



Cecilware®

Operator Manual

Electric Deep-Fat Fryer

EFP40, EFS40, EFS65



Model: EFS-40



Model: EFS-65



Both fryers are shown with optional casters.

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Thank you for purchasing this quality fryer. For your safety and the safety of others, read all warnings and the operator's manual before installing or using the product. Properly instruct all operators. Keep training records. For future reference, record serial number here:

Grindmaster-Cecilware

4003 Collins Lane, Louisville, KY 40245 USA
Phone: 502.425.4776 Toll Free: 800.695.4500
Fax: 502.425.4664
Web: gmcw.com Email: info@gmcw.com

Grindmaster-Cecilware provides the industry's BEST warranty. Visit gmcw.com for warranty terms and conditions.



**Grindmaster
Cecilware**

Safety Information

Important Safety Information



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

For your safety and the safety of others, read all warnings and the operator's manual before installing or using the product.

DANGER: This term warns the user of imminent hazard that will result in serious injury or death.

WARNING: This term refers to a potential hazard or unsafe practice, which could result in serious injury or death.

CAUTION: This term refers to a potential hazard or unsafe practice, which could result in minor or moderate injury.

NOTICE: This term refers to information that needs special attention or must be fully understood.

⚠ WARNING

- Do not deform power cord.
- Follow national and local electrical codes.
- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- Use only on a dedicated circuit load that is properly protected and capable of the rated load. Do not use extension cords as this could result in electrical shock, overheating, and fire.
- Risk of electrical shock. Disconnect power before servicing or cleaning unit. Contact Grindmaster-Cecilware Technical Service for service assistance.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agents, or similarly qualified persons in order to avoid a hazard.
- Due to the heat a fryer may produce, it must be placed on a non-combustible surface with at least 6 inches clearance from all combustible and noncombustible surfaces at side and rear.
- Fryer must only be operated when cooking oil or shortening is at recommended oil level.
- Do not move a fryer filled with hot liquid.
- Let hot oil cool sufficiently before draining. Hot oil will crack glass and also melt plastic vessels.
- Wear oil-proof insulated gloves when working at fryer filled with hot oil.
- Do not store combustible materials on top or under any fryer.

FAILURE TO COMPLY TO THE ABOVE RISKS PERSONAL INJURY, SHOCK HAZARD, FIRE, OR DAMAGE TO EQUIPMENT.

⚠ CAUTION

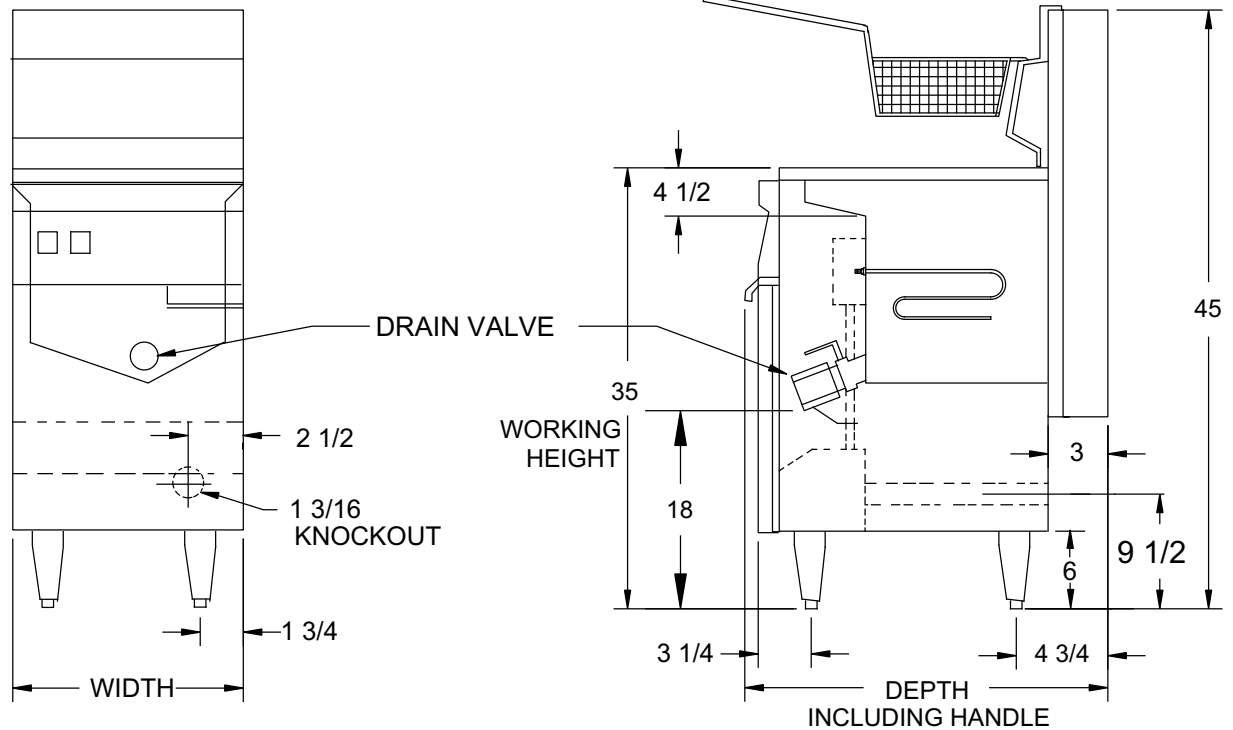
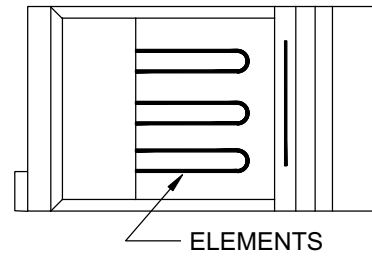
- Read and understand the operating instructions in this manual thoroughly. Only allow properly trained persons to operate this machine.
- Stay alert at all times during operation.
- Operate with care. Surfaces will get very hot and may cause serious burns.

