLOTTED	069773
	1	WIRING HARNESS CONTROL LOW VOLTAGE BPM-30,40E (NOT SHOWN)	144961
	1	HIGH LIMIT THERMOSTAT (ELECTRIC) (NOT SHOWN)	142755
	1	WIRING HARNESS POWER HIGH VOLTAGE BPM-40E (NOT SHOWN)	146193
	1	HARNESS, ELEMENTS, 30 GALLON (NOT SHOWN)	144964
	1	HARNESS, ELEMENTS, 40 GALLON (NOT SHOWN)	144976

## Trunnion Covers Parts List

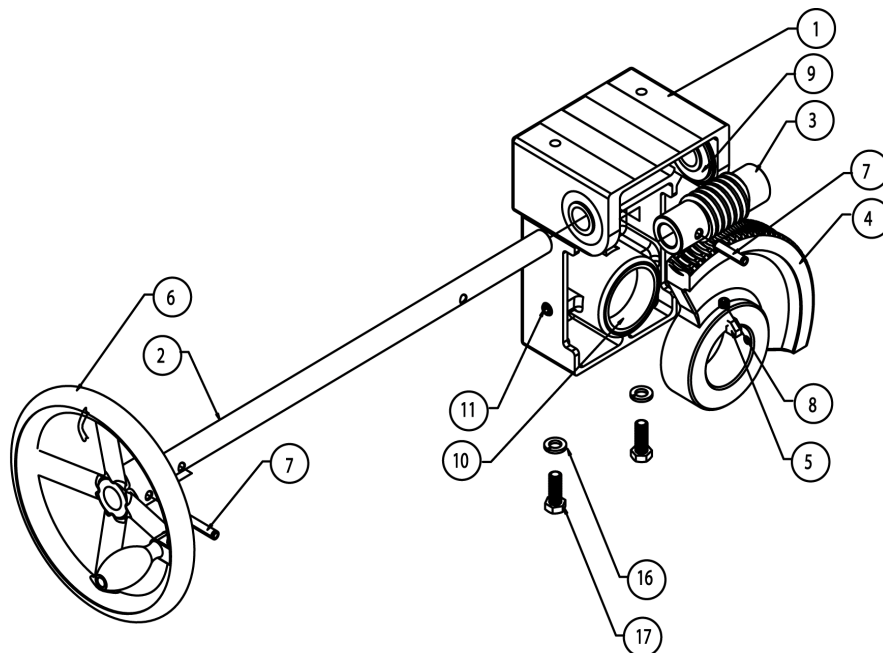


144346

## Trunnion Covers Parts List

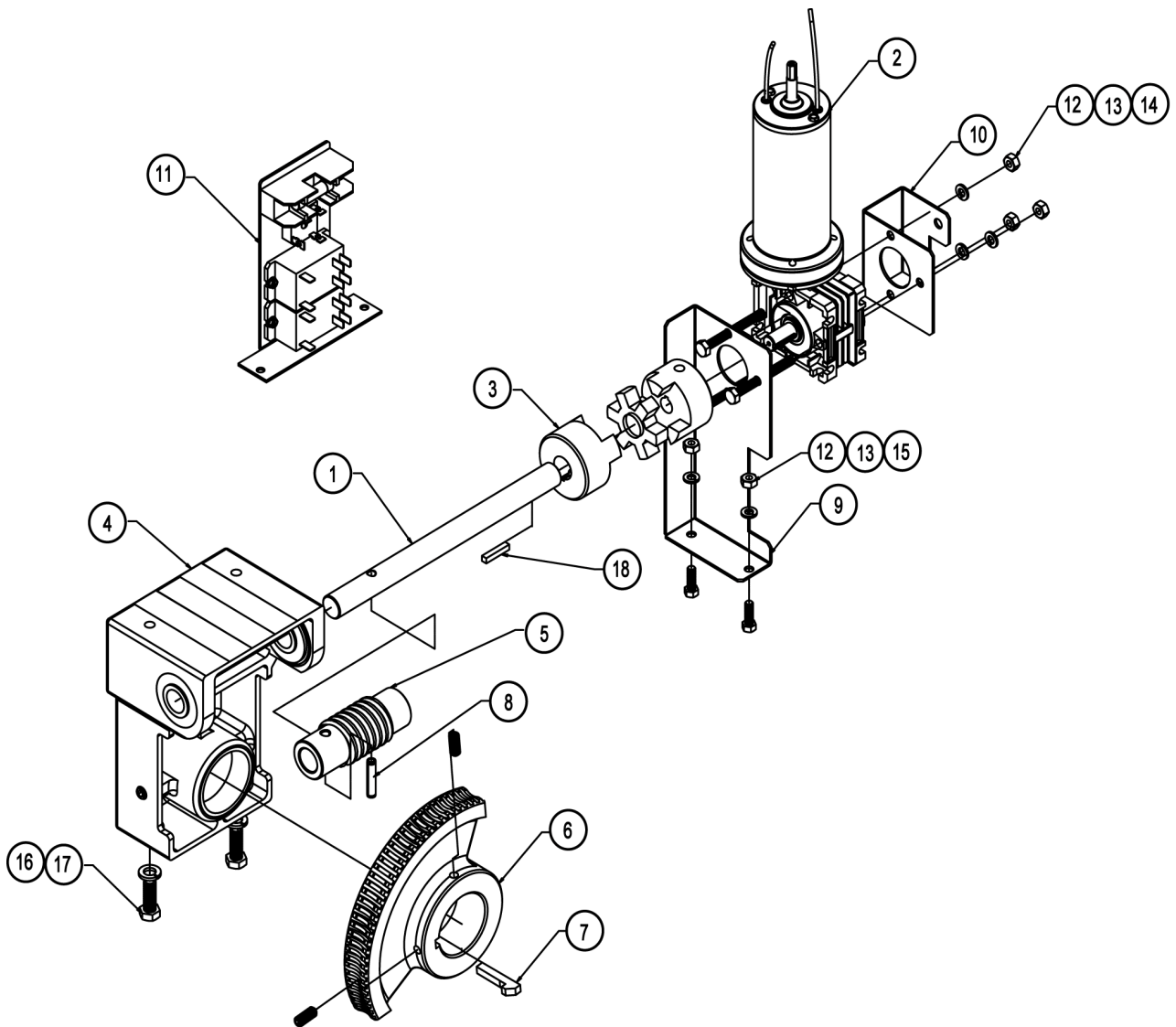
		TRUNNION COVERS	MANUAL TILT	POWER TILT
KEY	QTY		PART NO.	PART NO.
2	6	SCREW TRUSS HEAD	005764	005764
3	1	RIGHT TRUNNION SIDE PANEL	145688	145688
4	2	NUT HEX	005619	005619
5	2	WASHER LOCK	005618	005618
6	2	SCREW HEX HEAD CAP	005615	005615
7	1	RETAINING RING	124764	124764
8	1	FAUCET BRACKET	137738	137738
9	4	SCREW, 1/4-20 x 3/8" TRUSS	125609	125609
10	1	PILLOW BLOCK BOX	144314	144314
11	1	PILLOW BLOCK	002989	002989
13	1	SCREW-HEX SLOTTED	069773	069773
14	1	TERMINAL BLOCK BOTTOM	146207	146207
15	1	TERMINAL BLOCK BOX	146205	146205
16	1	ELECTRICAL PANEL COVER ASSY.	144762	144779
	64 IN	COVER GASKET (not shown)	145662	145662

