

OPERATOR MANUAL

OM-FPC

DOMESTIC
Part Number 121024

MODELS: FPC, MW/FPC,
FPC/1, MW/FPC/1
Braising Pans

*Stainless Steel
Manual Tilting
Electrically Heated*



Model FPC/1-4



Model MW/FPC-4



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.



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.
- 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
- WARNING:** WHEN TILTING BRAISING PAN FOR PRODUCT TRANSFER:
- 1) USE CONTAINER DEEP ENOUGH TO CONTAIN AND MINIMIZE 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 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.
- 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.

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Equipment Description

The Groen FPC is a stainless steel, electrically heated Braising Pan which is equipped with integrated heating elements, a hand operated 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 FPC and FPC/1 are mounted on an open-leg frame which is fabricated from tubular stainless steel. Models MW/FPC and MW/FPC/1 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 handwheel controlled mechanism is located in a stainless steel console to right of the pan body. 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 and heating indicator light are contained in a compact control console which is mounted to the left 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 spring-type actuator counter-balances the cover to maintain either the opened or closed 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		FPC/1			MW/FPC/1			FPC		
		Size 2	Size 3	Size 4	Size 2	Size 3	Size 4	Size 2	Size 3	Size 4
Unit Dimensions in inches (mm)	Left to Right	42 (1067)	49 (1245)	59 (1500)	39½ (1000)	46½ (1181)	56½ (1435)	42 (1067)	49 (1245)	59 (1500)
	Front to Back	36½ (927)	36½ (927)	36½ (927)	41¾ (1060)	41¾ (1060)	41¾ (1060)	36½ (927)	36½ (927)	36½ (927)
Pan Body Dimensions in inches (mm)	Left to Right	24d (619)	30¾ (781)	41d (1051)	24d (619)	30¾ (781)	41d (1051)	24e (625)	31e (803)	41e (1057)
	Front to Back	25 (635)	25 (635)	25 (635)	25 (635)	25 (635)	25 (635)	24e (627)	24e (627)	24e (627)
Capacity in Gallons (liters)	7" Pan Depth	18 (457)	23 (584)	30 (762)	18 (457)	23 (584)	30 (584)	18 (457)	23 (584)	30 (584)
	9" Pan Depth	23 (584)	30 (762)	40 (1016)	23 (584)	30 (762)	40 (1016)	23 (584)	30 (762)	40 (1016)

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

1. Fill faucet - swing spout
2. Casters
3. Fold down work tray(s)
4. Draw-Off Valve
5. Steamer insert
6. Steamer pan carrier



Optional 2" draw-off valve

Installation

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.

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 left side of the pan, as well as in this manual (pp. 14-21).

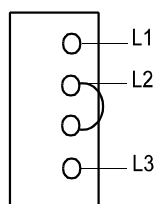
Your pan was performance-tested at the factory to confirm that all controls and heating elements were functioning correctly.

Installation is as follows:

A. For All Models:

6. 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.
7. Use only #6 gauge copper wire, rated at least 200°C (392°F)
8. Units are wired at the factory for three phase operation and should be connected as follows:

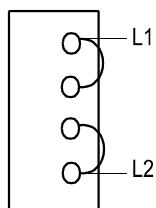
TERMINAL
BLOCK



Three Phase

9. For single phase operation, change the wiring with jumpers, as follows:

TERMINAL
BLOCK



Single Phase

B. For Model FPC or FPC/1:

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 in the bottom of the control console. A BX connection is **NOT** recommended. **ELECTRICALLY GROUND THE UNIT** at the proper terminal.

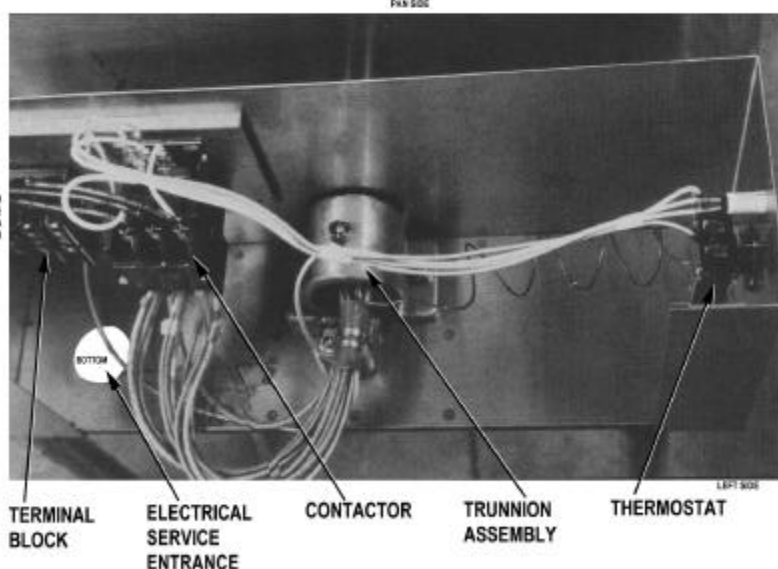
WARNING

ELECTRICALLY GROUND THE PAN AT THE TERMINAL PROVIDED.

C. For Model MW/FPC or MW/FPC/1:

1. Install the provided "chair carrier" frame in the wall to which the pan (and/or other equipment) will be attached. Follow accompanying instructions regarding anchoring and location.
2. Stub in the electrical service so that it will be aligned with the control console on the left side of the pan when it is mounted.
3. Mount the pan on the protruding studs of the chair carrier. *Make sure* the bottom of the

VIEW IS FROM ABOVE WITH SIDE/TOP PANEL REMOVED



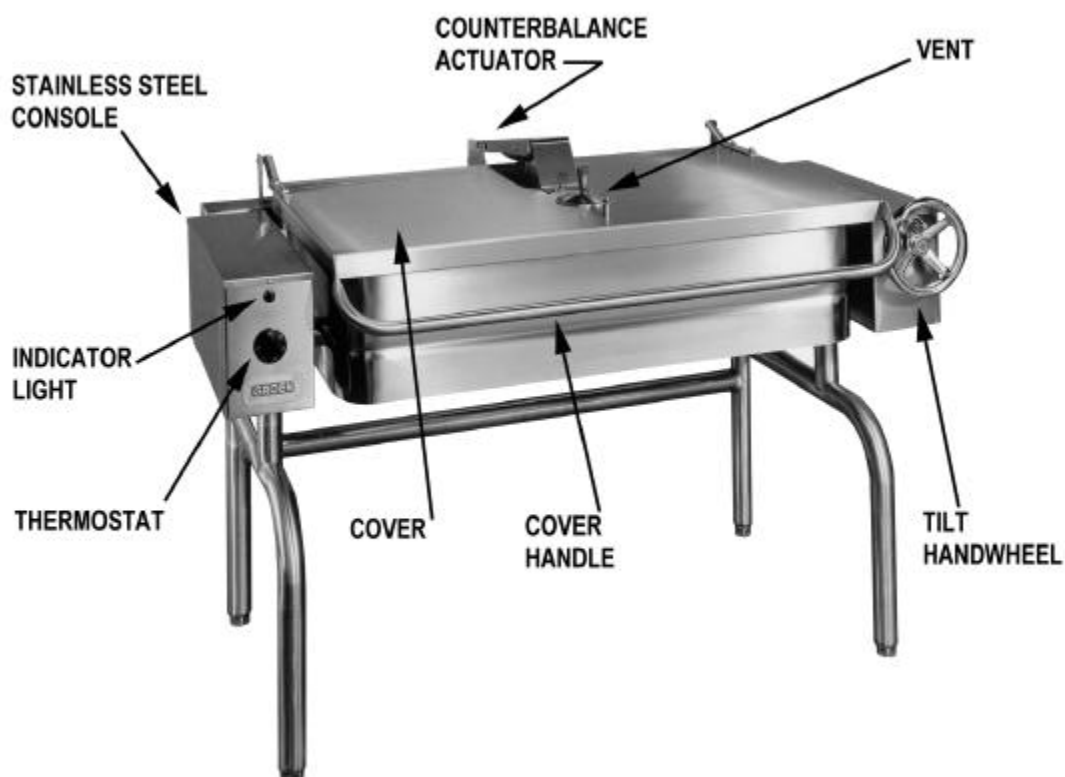
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pan body is level before you proceed to the next step. To prevent sanitation problems, seal the junction between the pan and wall with an appropriate NSF-approved material such as *Silastic*.