NOTICE

- Keep operating area clean.

Specifications

| Electrical Specifications | | | | | | |
|---------------------------|------|---------|--------------|-----|-------------|-----|
| Model | kW | V | SINGLE PHASE | | THREE PHASE | |
| | | | AMPS | AWG | AMPS | AWG |
| EF-40 | 18.0 | 208 | 86.5 | 4 | 50.0 | 6 |
| | 18.0 | 240 | 75.0 | 4 | 43.3 | 6 |
| | 18.0 | 220/380 | - | - | 47.3/27.4 | 6 |
| | 18.0 | 240/415 | - | - | 43.3/25.1 | 6 |
| EF-65 | 21.0 | 208 | 101.0 | 4 | 58.4 | 6 |
| | 21.0 | 240 | 87.5 | 4 | 50.6 | 6 |
| | 21.0 | 220/380 | - | - | 55.2/31.9 | 6 |
| | 21.0 | 240/415 | - | - | 50.6/29.6 | 6 |



Unpacking

With the container upright, cut the plastic straps around shipping container and lift off top, exposing the fryer. Carefully lift unit out of shipping container, and inspect immediately for shipping damage. Accessories are packed inside the fryer tank. Your fryer was shipped in a carton designed to give it maximum protection. It was thoroughly inspected before leaving the factory. File any claims for shipping damage or irregularities directly with the carrier.

ACCESSORIES WITH UNIT

- 1 Basket Hanger
- 2 Baskets
- 1 Drainpipe Extension

OPTIONAL ACCESSORIES

- 1 Cover
- 1 Twin Basket
- 4 Swivel Casters
- 1 Restrainer

Installation

▲ WARNING: ELECTRIC SHOCK HAZARD!

Installation of this appliance must be performed by qualified service personnel only. Improper installation could result in electrocution.

NOTICE: This equipment must be installed in compliance with applicable Federal, State, and/or Local electrical codes having jurisdiction or, in the absence of local codes, with the National Electric Code, NFPA 70 (latest revision).

Location and Restraint of Fryer

The fryer must be placed in operating position in such a way that accidental tipping of unit, or spilling of hot oil, cannot occur.

The unit may be restrained by either:

- Connecting unit in battery with others, or
- Locating unit in an alcove, or
- Additional mechanical means of restraint.

Air Supply and Ventilation -

The area around the appliance must be kept clear to avoid obstruction to the flow of ventilation air as well as for ease of maintenance and service.

UNDER NO CIRCUMSTANCE SHOULD THE INTERIOR OF THE FRYER'S CABINET BE USED FOR STORAGE.

Means must be provided for any commercial, heavy-duty cooking appliance to exhaust cooking vapors to the outside of the building.

Filters and drip troughs should be part of any industrial hood. Consult local codes before constructing and installing any hood.

Clearances

Minimum clearance from combustible and noncombustible construction is 6" from the sides and 6" from the back. This unit can be placed on either a combustible or non-combustible surface. At least 16" clearance must be provided between the frying surface of the fryer and the surface flames of any adjacent cooking unit.

Mechanical Installation

NOTICE Unit must only be installed and operated with legs or casters provided by manufacturer.

