

INSTALLATION, OPERATION, SERVICE, AND PARTS MANUAL

Value-14/17
Electric Fryer



 ***Frymaster***[®]

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SERVICE HOTLINE

1-800-551-8633

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FRYMASTER ELECTRIC FRYERS ARE MANUFACTURED FOR USE WITH THE TYPE VOLTAGE SPECIFIED ON THE FRYER RATING PLATE LOCATED ON THE FRYER DOOR. FOR PROPER INSTALLATION PROCEDURES IN THE UNITED STATES, REFER TO THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE ANSI/N.F.P.A. NO. 70; IN CANADA, CANADIAN ELECTRICAL CODE PART 1, CSA-22.1. INFORMATION ON THE CONSTRUCTION AND INSTALLATION OF VENTILATING HOODS MAY BE OBTAINED FROM THE LATEST EDITION OF THE "STANDARD FOR THE INSTALLATION OF EQUIPMENT FOR THE REMOVAL OF SMOKE AND GREASE LADEN VAPORS FROM COMMERCIAL COOKING EQUIPMENT", N.F.P.A. NO. 96. COPIES OF THESE ELECTRICAL STANDARDS ARE AVAILABLE FROM THE NATIONAL FIRE PROTECTION ASSOCIATION, BATTERY MARCH PARK, QUINCY, MASS. 02269

 WARNING

IN THE EVENT OF A POWER FAILURE, THE FRYER(S) WILL AUTOMATICALLY SHUT DOWN. SHOULD THIS OCCUR, TURN THE POWER SWITCH OFF. DO NOT ATTEMPT TO START THE FRYER(S) UNTIL POWER IS RESTORED.

THE FRYER(S) MUST BE INSTALLED WITH A 15 CM (six inch) CLEARANCE AT BOTH SIDES AND ADJACENT TO COMBUSTIBLE CONSTRUCTION. A MINIMUM OF 60 CM (24-inches) SHOULD BE PROVIDED AT THE FRONT OF THE FRYER(S) DOOR.

THIS MANUAL SHOULD BE KEPT IN A CONVENIENT LOCATION AND REFERRED TO WHEN ANY PROBLEM OCCURS AND FOR FUTURE REFERENCE.

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

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1. PARTS ORDERING/SERVICE INFORMATION

Parts orders must be placed directly with your local Frymaster Parts Distributor. A list of International Factory Authorized Service Centers was included with the fryers when shipped from the factory. If you do not have access to this list, please contact the Frymaster Technical Services Department at 1-800-551-8633 or 1-318-865-1711.

To help speed your order, the following information is required:

Model Number: _____
Serial Number: _____
Type of Gas or Voltage: _____
Part Number: _____

Service information may be obtained by calling your local Factory Authorized Service Center. A list of these agencies was packed with your fryer.

Service information may also be obtained by calling the Frymaster Technical Services Department. When calling, please have the following information available:

Model Number: _____
Serial Number: _____
Type of Gas or Voltage: _____
Nature of Service Problem: _____

Please have ready any other information that you think may be helpful in solving your service problem.

PARTS ORDERING/SERVICE INFORMATION CANADA -- Garland Commercial Ranges, Ltd.,
1177 Kamato Road, Mississauga, Ontario L4W1X4.

Note: Retain and store this manual in a safe place for future use. Additional copies may be obtained from your authorized service center.

2. IMPORTANT INFORMATION

2.1. Introduction

The V-14 and V-17 Series are deep-well, open-pot fryers designed for cooking a variety of fried products. Read the instructions in this manual thoroughly before attempting to install, operate or service this equipment.

2.2. Operating, Installation, and Service Personnel

Operating information for FRYMASTER equipment has been prepared for use by qualified and/or authorized operating personnel only.

All installation and service on FRYMASTER equipment must be performed by qualified, certified, licensed, and/or authorized installation or service personnel.

Service may be obtained by contacting your local Factory Authorized Service Center.