4. Make waterproof connection with the incoming electrical line. A BX connection is **NOT** recommended. **ELECTRICALLY GROUND THE UNIT** at the proper terminal.

CAUTION
ELECTRICALLY GROUND THE PAN AT THE
TERMINAL PROVIDED.

ELECTRICAL REQUIREMENTS			
Model	FPC-2 or FPC/1-2	FPC-3 or FPC/1-3	FPC-4 or FPC/1-4
208 Volt	8.5 KW	11.5 KW	14.5 KW
Single Phase	42 Amp	55 Amp	69 Amp
Three Phase	24 Amp	32 Amp	40 Amp
240 Volt	9 KW	12 KW	15 KW
Single Phase	38 Amp	50 Amp	63 Amp
Three Phase	22 Amp	29 Amp	36 Amp
480 Volt	9 KW	12 KW	15 KW
Three Phase	11 Amp	15 Amp	18 Amp



Initial Start-Up

Now that the Braising Pan has been installed, you should test it to ensure that it 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."

CAUTION
STAND AWAY FROM THE HOT WATER WHILE TILTING THE PAN TO EMPTY IT.

6. Position a container for the pour-off. Turn the handwheel clockwise to pour the water out. This will confirm that the pan body tilts from horizontal to vertical.

Operation

Operator Controls on the Braising Pan include the thermostat dial on the console to the left of the pan body and the tilting handwheel, to the right. The dial turns electric power for the pan on or off, and sets the pan's operating temperature. The handwheel controls the worm and gear mechanism that tilts the pan body and holds it in the desired position.

A. Start-up Procedure

1. 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.
2. 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.

B. 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 dryer 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.

C, 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 9 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*.

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.

Cleaning

1. Suggested Tools

- Cleaner, such as Klenzade HC-10
- Brushes in good condition
- Cloth for cleaning controls
- Chlorine sanitizer such as Klenzade XY-12
- Heavy Duty Cleaner, such as Klenzade LC-30



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.

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.

- 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.

- 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.

- 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.



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



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

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- d. Use a cloth moistened with cleaning solution to clean controls, the control console, and electric conduit.
- 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. 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.
- h. The outside of the unit may be polished with a recognized stainless steel cleaner such as Zepper from the Zep Manufacturing Company.
- i. 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 your supplier of sanitizing products.

- j. 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.

- k. After the unit has been cleaned, sanitized and drained, let all surfaces air dry unless the unit must be used again right away.
- l. It is recommended that the unit be sanitized just before use. Follow the directions of the sanitizer supplier.
- m. 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.
- n. 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

WARNING
USE OF 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.

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

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

console. A Maintenance and Service Log is provided at the rear of this manual. Each time work is performed, enter the date on which it was done, what was done, and who did it.

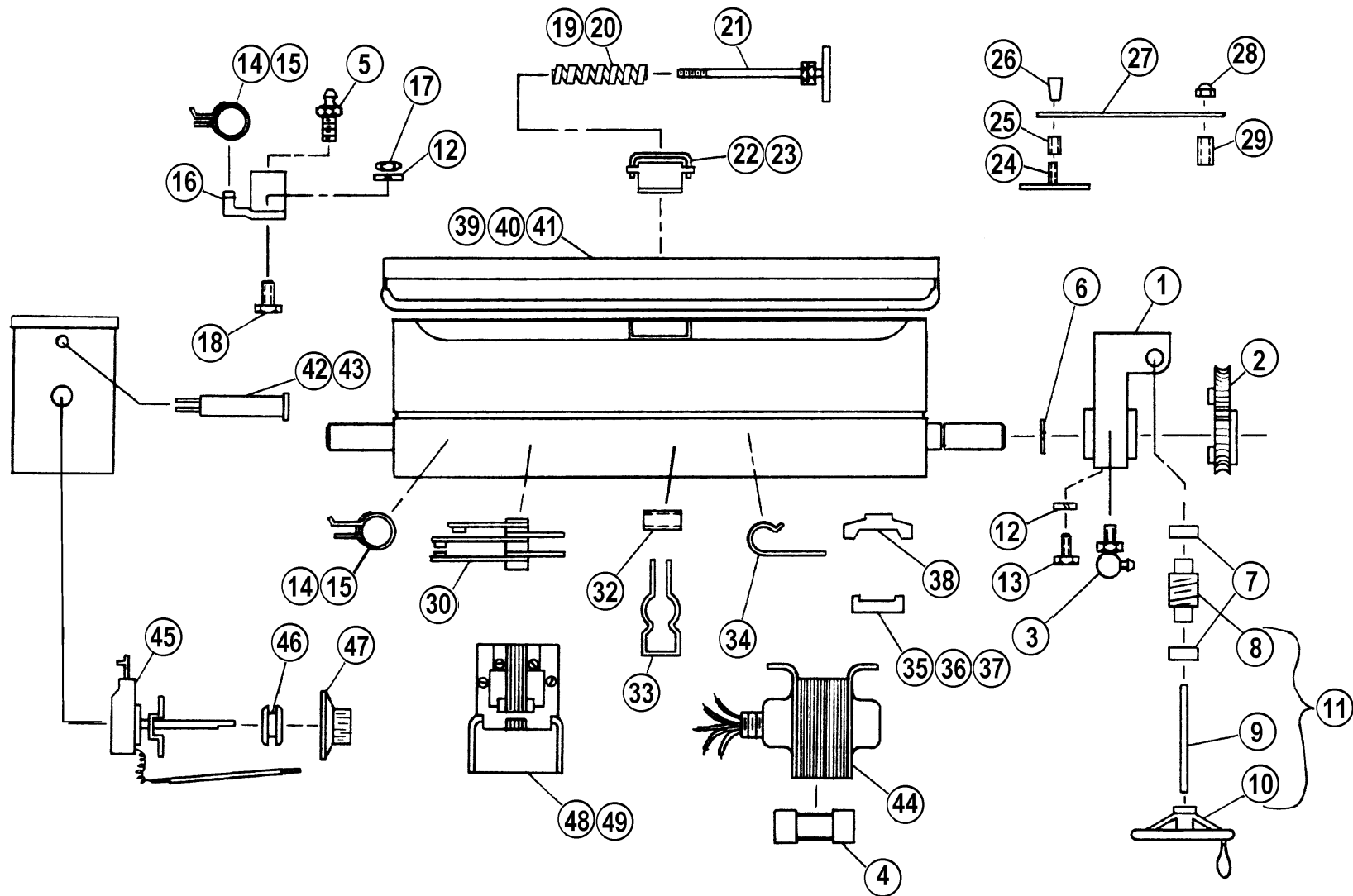
WARNING
ELECTRICAL POWER MUST BE SHUT OFF BEFORE WORK IS DONE ON INTERNAL COMPONENTS.

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 **Y**, the work should only be performed by a qualified service representative.