MOUNTING LEGS OR CASTERS - Carefully tip fryer up on its back and screw legs or (optional) casters into the threaded base of fryer. When installing casters make sure the swivel lock casters are mounted towards the front of the fryer. A high strength Restrainer must be installed when casters are used. Avoid putting any strain on rear legs or casters when tipping fryer back to an upright position.

POSITIONING - DO NOT PUSH against any of the edges of the unit in an attempt to adjust its position. Lift unit slightly to maneuver into desirable installation position. Pushing the unit will increase the probability of bending the legs or internal connectors.

LEVELING - Once the fryer is installed, the unit should be leveled, side-to-side and front-to-back, using a carpenter's spirit level. On smooth and level floors, level the unit with the screw threads of the legs. If the floor is uneven or has a slope, shims may be required.

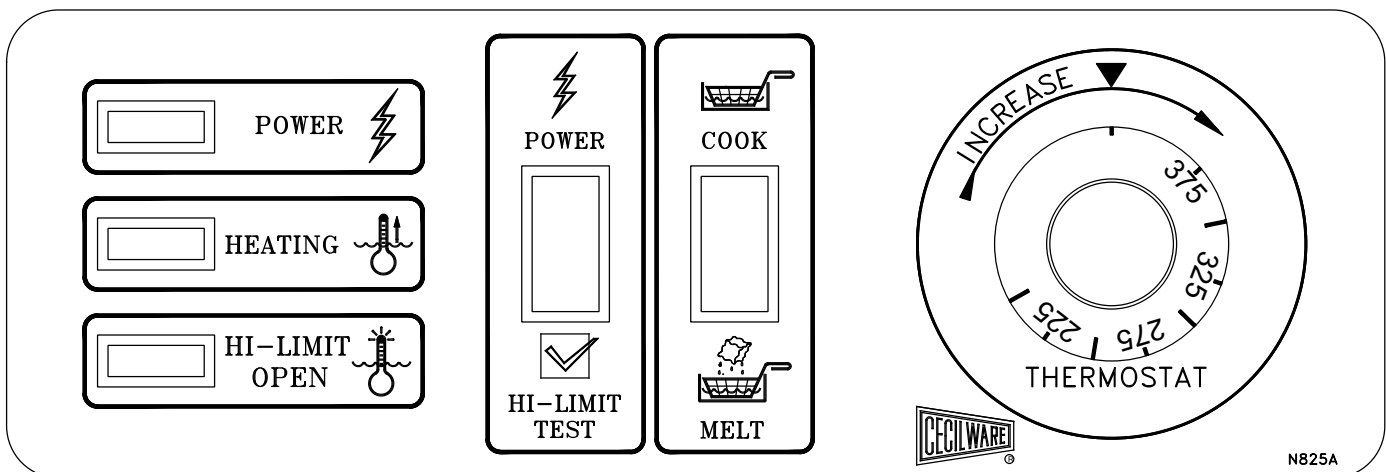
Electrical Installation

▲ WARNING: Electrical shock hazard. This is high voltage equipment. Make sure main disconnect is off before connecting fryer.

RATING PLATE - The rating plate is located on the inside of the fryer door. Information on the rating plate pertains to the power output (KW) of the heaters and other electrical requirements.

The information presented in this manual is for reference only. Installations must comply with local codes.

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



Installation (continued)

- The wiring diagram for each unit is attached to the inside of the fryer door. Wiring diagrams for all units are included in this manual. Amperage for each unit depends on the type of installation and accessories supplied with the unit.

Initial cleaning

Before using the unit, the tank should be washed thoroughly with hot, soapy water to remove oil residues and dust, then rinsed and wiped dry. Accessories, shipped with the unit, should also be washed.

Verification

1. Remove the crumb screen.
2. Fill the tank with hot or cold water to the "oil level" line.
3. Set the operating thermostat dial to 225 degrees, just above the boiling point of water, and engage cook cycle. (Cook switch ON)
4. Turn ON the power switch on the control panel. These steps check the heating element operation, initial thermostat calibration, and clean the tank for initial production.
5. When the water starts to boil, turn the dial to just below 212 degrees. The elements will turn off and the water will stop boiling.
6. When satisfied that heaters and thermostat are operating properly, drain the tank and dry thoroughly.
7. Close the drain valve.

Final Preparation

▲ WARNING To prevent serious burn injury:
Fryer must only be operated when cooking oil or shortening is at recommended oil level.
Do not move a fryer filled with hot liquid.
Let hot oil cool sufficiently before draining. Hot oil will crack glass and also melt plastic vessels.
Wear oil-proof insulated gloves when working at fryer filled with hot oil.