2.3. Definitions

Qualified and/or Authorized Operating Personnel

Qualified or authorized operating personnel are those who have carefully read the information in this manual and have familiarized themselves with the equipment functions or have had previous experience with the operation of equipment covered in this manual.

Qualified Installation Personnel

Qualified installation personnel are: individuals, a firm, corporation, or a company which either in person or through a representative are engaged in, and are responsible for the installation of electrical wiring from the building electric meter, main control box, or service outlet to the electrical appliance. Qualified installation personnel must be experienced in such work, be familiar with all electrical precautions required, and have complied with all requirements of applicable national, European Community and local codes.

Qualified Service Personnel

Qualified service personnel are those familiar with FRYMASTER equipment and have been authorized by THE FRYMASTER CORPORATION. All authorized service personnel are required to be equipped with a complete set of service parts manuals and stock a minimum amount of parts for FRYMASTER equipment.

A list of Frymaster Factory Authorized Service Centers was included with the fryer when shipped from the factory. If you do not have access to this list, please contact the Frymaster Customer Service Department, using the number listed on the front of this manual. Failure to use qualified service personnel will void the Frymaster warranty.

2.4. Shipping Damage Claim Procedure

Please note that the FRYMASTER equipment was carefully inspected and packed by skilled personnel before leaving the factory. The transportation company assumes full responsibility for safe delivery upon acceptance of the equipment.

What to do if equipment arrives damaged:

- A. File Claim for Damages Immediately--Regardless of extent of damage.
- B. Visible Loss or Damage--Be sure this is noted on the freight bill or express receipt and is signed by the person making the delivery.
- C. Concealed Loss or Damage--If damage is unnoticed until equipment is unpacked, notify freight company or carrier immediately and file a concealed damage claim. This should be done within 15 days of date of delivery. Be sure to retain container for inspection.

<p style="text-align: center;">FRYMASTER DOES NOT ASSUME RESPONSIBILITY FOR DAMAGE OR LOSS INCURRED IN TRANSIT</p>

3. INSTALLATION INSTRUCTIONS

PROPER INSTALLATION IS ESSENTIAL TO EFFICIENT AND TROUBLE-FREE OPERATION. ANY ALTERATION OF THE EQUIPMENT VOIDS THE FRYMASTER WARRANTY.

Note: Before installing the newly-arrived equipment, inspect it carefully for visible and concealed damage. See Section 2.4.

3.1. Caster/Leg Information

If it is necessary to install legs or casters, follow the instructions provided in the accessories package shipped with the fryer.

CAUTION:

If you need to relocate a fryer installed with legs, remove all the weight from each leg before moving. If a leg becomes damaged, contact your service agent for immediate repair or replacement.

3.2. Leveling

Place a carpenter's spirit level across the top of the fryer and level the unit both front-to-back and side-to-side. If it is not level, the unit may not function efficiently, the oil may not drain properly for filtering and in a line-up it may not match adjacent units.

If the floor is uneven or has a decided slope, a smooth platform is recommended for placing the unit on and not relying on leg/caster thread adjustment.

3.3. Electrical Connections

WARNING

For power supply connection, use copper wire ONLY, rated for at least 75°C (167°F).

CAUTION

A ground wire MUST be connected to the GROUND terminal provided near the input power terminal block.

POWER REQUIREMENTS

The electrical power supply for the fryers **MUST** be the same as indicated on the rating and serial number plate located on the fryer door.

MODEL	VOLTAGE	PHASE	WIRE SERVICE	MIN. SIZE	AWG (mm ²)	AMPS PER LEG		
						L1	L2	L3
V14	230/380	3	4	6	(16)	21	21	21
V14	240/415	3	4	6	(16)	20	20	20
V17	230/380	3	4	6	(16)	26	26	26
V17	240/415	3	4	6	(16)	24	24	24

Plan and carry out installation in accordance with local codes.

Connections: Connections to the terminal block and grounding lug should be made through the hole provided for this purpose in the junction box.

Wiring Diagram: It is attached to the inside of the fryer door. Amperage for each unit depends on the type of installation and accessories supplied with the unit.