## Manual Tilt Assembly Parts List



MANUAL TILT ASSEMBLY			
KEY	QTY		Part No.
1	1	GEAR CARRIER	002624
2	1	SHAFT, HANDWHEEL	144834
3	1	GEAR, WORM	128001
4	1	GEAR SECTOR	009829
5	1	KEY GIB	012031
6	1	HANDWHEEL	012061
7	2	PIN ROLL	012614
8	1	SCREW SET SOCKET	012060
9	2	BEARING ROLLER	002790
10	1	BEARING SLEEVE	137239
11	1	PLUG PIPE	010286
14	1	FITTING GREASE 90 (NOT SHOWN)	012195
15	1	BUSHING SNAP (NOT SHOWN)	000453
16	2	WASHER LOCK	005618
17	2	SCREW HEX HEAD CAP	005612

## Electric Tilt Assembly Parts List





## Electric Tilt Assembly Parts List

KEY	QTY	POWER TILT COMPONENTS	PART NO.
1	1	ELECTRIC TILT SHAFT	144791
2	1	POWER LIFT MOTOR 115V-FOR 480V BRAISING PANS	144792
2	1	POWER LIFT MOTOR 208/240V-FOR 208V OR 240V BRAISING PANS	144794
3	1	SHAFT COUPLING	144615
4	1	GEAR CARRIER ASSEMBLY	137880
4a	1	CARRIER GEAR	002624
4b	2	BEARING ROLLER	002790
4c	2	BEARING SLEEVE	137239
4d	1	PLUG PIPE	010286
4e	1	FITTING GREASE 90	012195
5	1	GEAR, WORM	128001
6	1	GEAR SECTOR	009829
6a	2	SCREW SET SOCKET	012060
7	1	KEY GIB	012031
8	1	PIN ROLL	012614
9	1	MOTOR BRACKET	146114
10	1	REAR MOTOR BRACKET	146117
11a	1	FUSE HOLDER [MOTOR]	077840
11b	1	FUSE [MOTOR, LP-CC-2 1/2]	144856
11c	1	RECTIFIER	145660
11d	2	RELAY [24VAC, DPST, NO]-2 REQ'D	119814
12	5	NUT HEX HEAD 1/4"-20	005601
13	5	WASHER LOCK 1/4"	005655
14	3	SCREW HEX HEAD CAP 1/4"-20 X 2-1/2" LONG	052584
15	2	SCREW HEX HEAD CAP	005609
16	2	WASHER LOCK 3/8"	005618
17	2	SCREW HEX HEAD CAP 3/8"-16 X 1" LONG	005612
18	1	ELECTRIC TILT SHAFT KEY	013386
	1	HOLE PLUG-1" (NOT SHOWN)	146369
	1	MANUAL OVERRIDE CRANK (NOT SHOWN)	145659
	1	POWER SWITCH W/O INDICATOR (NOT SHOWN)	144858
	2	TILT LIMIT SWITCH (POWER LIFT UP/DN -2 USED) (NOT SHOWN)	002982
	1	TRANSFORMER (460/115, 300VA)-FOR 480V BRAISING PANS ONLY (NOT SHOWN)	051469
	1	WIRE HARNESS,LOW VOLTAGE-FOR 208V OR 240V BRAISING PANS (NOT SHOWN)	146194
	1	WIRE HARNESS-FOR 480V BRAISING PANS (NOT SHOWN)	146531
	1	WIRE HARNESS-HIGH VOLTAGE-FOR 208V OR 240V BRAISING PANS (NOT SHOWN)	146192
	1	WIRE HARNESS-HIGH VOLTAGE-FOR 480V BRAISING PANS (NOT SHOWN)	146532