- **COOKING OIL:** fill tank to the "oil level" line marked on the tank.
- **SOLID SHORTENING:** either melt shortening first or cut it into small pieces and pack carefully around the heating element. Leave no air space around the elements and be careful not to disturb the sensing bulbs. Melt the shortening either with the MELT or MELT/COOK cycle or by using the COOK cycle and turning the heaters ON for FIVE (5) to TEN (10) SECONDS then OFF for ONE (1) MINUTE using the temperature control dial. Repeat this cycle until the shortening has melted. If smoke develops during this melting process shorten the "on" cycle and lengthen the "off" cycle.

- When the shortening has melted and the tank has filled to the "oil level", replace the crumb screen.
- Before starting operation, set the unit into COOK cycle mode and turn the thermostat to the operating temperature. Allow the oil or shortening temperature to stabilize, and then check with a high quality immersion thermometer.

Operation

Daily Operation

AT START OF WORKDAY - Check fryer visually for

- Power switch "OFF".
- Temperature control dial "OFF". (Counterclockwise)

GENERAL TURN-ON PROCEDURE:

- If fryer is empty, fill the tank with oil to the "oil level" mark.
- If using solid shortening, cut and pack as previously described.
- Turn Power switch "ON".
- To melt solid shortening, turn the Melt

▲ WARNING: Do not engage cook cycle until shortening has fully melted.

(Melt/Cook) switch "ON" and set the temperature control dial to 200 degrees.

- Put unit into cook cycle (Cook switch "ON") and set the temperature to 350 degrees (recommended). The frying compound will stabilize in less than 30 minutes and the unit will be ready for production.

USE OF FRYER - for best results:

- For consistent product quality, and long-term savings, use high quality liquid frying oil.
- If using solid shortening, never attempt to melt a block of shortening by setting it whole on top of the heating elements. This is dangerous as it may burn-out the elements and start a fire.
- The recommended temperature of 350 degrees should be the usual temperature for most cooking operations. However, frying should be carried out at the lowest temperature which will produce a high quality product while ensuring maximum life of the frying compound.
- When the fryer is not in use, temperature control should be set at a lower temperature than that used during cooking. Light loads may also be cooked at lower temperatures.
- Salting: Do not salt food over the fryer tank. Salt deteriorates the frying compound quickly.

Operation (continued)

FILTERING -The frying compound should be filtered at least once a day, or more frequently when doing high volume cooking. This assures the longest possible life for the frying compound, minimizes the transfer of flavors from batch to batch, and gives better taste to the food being prepared.

AT CLOSING TIME -Turn the power switch on the fryer panel OFF and set the temperature control dial OFF Drain and filter the frying compound. Allow compound to cool down sufficiently to prevent burns to the operator. Cover the fryer tank.

SHUT DOWN - When shutting down for longer than just overnight, drain the frying compound, clean the tank thoroughly, either discard the compound or return it filtered to the tank and then cover it.

Cleaning

DAILY

- Take off and wash fryer basket(s), crumb screen and basket hanger.
- Clean all exterior surfaces of the unit. Do not use cleansers, steel wool, or any other abrasive cleaning material on steel.
- Filter the frying compound or replace as necessary. More frequent filtering may be required if the unit is heavily used.

WEEKLY

- Drain the tank completely, either into a filter or a steel container. Do not use plastic buckets or glass containers.

▲ CAUTION: Allow oil to cool sufficiently before draining it.

- Clean the vessel with a nonabrasive commercial cleaner or hot water and a strong detergent. Drain the cleaning solution.
- Close drain valve and fill tank with fresh cleaning solution. Bring the cleaning solution to a boil, turn down the heat, and let the solution stand until deposits or spots can be rubbed off with a Teflon brush.
- Scrub tank walls, bottom and heating elements (Be careful not to disturb the sensing bulbs), then drain tank and rinse with clean water.
- Refill tank with clean water and bring to a full boil. Drain, rinse, and dry tank thoroughly.
- Refill with frying oil or compound (see **Daily Operation** in **Operation** section).

GENERAL CLEANING SUGGESTIONS

DO NOT USE steel wool or abrasive cloths, cleaners or powders. If it is necessary to scrape steel to remove encrusted materials, soak the area with hot cloths to loosen the material, and then use a wood or nylon scraper.

DO NOT USE a metal knife, spatula, or any other metal tool to scrape steel.

Keep all exterior surfaces of the griddle free of splashed grease and other dirt by washing regularly with hot water and soap. Rinse and wipe dry: then polish with a soft cloth.