4. INITIAL STARTUP INSTRUCTIONS

4.1. Cleaning

New units are wiped clean with solvents at the factory to remove any visible signs of dirt, oil, grease, etc. remaining from the manufacturing process, then coated lightly with oil. Wash thoroughly with hot, soapy water to remove any film residue and dust or debris before food preparation, then rinse out and wipe dry. Wash any accessories shipped with the unit as well. Close the drain valve completely and remove the crumb screen. Make sure the screws holding the thermostat and high-limit control sensing bulbs into the vessel are tight.

4.2. Heating The Vessel

This step checks heater element operation, initial thermostat calibration, and cleans the vessel for initial food production.

- A. Fill the fryer vessel with hot or cold water to the oil level line scribed in the back of the tank.
- B. Set the thermostat/temperature controller dial to approximately 105°C (220°F), just above the boiling point of water.
- C. Turn the power switch to ON. The heater elements will begin heating.
- D. When the water starts to boil, turn the dial to below 100°C (210°F). The elements will turn off and the water will stop boiling.
- E. When satisfied that the elements and thermostats operate properly, drain the vessel and dry **thoroughly**. Refill fry vessel with shortening as directed in Section 4.3.

4.3. Fill With Cooking Oil/Shortening

Note: *Cooking oil/shortening capacity of Value-H14 and Value-H17 Series fryers is 25 liters. (50 lbs.) at 21°C (70°F).*

- A. Close the frypot drain valve.
- B. Place the power switch to the OFF position.
- C. Remove the baskets and basket support rack.
- D. When using liquid shortening, fill the empty frypot to the bottom oil-level line.

 **WARNING**

**Never melt a solid block of shortening by setting it in the vessel.
This is unsafe, inefficient and dangerous.**

- E. When using solid shortening, either melt it first, or cut into small pieces and pack into cool zone (bottom) of the frying vessel. Be careful to not leave any air spaces or disturb the thermostat and high limit bulbs. Continue to tightly pack the shortening, then lower the elements. Pack additional shortening in between and on top of the elements until level with the bottom oil level line.
- F. Replace the basket support rack on top of the heating element.
- G. Place the ON/OFF switch in the ON position. Melt shortening by turning the heaters “ON” for about five or ten seconds, “OFF” for a minute, repeating cycle until shortening is melted. If oil starts to smoke while melting this way, shorten the “ON” cycle and lengthen the “OFF” cycle. Smoke shows that you are scorching the shortening and cutting its useful life.
- H. Once the shortening is melted, set the thermostat for normal cooking temperature.

4.4. Before Relocating Fryer

 **CAUTION**

Moving a fryer filled with hot cooking oil/shortening may cause splattering. Extreme care must be exercised. It is recommended that the operator or servicer follow the draining instructions of this manual before attempting to relocate the fryer.

If you need to relocate a fryer installed with legs, remove all the weight from each leg before moving. If a leg becomes damaged during movement, contact your service agent for immediate repair/replacement.

- A. Turn fryer ON/OFF switch to OFF. Unplug the power cord from the source.
- B. Relocate the fryer for service accessibility.
- C. After servicing is complete, return the fryer to the operating position. Plug all power cords into source. Attach the restraining devices.

5. DAILY OPERATION

CAUTION

Use care when draining and filtering cooking oil/shortening to avoid serious burns.

5.1. General Use

- A. For consistent quality product, convenience and long-term savings, use a high-quality liquid frying oil.
- B. Although a temperature of 177°C (350°F) is recommended for most cooking operations, set the fryer at the lowest possible temperature which produces a high quality end product while ensuring maximum life of frying oil/shortening.
- C. When the fryer is not in use, the thermostat should be set lower than that used during cooking.

5.2. Turn On Procedures

CAUTION

If using solid shortening, follow melting procedures in Section 4.3 closely.

- A. Always be sure vessel is full before turning fryer on. Follow instructions in Section 4.3.
- B. Turn fryer on, and set thermostat to the desired cooking temperature.