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.		
SYMPTOM	WHO	WHAT TO CHECK <small>X indicates items which must be performed by an authorized technician.</small>
Pan will not heat, but indicator light comes on.	Auth Service Rep Only	a. Heating elements for short circuit.X
Pan will not heat, and indicator light will not light	User	a. That power supply is on. b. Fuses, accessible by removing caps on the side of the control box.
	Auth Service Rep Only	c. For loose or broken wires.X d. Thermostat functioning, by listening for a click when the switch opens or closes.X e. Contactor functioning.X
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.X c. Thermostat calibration.X d. Contactor, to determine if it is de-energized.X
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.X c. Thermostat functioning, by listening for a click when the switch opens or closes.X d. Thermostat calibration.X e. Contactor functioning.X
Rapid clicking noise (chattering)	User	a. For low voltage.
	Auth Service Rep Only	b. Contactor for dirt or corrosion on the contacts.X
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.X
Pan is hard to tilt	User	a. Gears for foreign materials, lubrication and alignment.

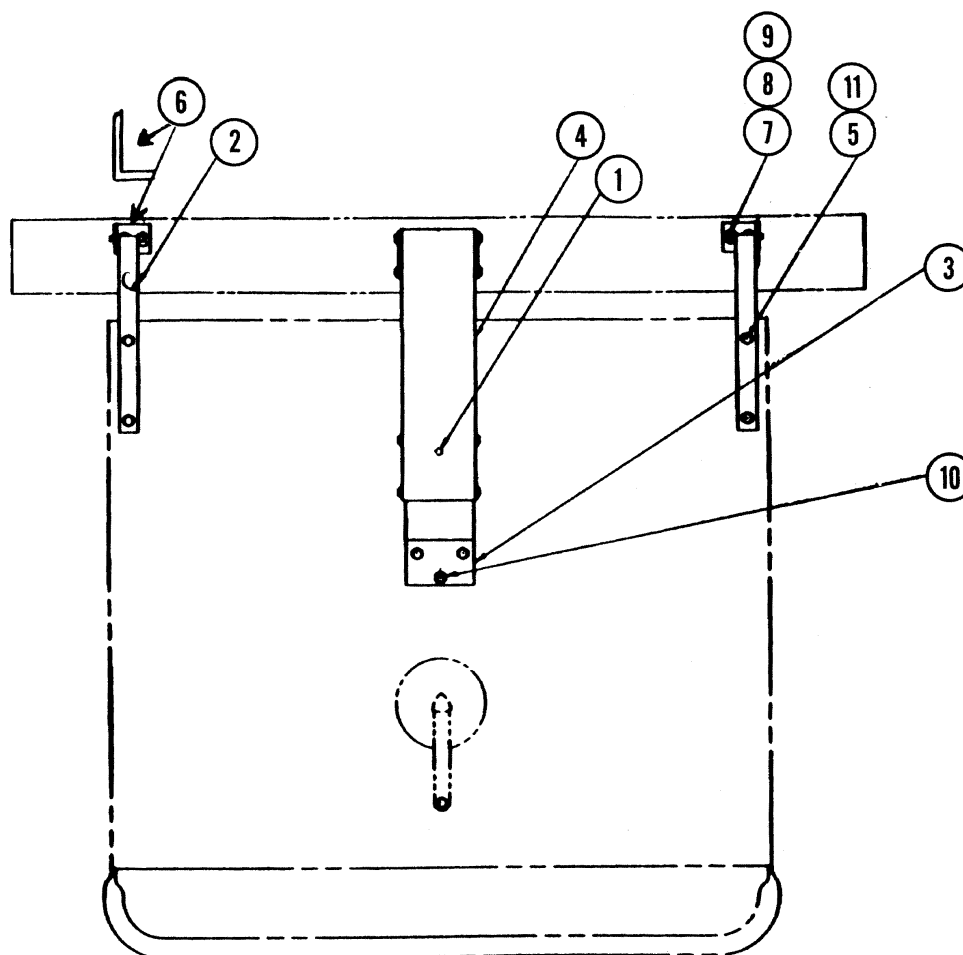
Parts List



Parts List

Key	Description	Part No.	Key	Description	Part No.
1	Gear Carrier Assembly (Casting)	014079	28	Nut - Acorn	090567
2	Worm Gear Sector	003692	29	Spacer - Long	012733
3	90 deg. Alemite Grease Fitting	012195	30	Thermostat - Non-adjustable	012840
4	Fuse Bus - 3 Amp	002651	31	Not Used	
5	Straight Alemite Grease Fitting	012100	32	Tube - Porcelain	012606
6	Retaining Ring (2" external)	012826	33	Hanger Conduit (Minerallac)	012852
7	Bearing (thrust)	002790	34	Clamp 7/16"	009968
8	Worm Gear (single RH)	012026	35	Strip - Heater (See P. 15)	—
9	Shaft - Handwheel (15 $\frac{1}{2}$ " long)	003123	36	Strip - Heater (See P. 15)	—
10	Handwheel Assembly	012061	37	Strip - Heater (See P. 15)	—
11	Handwheel, Shaft & Worm Assy	049868	38	Clamp - Heater Strip	012844
12	Washer-Lock $\frac{1}{2}$ "	005618	39	Cover Assembly (Size 2)	014030
13	Screw $\frac{1}{2}$ -16 x 1" lg., hex head	005612	40	Cover Assembly (Size 3)	048798
14	Clamp - Hose $\frac{1}{2}$ " dia., (208/240V)	009967	41	Cover Assembly (Size 4)	046450
15	Clamp - Hose $\frac{1}{2}$ " dia., (480V)	002509	42	Ind. Light Assy Snap-in (See P. 15)	—
16	Trunnion Race 2"	012951	43	Ind. Light Assy Snap-in (See P. 15)	—
17	Nut Hex $\frac{1}{2}$ -16	003566	44	Transformer (See P. 16)	—
18	Screw $\frac{1}{2}$ -16 x 1 $\frac{1}{2}$ " lg., hex head	005615	45	Thermostat - Adjustable	012838
19	Spring (size 2)	012413	46	Grommet - Rubber	001518
20	Spring (size 3 & 4)	012533	47	Knob - Thermostat	003908
21	Spring Rod Assembly	012524	48	Contacto (See P. 15)	—
22	Actuator, cover Model 51 (size 2)	014085	49	Contacto (See P. 15)	—
23	Actuator, cover Model 51 (3 & 4)	014085	—	Terminal Block (not shown)	003462
24	Vent cover with stud	003265	—	Key (not shown)	010231
25	Spacer - Short	002378	—	Set Screw (not shown)	010260
26	Knob Plastic	002408	—	Roll Pin-Part of 149868 (not shown)	012614
27	Arm - Vent Cover	002377	—	Cover Bracket Assy (See P. 14)	—

Parts List



Key	Description	Part No.	Key	Description	Part No.
FOR 7" DEEP PAN			FOR 9" DEEP PAN		
1	Stud Weld ¼" - 20x	012590	1	Stud Weld ¼" - 20x	012590
2	Cover Hinge Bracket	013485	2	Cover Hinge Bracket	013485
3	Bracket Cover	013277	3	Bracket Cover	013277
4	Actuator #51 FPC/CFPC	014085	4	Actuator #51 CFPC/CHFP	014085
5	Hut Hex Dome	005471	5	Hut Hex Dome	005471
6	Bracket Cover Hinge	054876	6	Bracket Cover Guide	004556
7	Nut Hex Jam	003823	7	Nut Hex Jam	003823
8	Washer Lock 5/16"	005656	8	Washer Lock 5/16"	005656
9	Screw Hex Head	006014	9	Screw Hex Head	006014
10	Washer Plain ¼"	002644	10	Washer Plain ¼"	002644
11	Washer Lock ¼"	005655			