Maintenance

NOTICE: The following procedures must be performed by qualified service personnel only. Factory approval must be obtained prior to doing any warranty work.

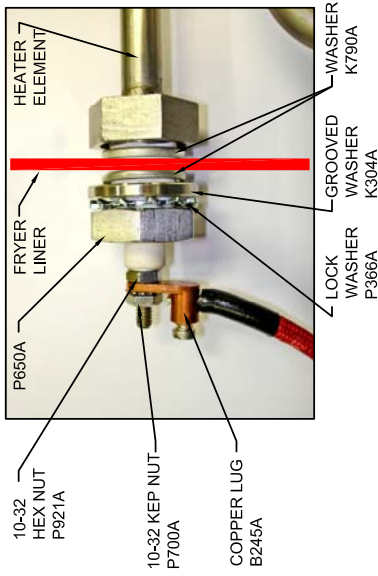
High Limit Control Test:

To test whether high limit control is working properly, fill the fry tank with oil up to maximum oil level. Then place a suitable thermometer in the fry tank with bulb deeply immersed in oil. Set thermostat to maximum position. When temperature has reached cut out level (Heating indicator light goes OFF), depress the High Limit Test Switch which bypasses thermostat and allows fat to heat up until high limit control is activated. When Red High Limit Pilot goes ON, note the temperature on thermometer (should be between 440 deg. and 475 deg.). Allow fryer to cool; then press red reset button(s) on the left section of control box, located behind the access door. If high limit control does not shut off fryer before 475 degrees is reached, have it replaced.

Maintenance (continued)

HEATER ELEMENT INSTALLATION INSTRUCTIONS EFS-40 EFS-65

PART NUMBERS IDENTIFICATION

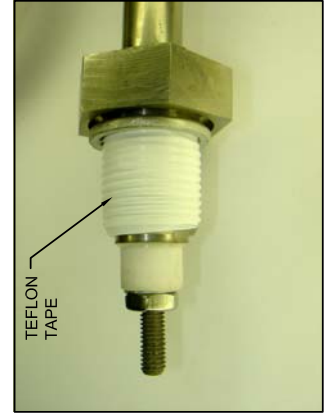
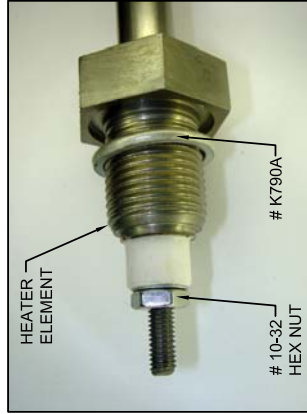


STEP 1:

1. TIGHTEN # 10-32 HEX NUT ON HEATER TERMINAL.
2. SLIDE (1) # K790A WASHER OVER THREADED PORTION OF HEATER. TEFLON SIDE OF WASHER FACES OUT AS SHOWN.

STEP 2:

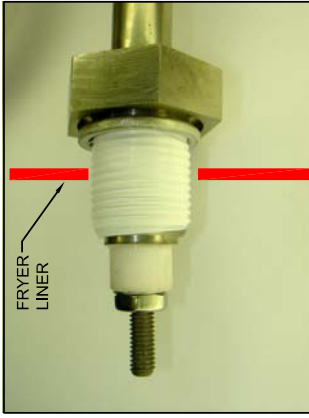
1. WRAP TEFLON TAPE (NOT SUPPLIED) AROUND THREADED PORTION OF HEATER.



HEATER ELEMENT INSTALLATION INSTRUCTIONS EFS-40 EFS-65

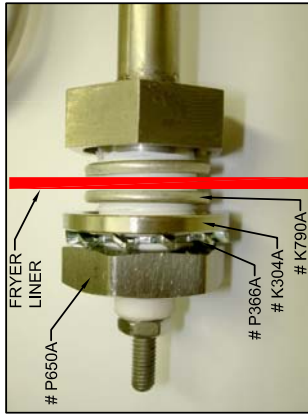
STEP 3:

1. INSTALL HEATERS THROUGH HOLES IN FRYER LINER.



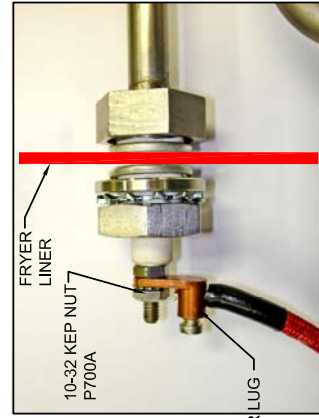
STEP 4:

1. SLIDE ON SECOND # K790A WASHER OVER THREADED PORTION OF HEATER. TEFLON SIDE FACES LINER WALL AS SHOWN.
2. SLIDE ON # K304A GROOVED WASHER. GROOVE FACES # K790A WASHER.
3. SLIDE ON # P366A LOCK WASHER.
4. INSTALL # P650A HEX NUT. TIGHTEN IN PLACE.