5.3. Filtering

Always consult the filter manufacturer's operation instructions for the recommended filtering procedure.

WARNING:

Always wear protective clothing when filtering and handling hot cooking oil.

The following procedure is recommended to drain and filter your cooking oil/shortening when a filter machine is not available:

- A. Turn the fryer ON/OFF switch to the OFF position. Screw the drain pipe (provided with fryer) into the drain valve. Make sure the drain extension is firmly screwed into the drain valve and that the curved end is pointing down.
- B. Position a metal container with sealable cover under the drain extension. The metal container and cover must be able to withstand the hot cooking oil/shortening and hold hot liquids. Frymaster recommends that a Frymaster filter cone holder and filter cone be used when a filter machine is not available. If you are using the Frymaster filter cone holder and cone, be sure that the cone holder rests securely on the metal container.
- C. Open the drain valve slowly to avoid splattering. If splattering occurs, exercise extreme caution.

- D. If the drain valve becomes clogged with food particles, use the Fryer's Friend (poker-like tool). Use this tool from the inside of the frypot ONLY. Grip the tool on the handle as far as possible away from the cooking oil/shortening in the frypot. DO NOT hammer on the drain valve. This damages the drain valve ball.

 **WARNING:**

DO NOT insert the tool into the front of the drain to unclog the valve, hot oil/shortening will rush out creating an extreme hazard.

 **WARNING**

Allow the oil/shortening to cool to 38°C (100°F) or lower before transporting the container and removing the drain extension. Accidental contact with oil/shortening temperature of 60°C (140°F) or higher will result in severe burns.

Note: For safe, convenient draining and disposing of used oil/shortening, Frymaster recommends the use of the Frymaster shortening disposal unit (SDU). The SDU is available through your local distributor.

- E. After draining the oil/shortening, clean all food particles and residual oil/shortening from the frypot before refilling.
- F. Close the drain valve and refill the frypot with clean, filtered oil/shortening.

 **WARNING**

When filtering, never leave the filter unattended. Always point the oil return hose (if used) down into the fry vessel to prevent the spraying of hot oil which may cause severe burns.

5.4. Closing

- A. When closing for the night, turn the fryer ON/OFF switch to OFF position.
- B. Filter oil in fryers.
- C. Put frypot cover in place over frypot.

5.5. Shutdown

When shutting down for periods longer than overnight, drain the frying oil/shortening and clean the vessel thoroughly. Either discard the frying oil/shortening or filter it and return it to the vessel and cover the vessel. Turn the power switch and the thermostat to OFF.

If the vessel is not stainless steel, and it is to be left empty, apply a light coat of shortening to the entire interior of the vessel to prevent corrosion and possible rust.

6. CLEANING AND MAINTENANCE

6.1. General:

Any piece of equipment works better and lasts longer when maintained properly and kept clean. Cooking equipment is no exception. The fryer should be kept clean during the working day and thoroughly cleaned at the end of each day.

6.2. Daily:

Wash all removable parts. Be sure to dry all parts thoroughly. Clean all exterior surfaces of the fryer. Do not use cleansers, steel wool, or any other abrasive material on the stainless steel or enamel surfaces.

Filter the cooking oil and replace if necessary. Under heavy use conditions, the oil should be filtered more often than once a day.

6.3. Weekly

A. Completely drain the oil from the fryer into either the filter or a steel container. Do not use a glass or plastic container.

B. Clean the vessel in the following manner:

1. Close the drain valve and refill with either a good commercial cleaning solution and water, or water and strong detergent.
2. Set the operating thermostat to 104°C (220°F). Bring to a rolling boil, then turn the heat down to a simmer and let the mixture stand until the deposits and/or carbon spots can be readily removed with scrub pad or scrub brush.
3. Scrub the vessel walls, bottom and heating elements.

 **CAUTION**

Do not drain water into filter. Water will damage the filter pump.

4. Drain vessel and rinse with clean water.

 **CAUTION**

Never allow water to boil down to the point that elements are exposed. This will damage them.