## Electrical Heater & Transformer Chart

Model	Power	No. Of Heaters	Heater Part Number			Transformer Part Number		
			208 V	240 V	480 V	208 V	240 V	480 V
BPM-30E	11.5 kw	9	145656	146185	145657	137441	137441	137694
BPP-30E	11.5 kw	9	145656	146185	145657	137441	137441	51469 & 137694
BPM-40E	15.3 kw	12	145656	146185	145657	137441	137441	137694
BPP-40E	15.3 kw	12	145656	146185	145657	137441	137441	51469 & 137694

## References

**NATIONAL FIRE PROTECTION ASSOCIATION**

60 Battery March Park

Quincy, Massachusetts 02269

**NFPA/70**

**The National Electrical Code**

**NATIONAL SANITATION FOUNDATION**

3475 Plymouth Rd.

Ann Arbor, Michigan 48106

**NSF/ANSI - Standard 4**

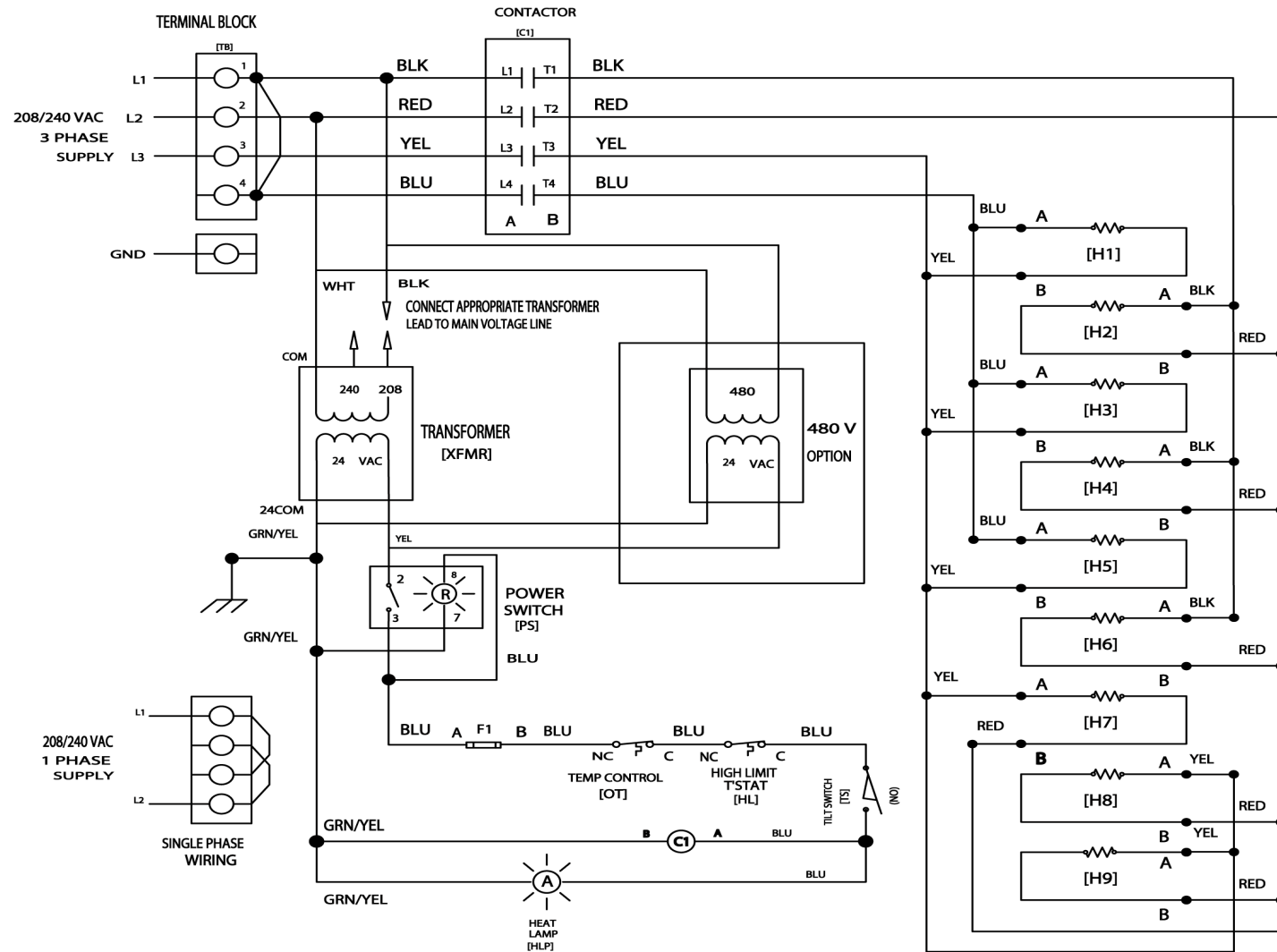
**Underwriters Laboratories, Inc.**

333 Pfingsten Road

Northbrook, Illinois 60062

**UL/ANSI Standard 197**

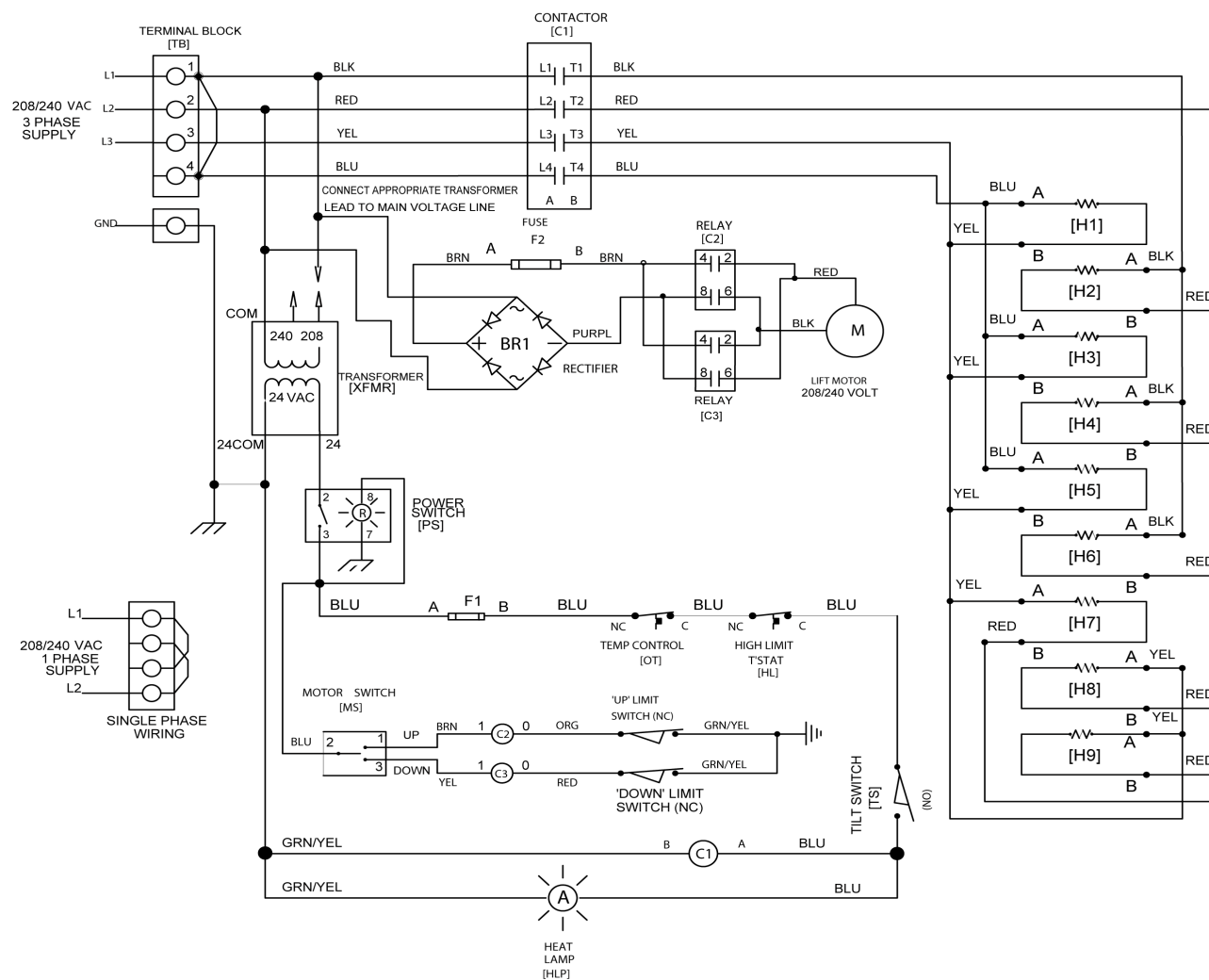
## Diagrams & Schematics



P/N 146188 REV A

BPM-30E 208, 240 and 480 Volts

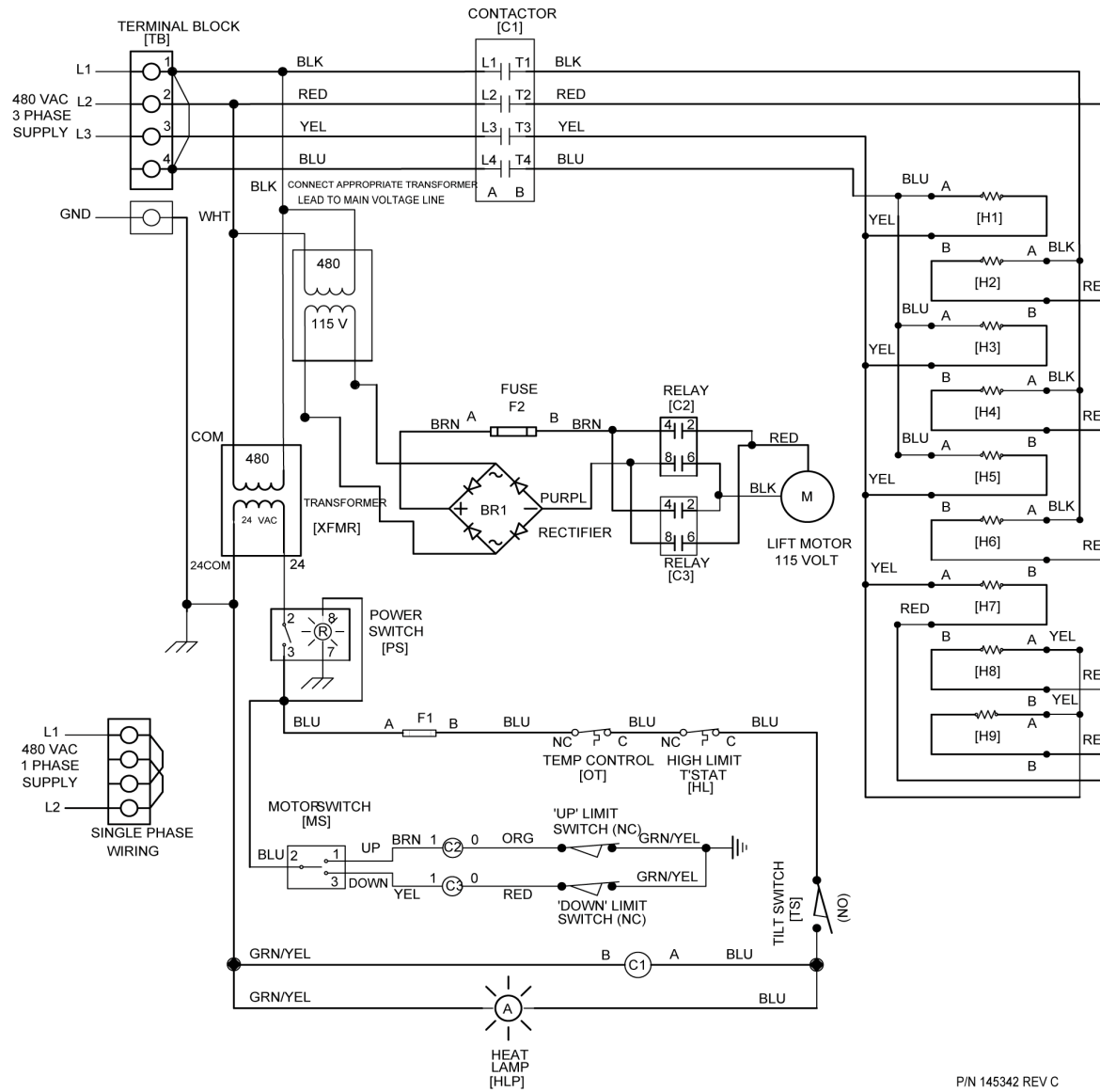