STEP 5:

1. ATTACH WIRE LEADS TO # B245A COPPER LUGS. TIGHTEN SET SCREWS.
2. SLIDE THE # B245A LUGS ONTO HEATER TERMINAL.
3. TIGHTEN IN PLACE USING # P700A 10-32 "KEP NUTS".



NR90A
AUGUST 2009

Troubleshooting

If the elements will not heat:

1. Check if all wires to the solid state temperature control or melt cycle timer are secure.
2. With the power on/off switch "ON", manually reset the high limit thermostat (push the red button(s) behind the access door).
3. Check that correct line voltage exists across terminal block terminals L1-L2, L2-L3 and L3-L1 (three phase connection) or L1-L2 (single phase connection).
4. Check if the main or branch circuit breakers or fuses are tripped or blown.
5. If the panel power indicator light is ON but latching contactor is not actuated, check continuity from the latching contactor coil to the power indicator light.

If the panel power indicator light does not light:

1. Check line voltage across the power indicator light, and then if voltage does not exist proceed as follows:
2. Check the fuse for line voltage between the load side and L3.
3. Check the power on-off switch for line voltage between the load side and L3.
4. Check the high limit thermostat for line voltage between the load side and L3; if resetting does not produce results, replace the high limit thermostat.
5. Check the operating thermostat for line voltage between the load side and L3; if defective, replace thermostat.

Excessive warm-up time; slow or inadequate temperature recovery; uneven heating:

1. Check temperature controller adjustment.
2. Place the sensing bulb of a high quality immersion thermometer about 1.5" above the thermostat sensing bulb or thermistor probe and set the controller dial to 350 degrees.
3. Wait at least 20 minutes for the oil temperature to stabilize.
4. If the temperature is not within +/- 10 degrees of the dial setting, see "Probe Test" below for the solid state temperature controller or "Temperature Adjustment" for the thermostat temperature controller.
5. Check heating circuit
6. With the power switch "ON" turn the temperature control dial until the power and heating indicator lights are both on. The latching and cycling contactors should both be actuated.

7. Check the load side of the contactors to the heating element terminals. Each element should draw as shown:

| Model | at 208V | at 240V |
|-------|---------|---------|
| EF-40 | 29 AMPS | 25 AMPS |
| EF-65 | 34 AMPS | 29 AMPS |

Excessive temperature overshoot during warm-up; overheating; scorching; high limit switch requires frequent re-setting:

1. Check temperature controller (see Temperature Adjustment below).
2. Check thermistor probe.
3. Check that the thermostat bulb or thermistor probe in the tank has not been moved out of operating position.

TEMPERATURE ADJUSTMENT (For units with mechanical thermostat controls)

1. Mount the bulb of a high quality immersion thermometer at the same level as the thermostat bulb. To adjust temperature, turn the thermostat knob to its maximum position (in clockwise direction).
2. Pull off the dial knob and insert a small screwdriver into the adjustment screw in the center of the shaft. If the liquid compound is hotter than the setting turn the screw CLOCKWISE TO LOWER THE TEMPERATURE.
3. If the liquid compound is cooler than the setting turn the screw COUNTERCLOCKWISE TO RAISE THE TEMPERATURE.