5. Refill with water, set operating thermostat to above 100°C (212°F), and boil again. Once boiling is completed, turn operating thermostat off, drain, rinse, and dry the vessel and elements thoroughly.
- C. Immediately refill with cooking oil or frying compound as directed in Section 4.3.

6.4. Periodic

The fryer should be checked and adjusted periodically by qualified service personnel as part of a regular kitchen maintenance program.

6.5. Stainless Steel Care

All stainless steel fryer cabinet parts should be wiped regularly with hot soapy water during the day, and with a liquid cleanser designed for stainless steel at the end of each day.

- A. Do not use steel wool or abrasive cloths, cleansers or powders.
- B. Do not use a metal knife, spatula or any other metal tool to scrape stainless steel! Scratches are almost impossible to remove.
- C. If it is necessary to scrape the stainless steel to remove any encrusted materials, soak the area first to soften the deposit, then use a wood or nylon scraper only.

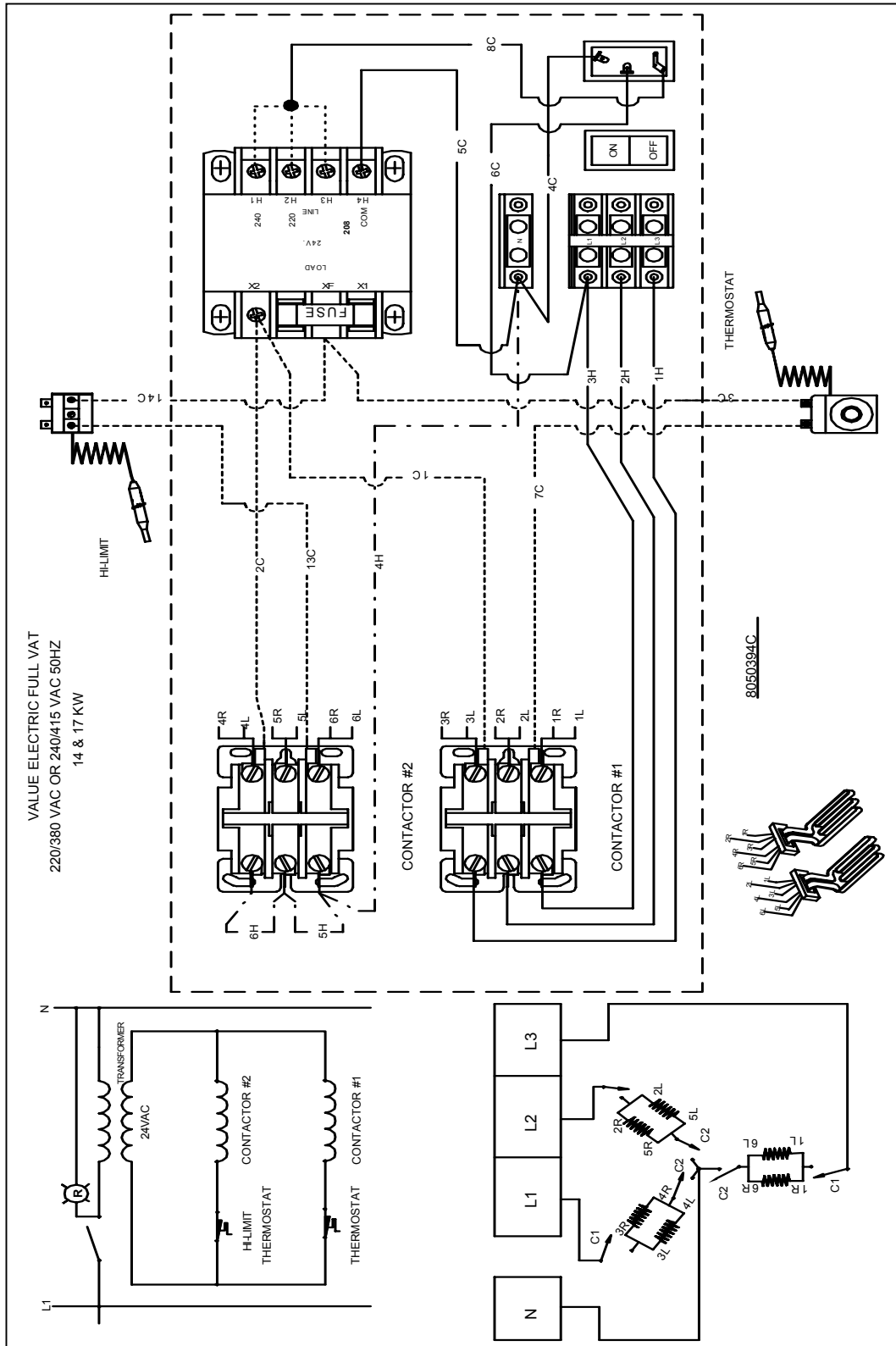
7. SERVICE PROCEDURES

7.1. Thermostat Calibration

- A. Insert a good grade thermometer or pyrometer probe approximately 8-10cm (3-4 inches) into the cooking oil/shortening near the fryer temperature sensing probe.
- B. Turn thermostat knob to the desired frying temperature.
- C. Turn the fryer ON/OFF switch to the ON position and heat the shortening to the thermostat temperature setting. Stir if necessary to get all cooking oil/shortening in bottom of frypot melted.
- D. Allow the heating elements to cycle ON and OFF three times after reaching the thermostat temperature setting. When the elements come on the fourth time, the thermometer reading should be within 2°C (5°F) of the thermostat knob setting. If it is not, calibrate as follows:
 1. Remove the thermostat knob by pulling straight out on the knob with a firm steady pull.
 2. Insert a small flat blade screwdriver into the center of the thermostat shaft and turn the adjusting screw clockwise to decrease and counter-clockwise to increase. DO NOT allow the thermostat shaft to turn while turning the adjusting screw. Turn the screw in ¼ turn increments, checking calibration after each adjustment.
 3. After each adjustment, reinstall the thermostat knob, and allow the shortening to cool until the heating element comes on.
 4. Compare the thermometer or pyrometer reading and the thermostat knob setting when the elements come on.
 5. Repeat Steps 5.a. through 5.d. until thermometer or pyrometer reading and knob setting agree within 2°C (5°F).
 6. If calibration cannot be obtained for any reason, call a Factory Authorized Service Center.
 7. Remove thermometer or pyrometer probe