Electrical Parts Chart

MODEL	KW	AMP	CONTACTOR		HEATER		INDIC.	TRANS-
			QTY	P/N	QTY	P/N	LIGHT	FORMER
FPC-2, MW/FPC-2, FPC/1-2, & MW/FPC/1-2								
208V/1 ph	8.5	42	1	013368	9	012842	016028	NONE
240V/1 ph	9	38	1	013368	9	012842	016028	NONE
208V/3 ph	8.5	24	1	013368	9	012842	016028	NONE
240V/3 ph	9	22	1	013368	9	012842	016028	NONE
480V/3 ph	9	11	1	009574	9	012908	002986	012827
FPC-3, MW/FPC-3, FPC/1-3, & MW/FPC/1-3								
208V/1 ph	11.5	55	1	013368	12	012842	016028	NONE
240V/1 ph	12	50	1	013368	12	012842	016028	NONE
208V/3 ph	11.5	32	1	013368	12	012842	016028	NONE
240V/3 ph	12	29	1	013368	12	012842	016028	NONE
480V/3 ph	12	15	1	009574	12	012908	002986	012827
FPC-4, MW/FPC-4, FPC/1-4, & MW/FPC/1-4								
208V/1 ph	14.5	69	1	013368	15	012842	016028	NONE
240V/1 ph	15	63	1	013368	15	012842	016028	NONE
208V/3 ph	14.5	40	1	013368	15	012842	016028	NONE
240V/3 ph	15	36	1	013368	15	012842	016028	NONE
480V/3 ph	15	18	1	009574	15	012908	002986	012827

References

ECONOMICS LABORATORY, INC.
St. Paul, Minnesota 55102

NATIONAL FIRE PROTECTION ASSOCIATION
60 Battery March Park
Quincy, Massachusetts 02269

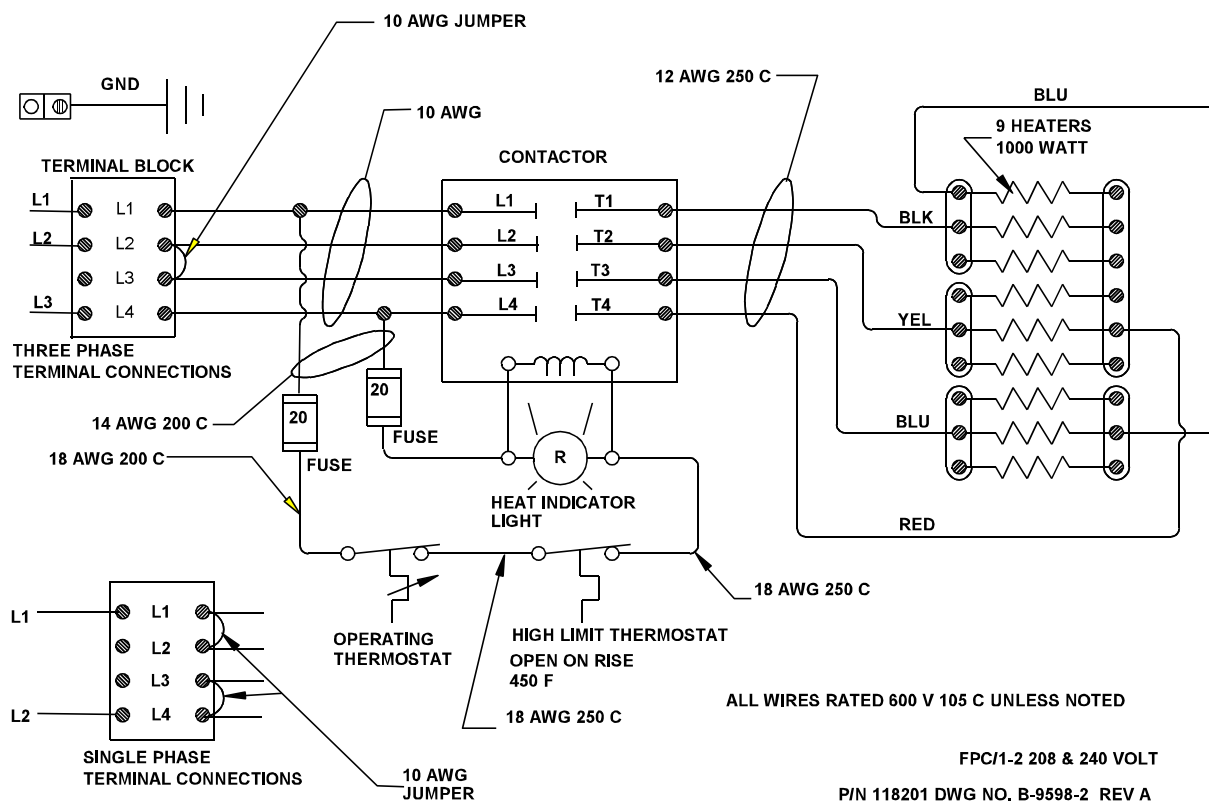
NFPA/70 The National Electrical Code

NATIONAL SANITATION FOUNDATION
3475 Plymouth Rd.
Ann Arbor, Michigan 48106

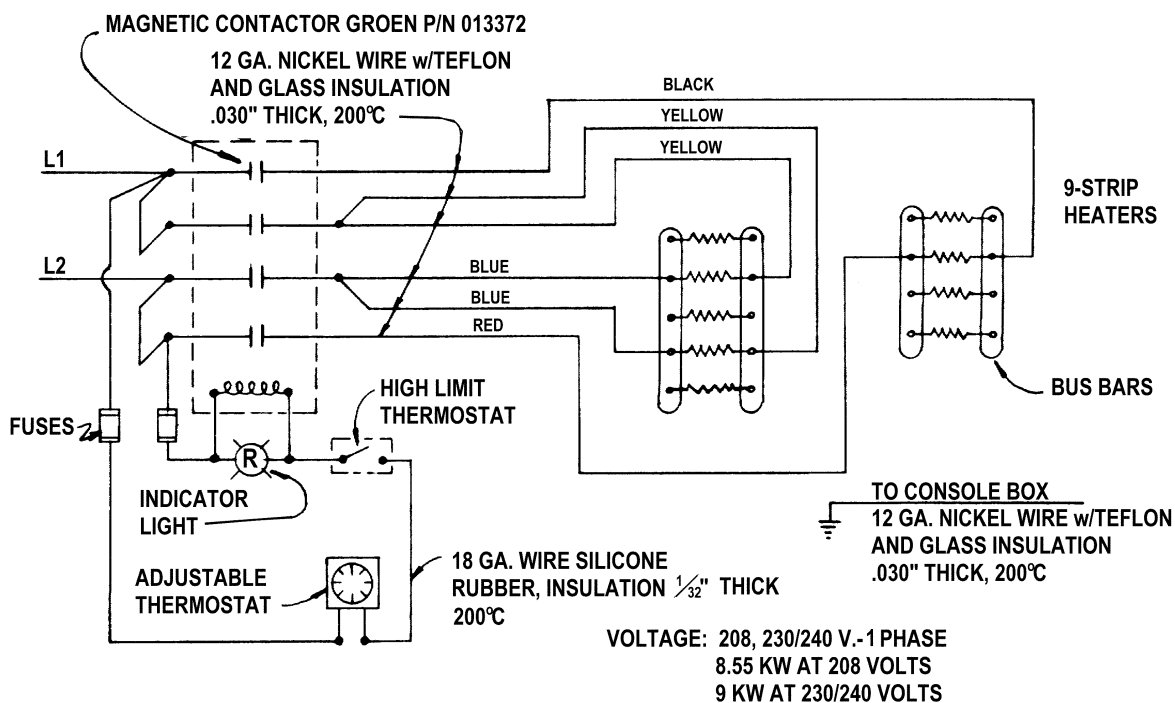
UNDERWRITERS LABORATORIES, INC.
333 Pfingsten Rd.
Northbrook, Illinois 60062