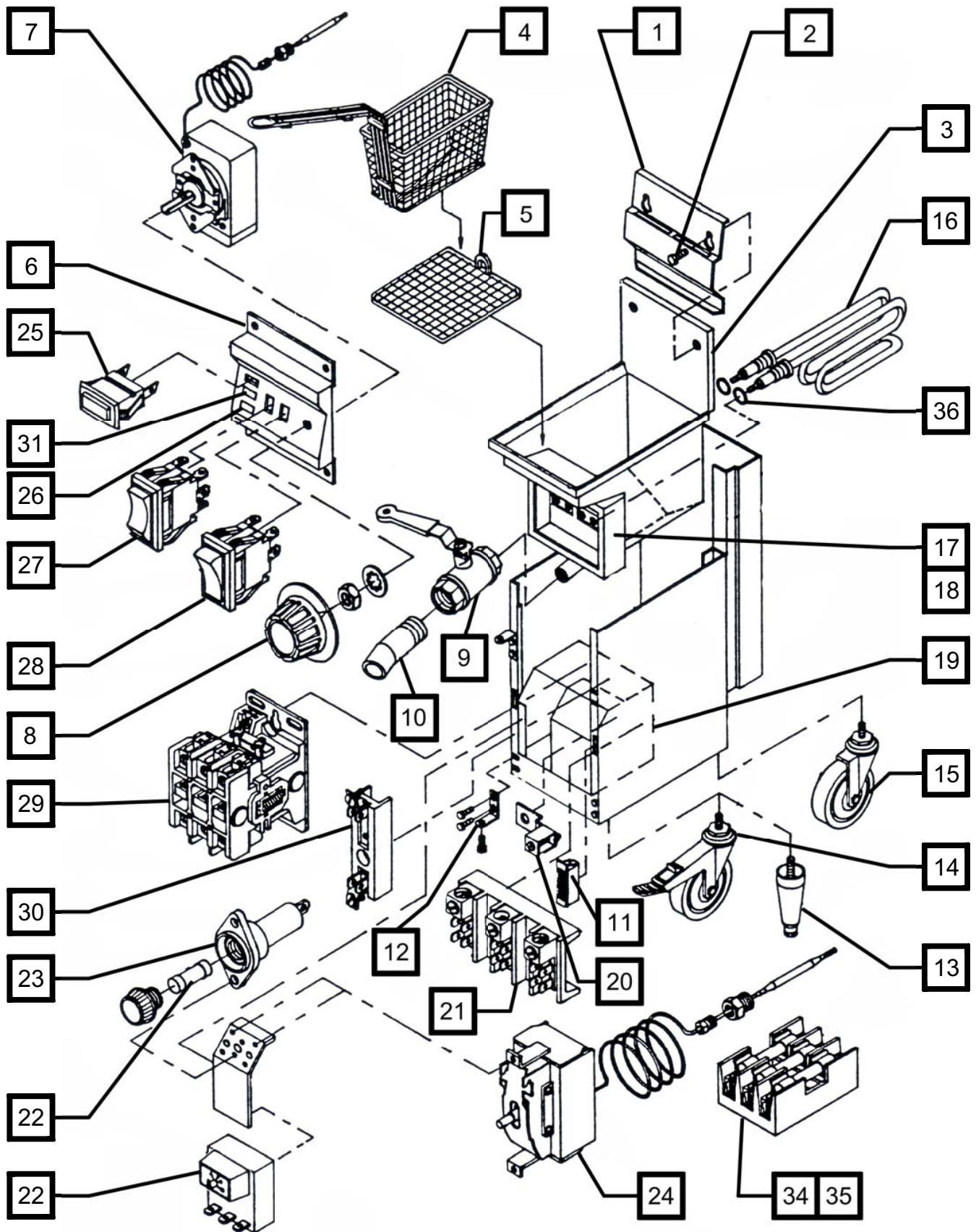
MAKE ALL TEMPERATURE ADJUSTMENTS, UP OR DOWN, IN INCREMENTS OF 1/4 TURN. IF THIS CALIBRATION FAILS, REPLACE THERMOSTAT.

If you need help, call Grindmaster-Cecilware Technical Service Department, (502) 425-4776 or (800) 695-4500 (USA & Canada only) (Monday through Friday 8 AM - 6 PM EST). Please have the model and serial number ready so that accurate information can be given. The rating plate is located on the inside of the fryer door. Information on the plate includes the model and serial number of the unit.

Prior authorization must be obtained from Grindmaster- Cecilware for all warranty claims.

Grindmaster-Cecilware provides the industry's BEST warranty. Visit our website at GMCW.com for warranty terms and conditions.