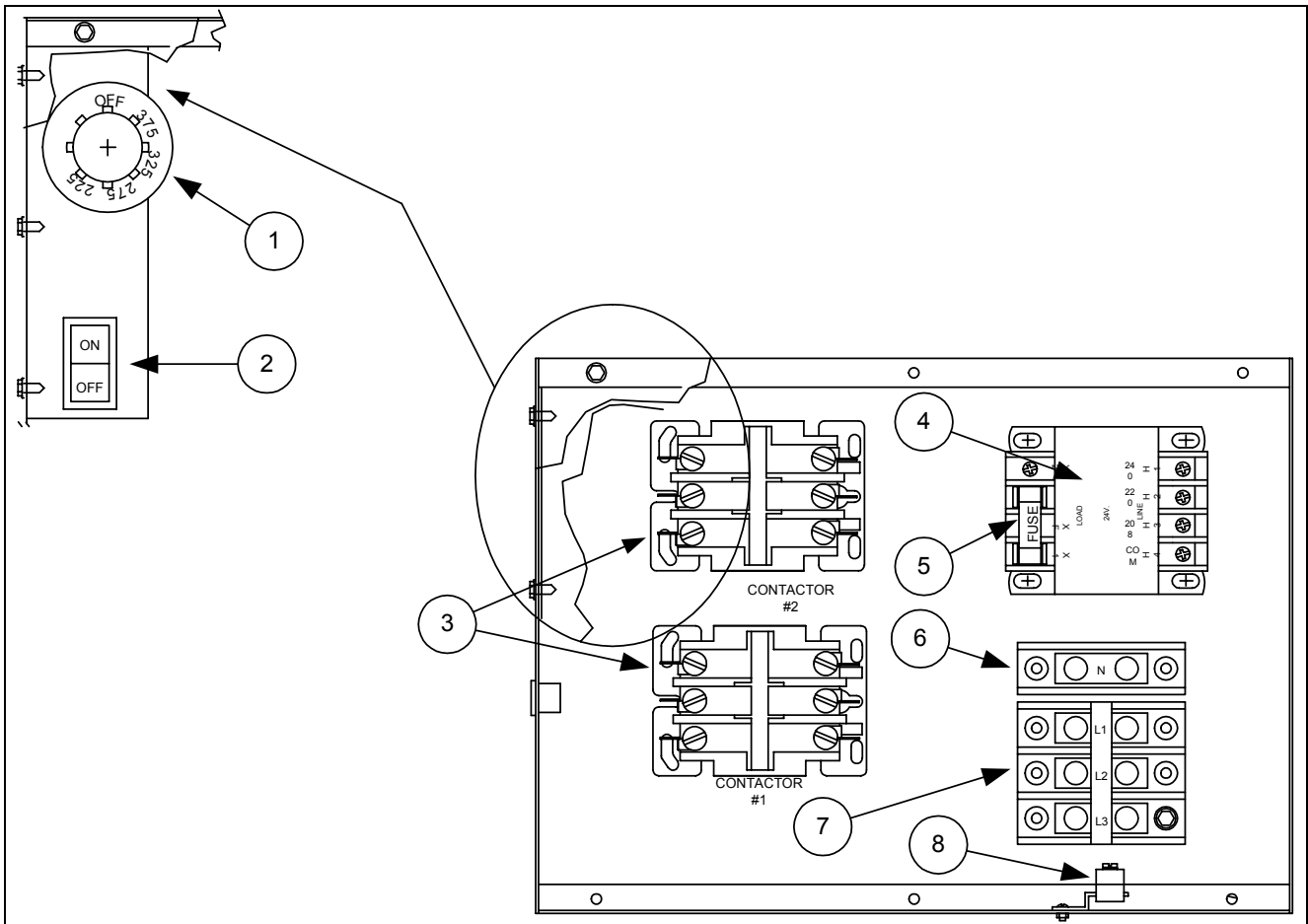
Note: *The heating element must cycle ON at the calibration point.*