ZEP MANUFACTURING
1390 Lunt Avenue
Elk Grove Village, Illinois 60007

Diagrams & Schematics

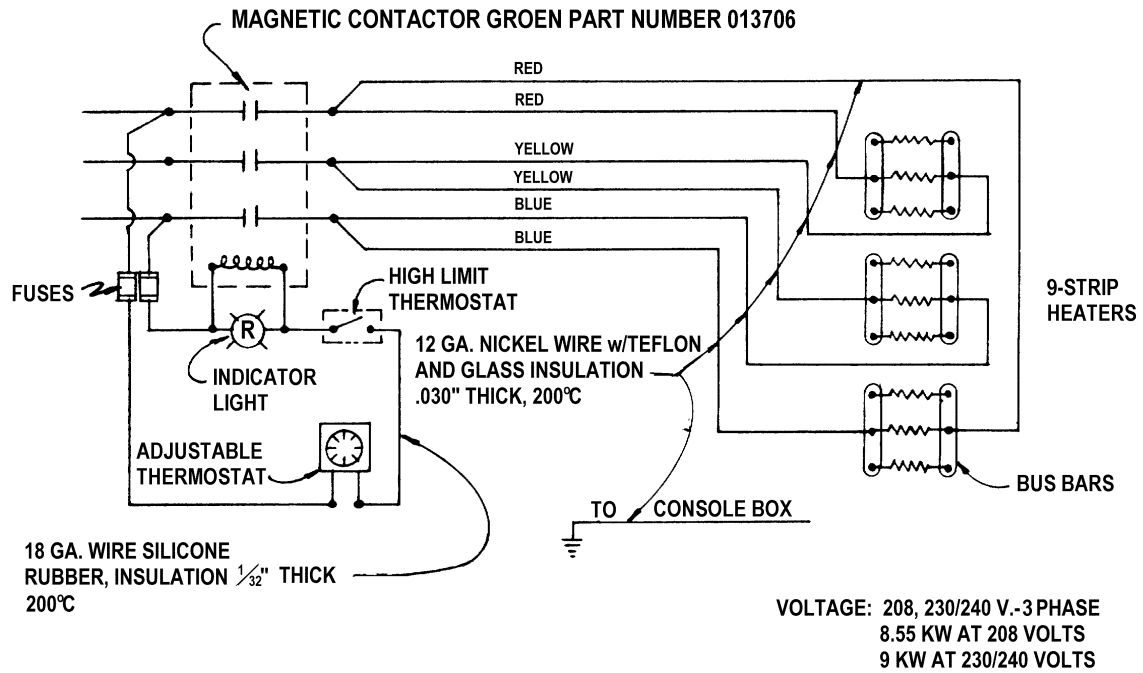


FPC/1-2, 208 and 240 Volts

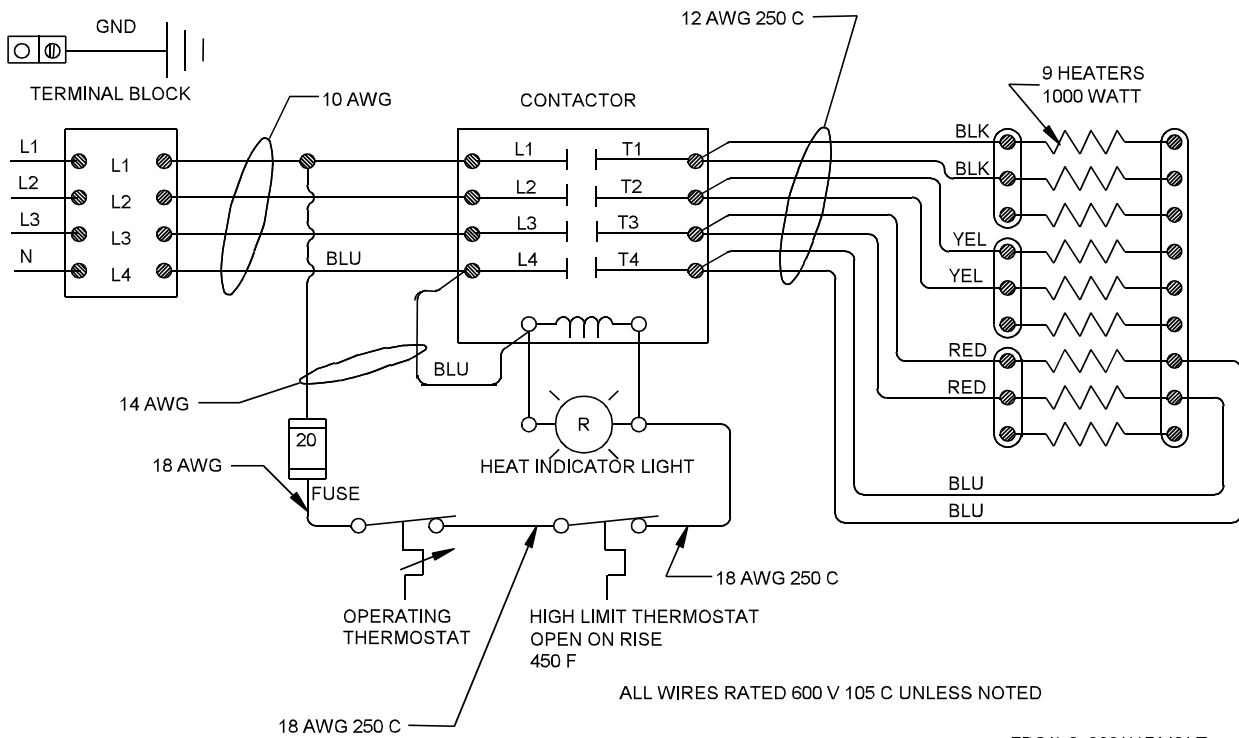


**FPC-2 and FPC/1-2, 208 and 230/240 Volts Single Phase
(Manufactured before January 1, 1985)**

Diagrams & Schematics, Continued



FPC-1 and FPC/1-2 Models 208 and 230/240 Volts Three Phase (Manufactured before January 1, 1985)