## Diagrams & Schematics Continued



P/N 146189 REV C

## BPP-30E 208 and 240 Volt

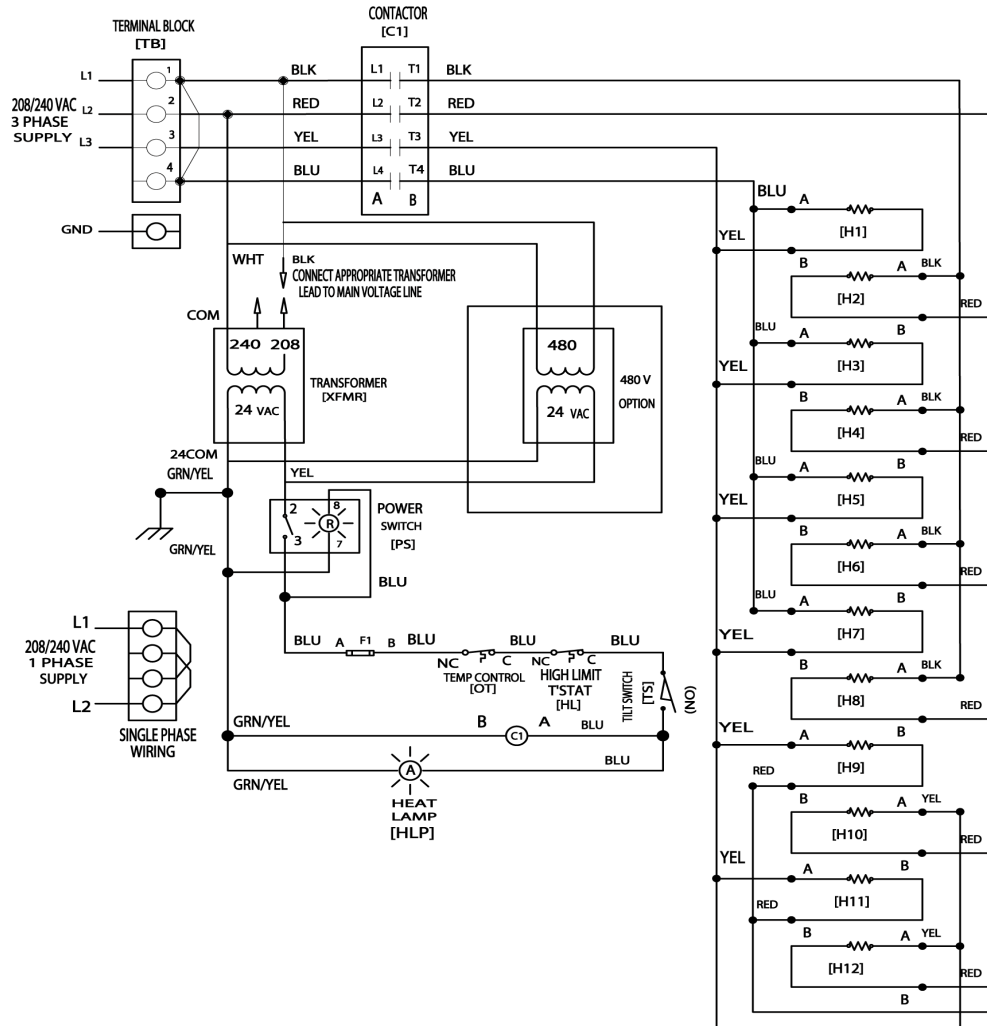
# Diagrams & Schematics Continued



P/N 145342 REV C

**BPP-30E 480 Volt**

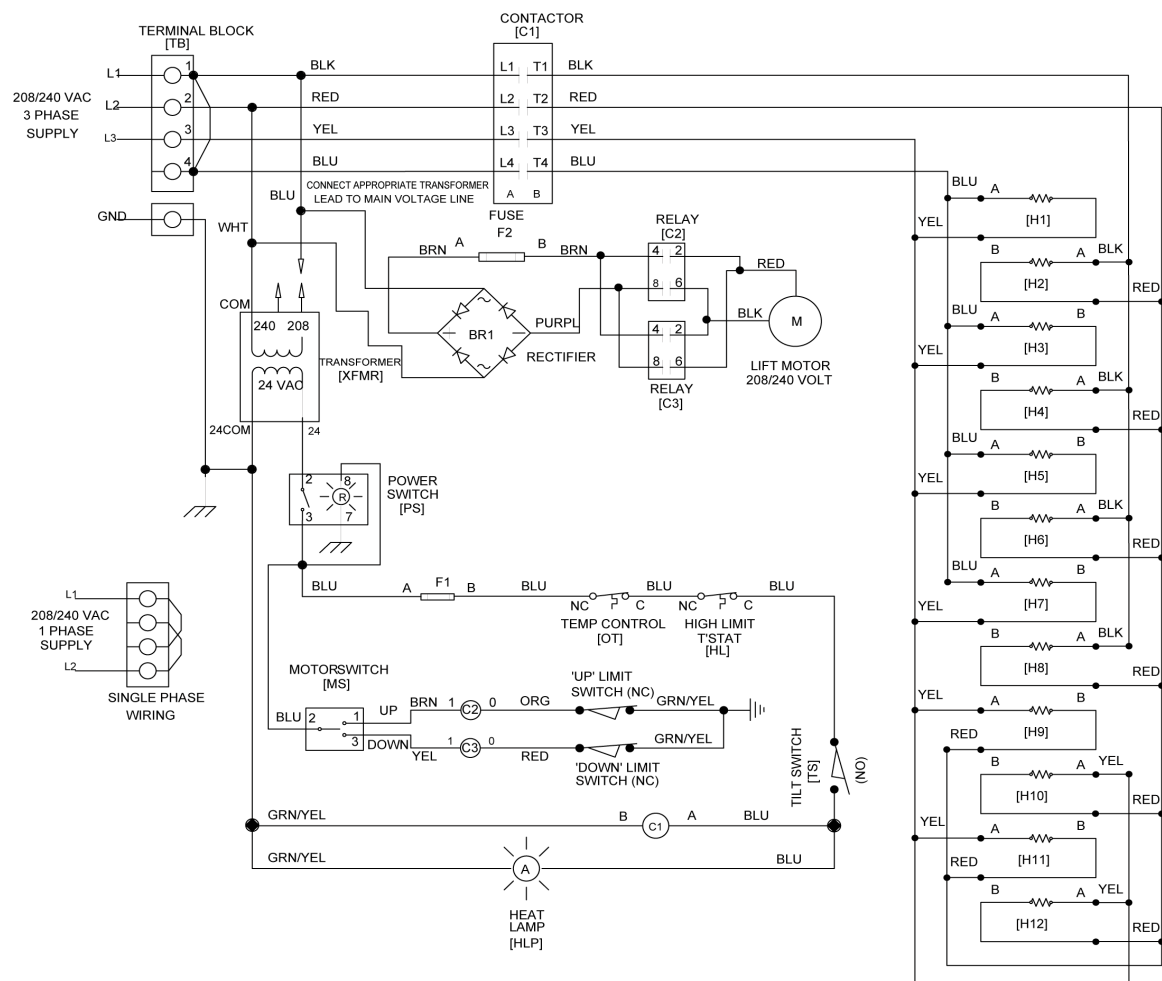
## Diagrams & Schematics, Continued



P/N 145341 REV A

BPM-40E 208, 240 and 480 Volt

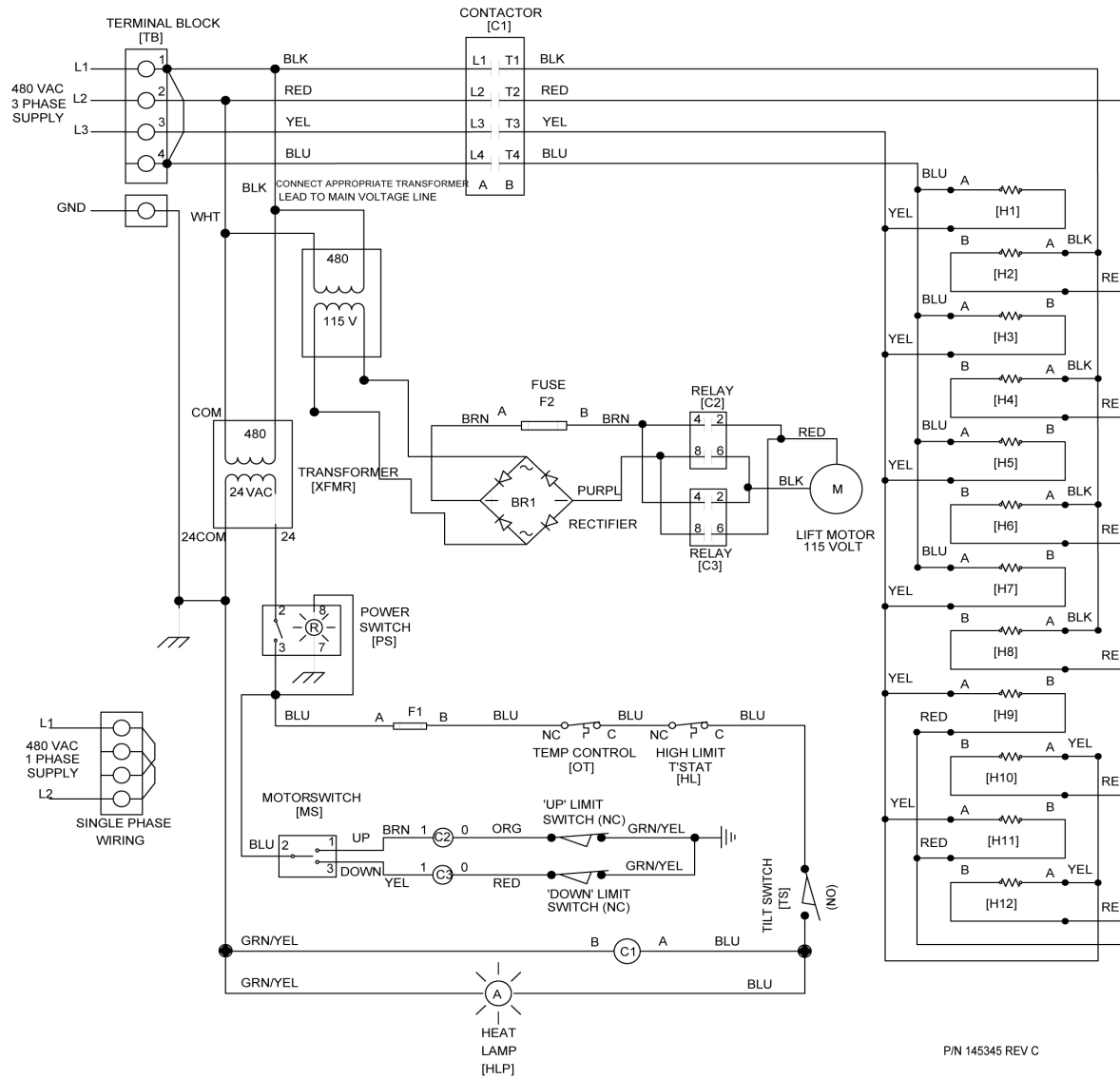
## Diagrams & Schematics, Continued



P/N 145344 REV C

## BPP- 40E 208 and 240 Volt

## Diagrams & Schematics, Continued





# OM-BPM-E

## 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 PURCHASE\* (U.S. & Canadian Sales Only.)

Groen® warrants to original commercial purchaser/users that foodservice equipment manufactured by Groen® (3Groen® Equipment<sup>2</sup>) other than CapKold® foodservice equipment, shall be free from defects in material and workmanship for twelve (12) months from the date of installation or fifteen (15) months from date of shipment from Groen®, whichever date first occurs (the "Warranty Period"), in accordance with the following terms and conditions:

**I.** This warranty is limited to replacement parts and related labor for Groen® Equipment located at its original place of installation in the United States and Canada.

**II.** Damage to Groen® Equipment that occurs during shipment must be reported to the carrier and is not covered under this warranty. The reporting of any damage during shipment is the sole responsibility of the commercial purchaser/user of such Groen® Equipment.