8. WIRING DIAGRAM



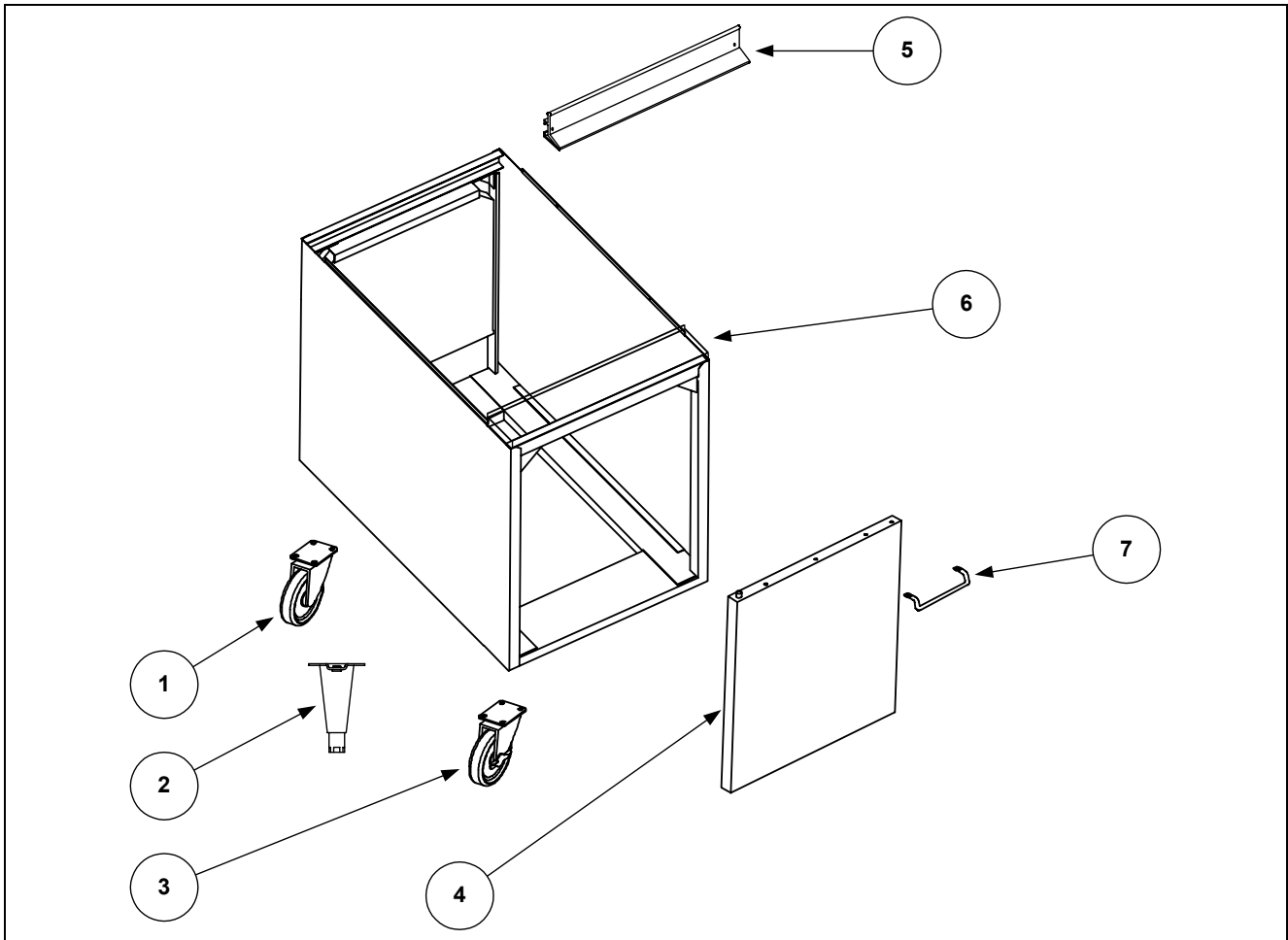
9. PARTS LISTS

9.1. Control/Component Box



Item No.	Part Number	Description
1	807-1692	Thermostat, Sunne
	816-0139	Knob, Thermostat
2	807-0044	Switch, Red On/Off
3	810-1202	Contactor, 40 Amp, 3 Pole
4	807-1169	Transformer, 208-220-240 / 24 volt
5	807-1174	Fuse, 250V, 3 Amp, Slow Blow
6	807-1268	Terminal Block, Single Pole (Neutral)
7	807-0065	Terminal Block, Field Wiring
8	807-0070	Terminal Lug, Ground

9.2. Miscellaneous Parts



Item No.	Part Number	Description
1	810-0356	Caster, 5" without Brake
2	806-5043	Leg
*	806-3811	Legs (Package of 4)
3	810-0357	Caster, 5", With Brake
4	806-4926	Door Assembly
5	803-0028	Basket Hanger
6	910-4408	Top Cap
*	807-0063	Hi-Limit thermostat
*	910-1614	Guard, Operating Thermostat
*	806-6993	Drain Valve, 1-1/4"
*	810-0820	Handle, Drain Valve
*	812-1226SP	Drain Extension
*	823-1775SP	Frypot, V14/17
*	807-2645	Heating Element, V14 / 220V
*	807-2641	Heating Element, V17 / 220V
*	807-2644	Heating Element, V14 / 240/415V
*	807-2645	Heating Element, V17 / 240/415V
*	807-2647	Heating Element, V14 / 380V
*	807-2648	Heating Element, V17 / 380V



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