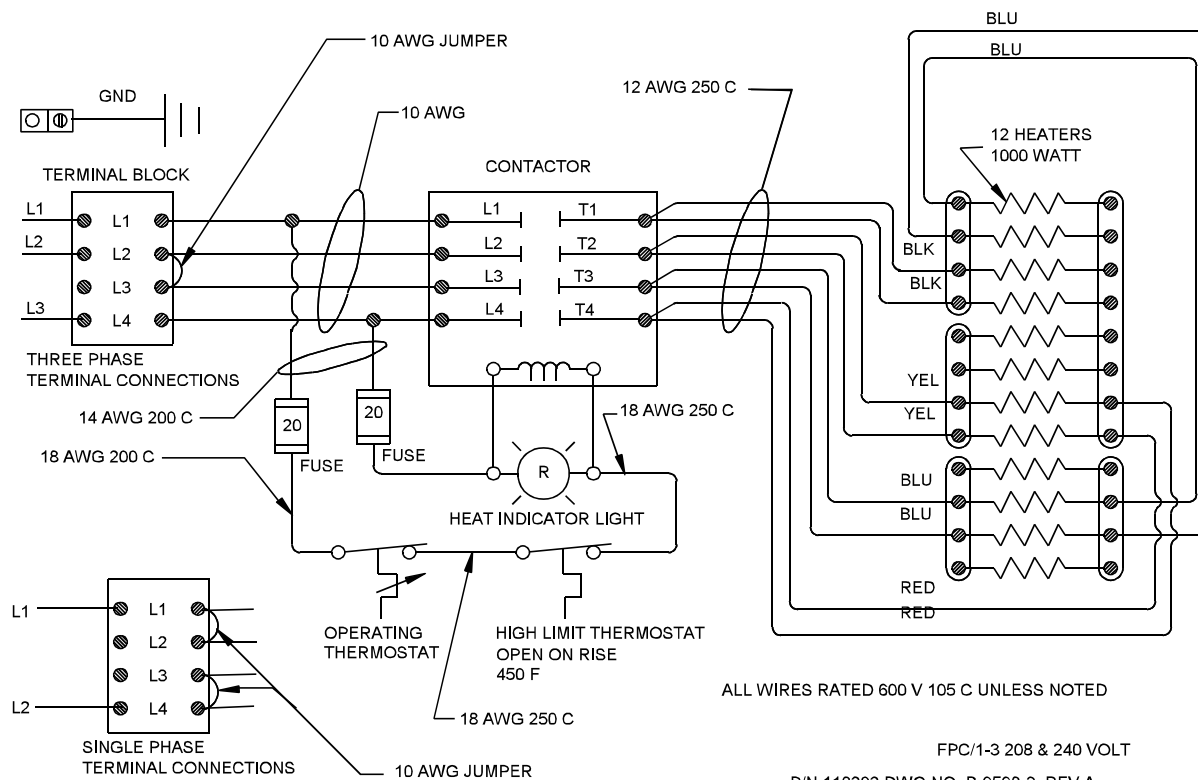


FPC/1-2 380/415 VOLT

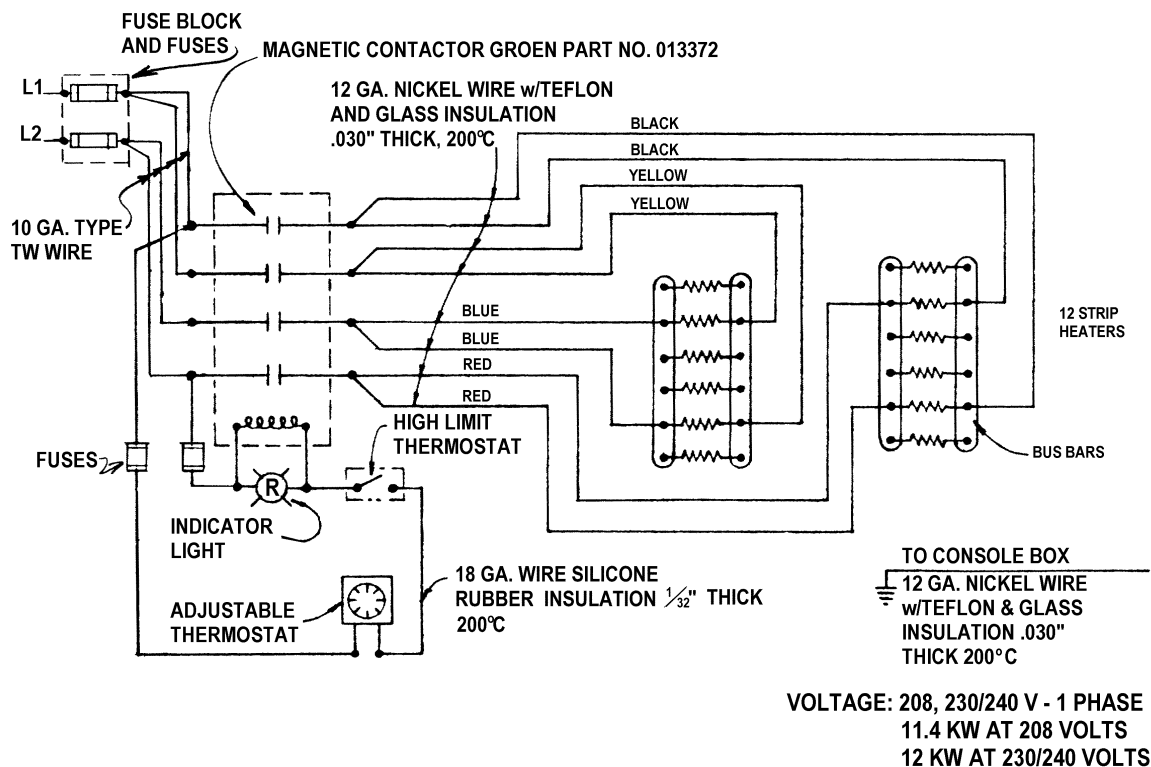
P/N 118207 DWG NO. B-9598-8 REV A

FPC/1-2 380/415 Volts

Diagrams & Schematics, Continued

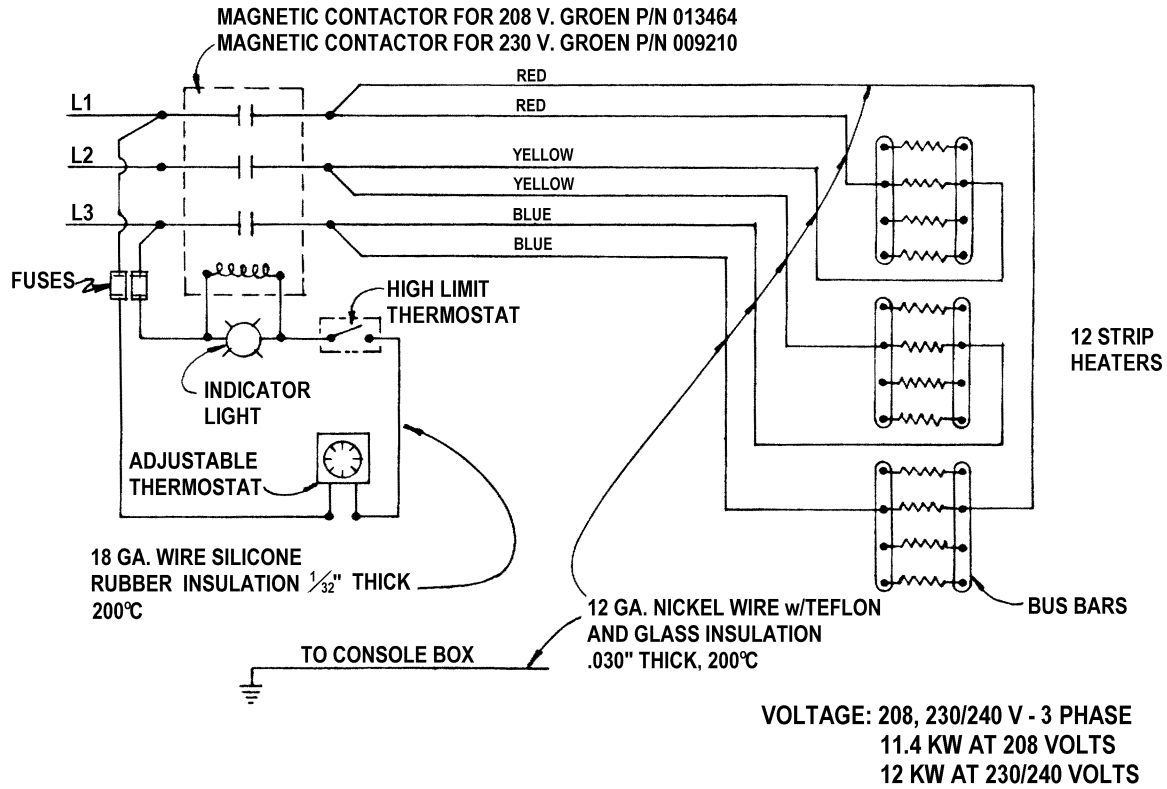


FPC/1-3, 208 and 240 Volts

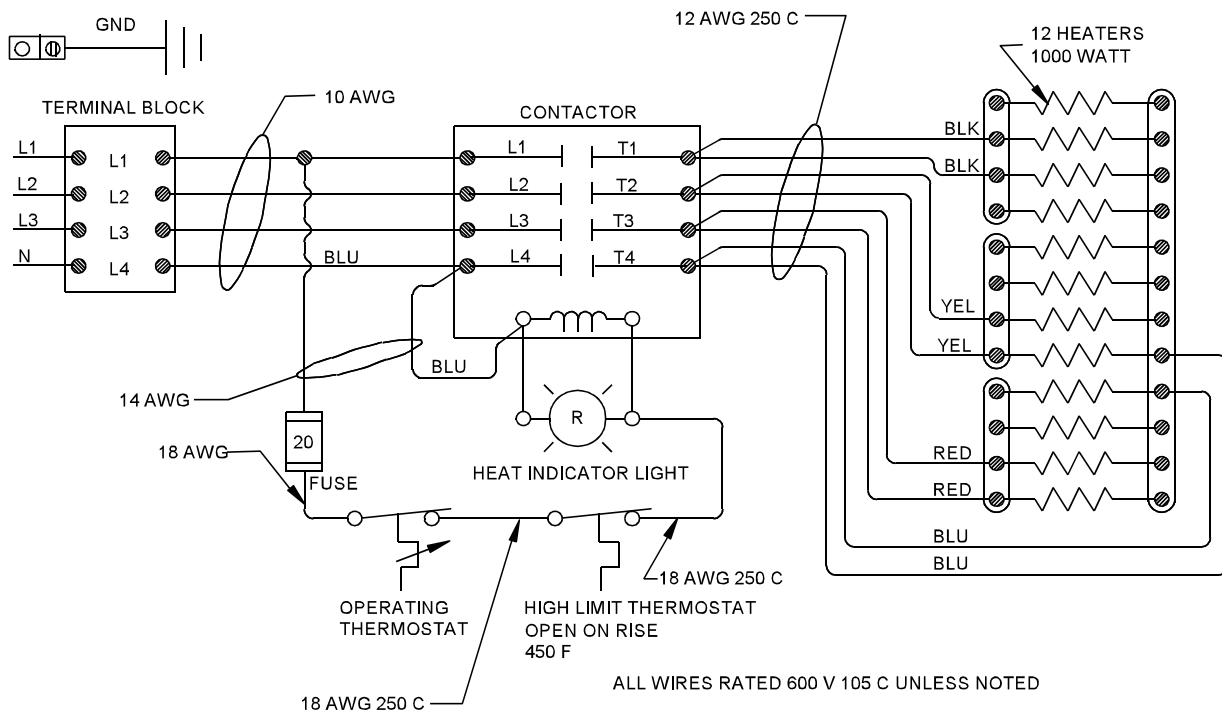