**III.** For Groen® Convection Combo<sup>TM</sup> Steamer-Ovens, HyPerSteam<sup>TM</sup> Convection

Steamers and HyPlus<sup>TM</sup> Pressureless Steamers, Groen® further warrants to the original commercial purchaser/users of such Groen® Equipment that the atmospheric steam generators or boilers contained in such Groen® Equipment shall be free from defects in material and workmanship for twenty-four (24) months from the date of installation or twenty-seven (27) months from date of shipment from Groen®, whichever date first occurs, provided that: (a) the original purchaser/user shall have also purchased and installed a Groen® PureSteam Water Treatment System<sup>TM</sup> for use in connection with such Groen® Convection Combo<sup>TM</sup> Steamer-Oven, HyPerSteam<sup>TM</sup> Convection Steamer or HyPlus<sup>TM</sup> Pressureless Steamer on or before the date such Groen® Equipment was installed, (b) the original purchaser/user has continuously used such Water Treatment System in connection with such Groen® Equipment from the date of installation, and ©) the commercial purchaser/user shall have maintained such Water Treatment System in accordance with the maintenance and filter cartridge replacement recommendations of Groen®, and otherwise maintained such Oven or Steamer in accordance with all other operational and maintenance recommendations of Groen®.

**IV.** For Groen® SmartSteam<sup>TM</sup> Boilerless Steamers and Vortex® Connectionless Steamers, Groen® further warrants to the original commercial purchaser/users of SmartSteam<sup>TM</sup> Boilerless Steamers and Vortex® Connectionless Steamers shall be free from defects in material and workmanship for twenty-four (24) months from the date of installation or twenty-seven (27) months from the date of shipment from Groen®, whichever date first occurs. This warrants Groen® Vortex® Connectionless Steamers that were shipped after March 15, 2003 and SmartSteam<sup>TM</sup> Boilerless Steamers that were shipped after May1, 2003.

**V.** Groen® further warrants to the original commercial purchaser/users of Groen® Convection Combo<sup>TM</sup> Steamer-Ovens that the electronic relay and control board contained in such Groen® Convection Combo<sup>TM</sup> Steamer-Oven shall be free from defects in material and workmanship for twenty-four (24) months from the date of installation or twenty-seven (27) months from date of shipment from Groen®, whichever date first occurs.

**VI.** During the Warranty Period, Groen®, directly or through its authorized service representative, will either repair or replace, at Groen's sole election, any Groen® Equipment determined by Groen® to have a defect in material or workmanship. As to any such warranty service during the Warranty Period, Groen® will be responsible for related reasonable labor and portal to portal transportation expenses (time & mileage) incurred within the United States and Canada.

## OM-BPM-E

**VII.** This warranty does not cover boiler maintenance, calibration, periodic adjustments as specified in operating instructions or manuals, consumable parts (such as scraper blades, gaskets, packing, etc.), and 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 Groen® Equipment. This warranty does not cover damage to Groen® Equipment caused by poor water quality or improper boiler maintenance.

**VIII.** 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.

**IX.** 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 Groen® Equipment (other than CapKold® foodservice equipment, SmartSteam™ Boilerless Steamers and Vortex® Connectionless Steamers) ordered after September 11, 2001.**

# OM-BPM-E

## **GROEN® LIMITED EXTENDED WARRANTY COVERAGE\*** **(U.S. & Canadian Sales Only)**

Limited Extended Warranty Coverage is available on all standard Groen® Equipment (other than CapKold® foodservice equipment) covered by the above Groen® Limited Warranty. Commercial purchasers/users of Groen® Equipment may elect to extend the standard limited warranty to cover parts, labor and portal to portal transportation costs (time and mileage) for an additional twelve (12) or twenty four (24) month period, in addition to the time period of the standard limited warranty described above. Limited Extended Warranty Coverage is not available to extend the supplemental limited warranty for:

(a) atmospheric steam generators or boilers contained in Groen® Convection Combo™ Steamer-Ovens, HyPerSteam™ Convection Steamers and HyPlus™ Pressureless Steamers, or (b) electronic relay and control boards contained in Groen® Convection Combo™ Steamer-Ovens, or (c) Groen® SmartSteam™ Boilerless Steamers, or (d) Vortex® Connectionless Steamers.

### **Cost of Extended Coverage**

Five percent (5.0%) of the LIST PRICE of the Groen® Equipment to be covered by the Limited Extended Warranty for each additional twelve (12) months of limited extended warranty coverage. The five percent (5.0%) of the LIST PRICE charge will be the net invoice amount for each year of Limited Extended Warranty Coverage purchased.

### **Conditions of Coverage**

(1) Limited Extended Warranty Coverage must be purchased at the time the Groen® Equipment to be covered is purchased.

(2) All conditions and limitations on the Standard Limited Warranty Coverage apply to the Limited Extended Warranty Coverage. See above for details of conditions and limitations on the Standard Warranty Coverage.

**\*Covers Groen® Equipment (other than CapKold® foodservice equipment, SmartSteam™ Boilerless Steamers and Vortex® Connectionless Steamers) ordered after September 11, 2001.**



1055 Mendell Davis Drive  
Jackson, MS 39272  
Telephone 601 372-3903  
FAX 601 373-9587

**OM-BPM-E (Revised 10/03)**  
**Part Number 145340 Rev A**