**FPC-3 and FPC/1-3, 208 and 230/240 Volts Single Phase
(Manufactured before January 1, 1985)**

Diagrams & Schematics, Continued



FPC-3 and FPC/1-3, 208 and 230/240 Volts, Three Phase (Manufactured before January 1, 1985)

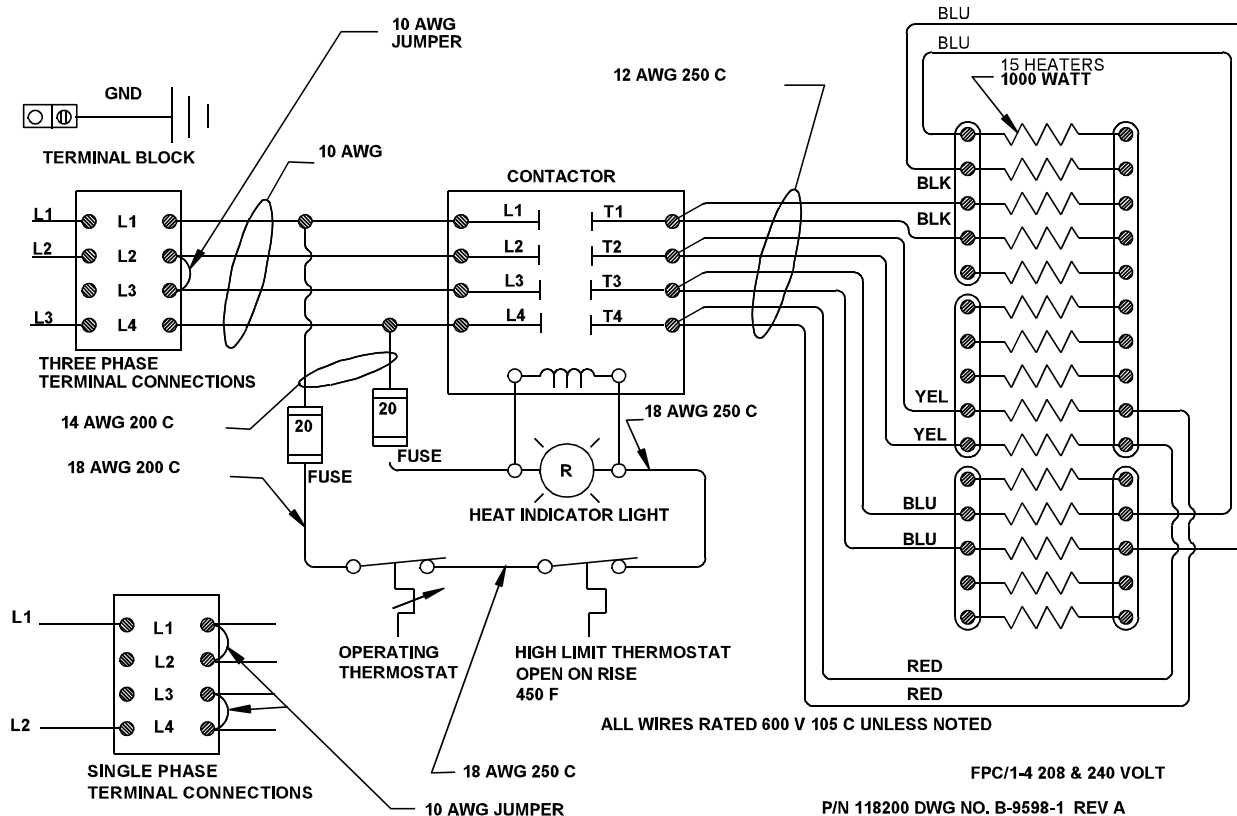


FPC/1-3 380/415 VOLT

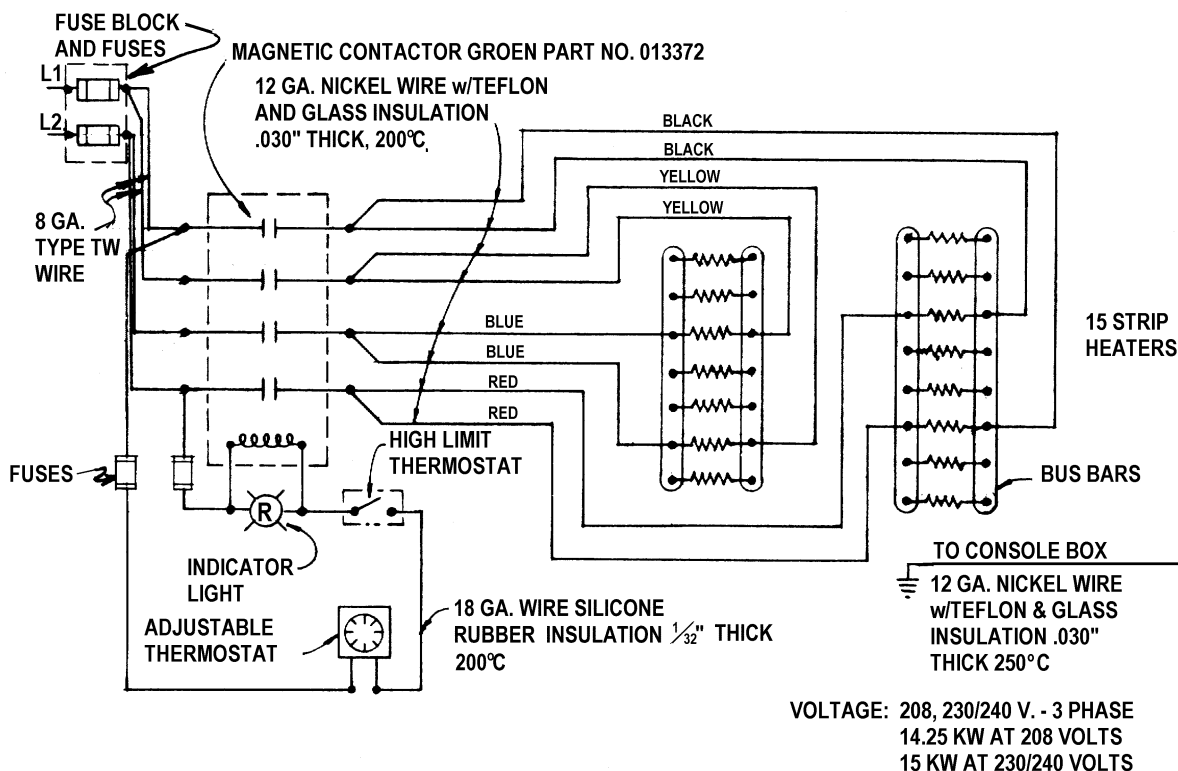
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FPC/1-3, 380/415 Volts

Diagrams & Schematics, Continued

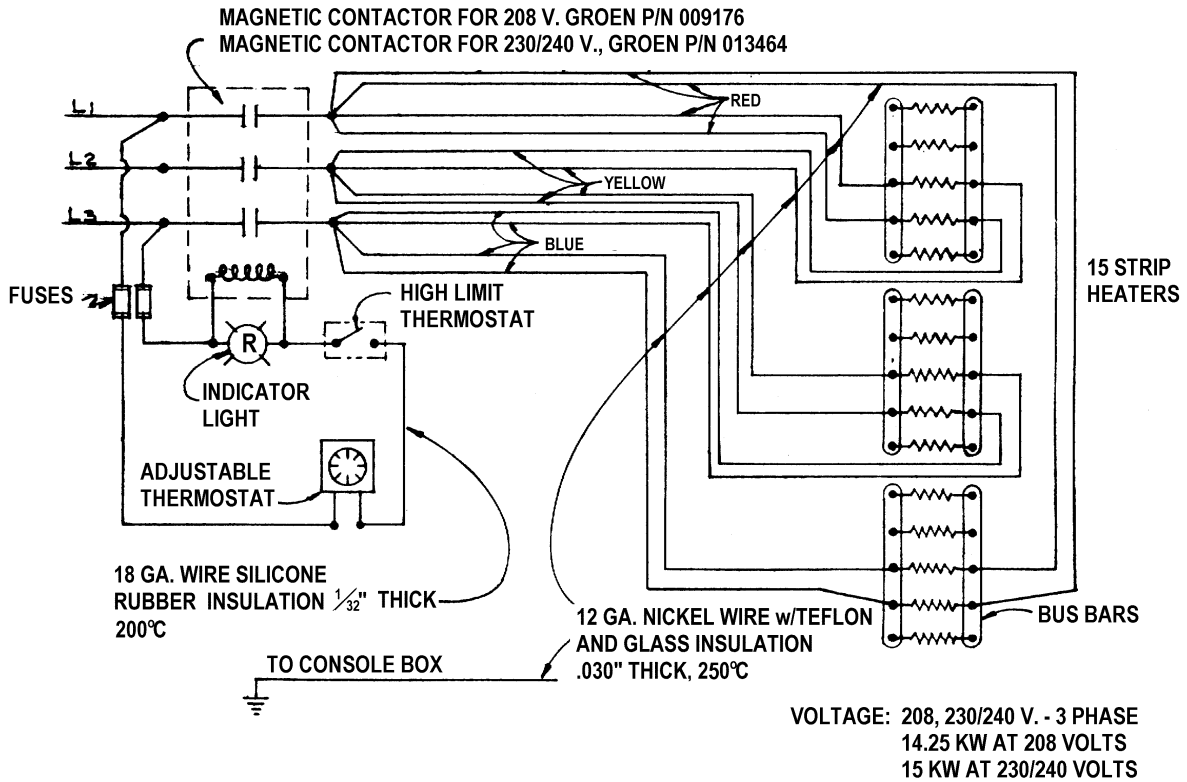


FPC/1-4, 208 and 240 Volts

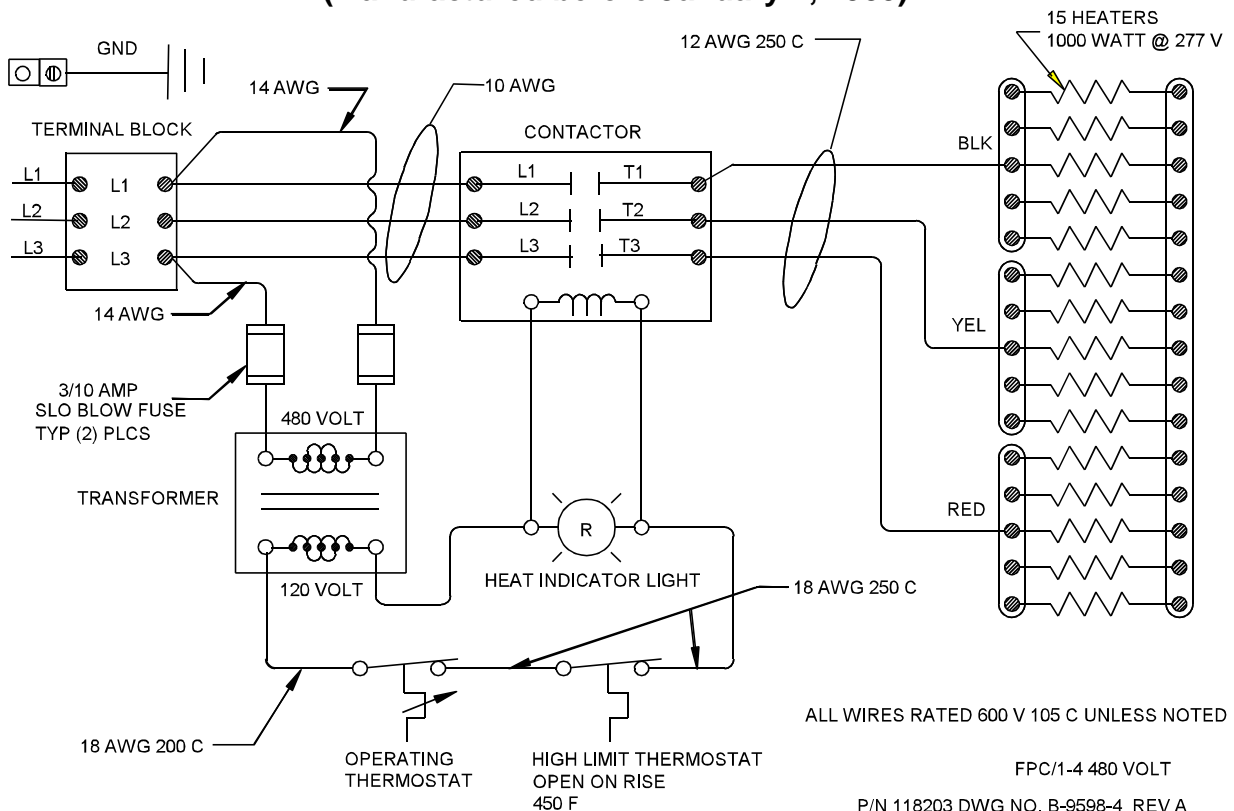


**FPC-4 and FPC/1-4, 208 and 230/240 Volts Single Phase
(Manufactured before January 1, 1985)**

Diagrams & Schematics, Continued



FPC-4 and FPC/1-4, 208 and 230/240 Volts Three Phase (Manufactured before January 1, 1985)



FPC/1-4, 480 Volts

OM-FPC

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 *

(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)



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

OM-FPC (Revised 9/98)
Part Number 121024