Parts Diagram



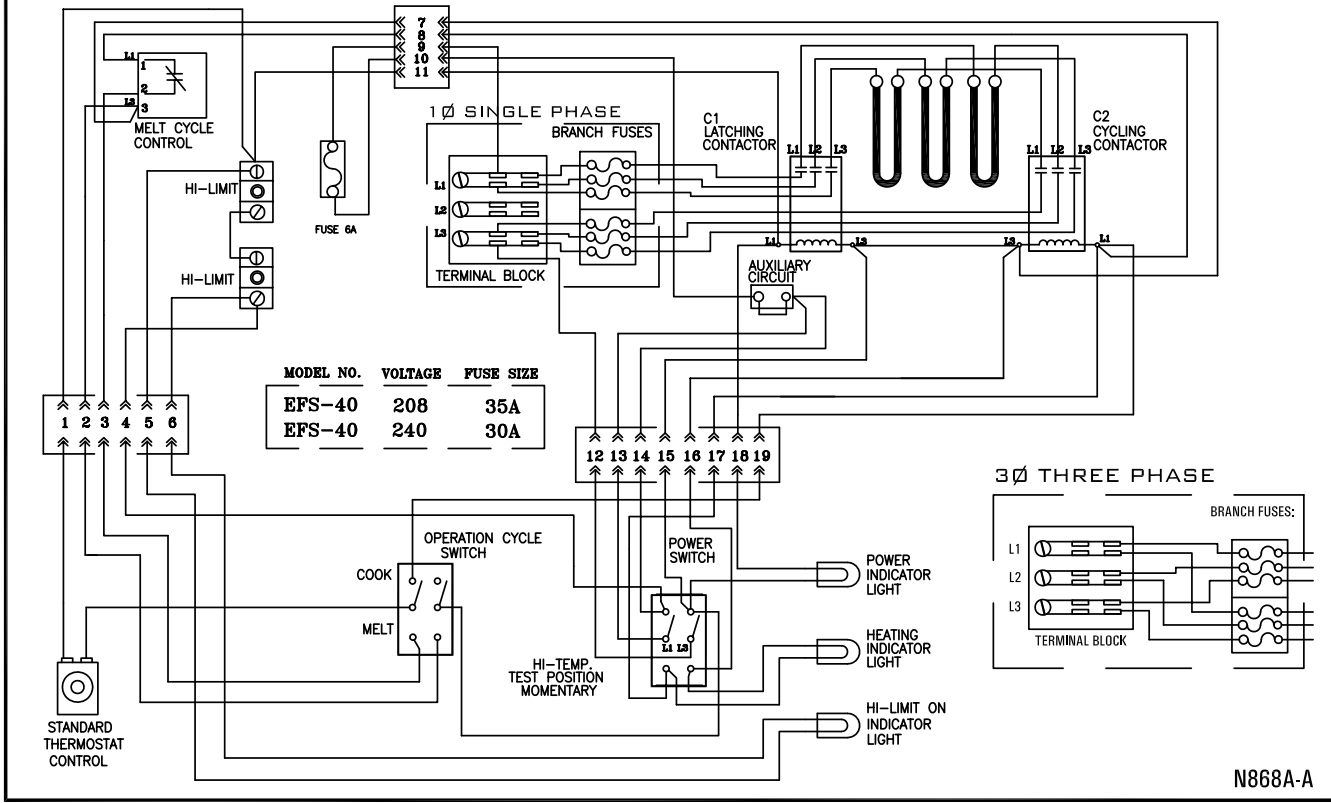
Parts List

| ITEM # | DESCRIPTION | EFS/EFP-40 | EFS/EFP-65 |
|--------|--|------------|------------|
| 1 | Basket Support Bracket | T536A | T644AL |
| 2 | Basket Support Fastener | P281 A | P281 A |
| 3 | Fry Tank (Stainless Steel) | T787Q | T820Q |
| 3 | Fry Tank (Mild Steel) | T826Q | T829Q |
| 4 | Fry Basket, Small | V174P | V180P |
| 5 | Crumb Screen | V172A | V179A |
| 6 | Fascia Assembly | U919Q | U958Q |
| 7 | Thermostat Control | L345E | L345E |
| 8 | Thermostat Knob | M099A | M099A |
| 9 | Drain Valve | D048A | D048A |
| 10 | Drain Pipe | J062A | J062A |
| 11 | Magnetic Catch | U008A | U008A |
| 12 | Door Hinge | U579A | U579A |
| 13 | Adjustable Leg (1 Leg) | M219B | M219B |
| 14 | Swivel Caster with Locking Device (Optional) | M015A | M015A |
| 15 | Swivel Caster (Optional) | M014A | M014A |
| 16 | Heating Element 208V | G250Q | G249Q |
| 16 | Heating Element 240V | G246Q | G245Q |
| 17 | Junction Box | U881A | U882A |
| 18 | Cover (Junction Box) | U884A | U885A |
| 19 | Electric Control Box | U962Q | U949Q |
| 20 | Ground Lug | B081A | B081A |
| 21 | Terminal Block | B083A | B083A |
| 22 | Fuse | C395AL | C395AL |
| 23 | Fuse Holder | C396AL | C396AL |
| 24 | Hi-Limit Control | L346A | L346A |
| 25 | Clear Pilot | L420A | L420A |
| 26 | Red Pilot | L422A | L422A |
| 27 | Power Switch | L408A | L408A |
| 28 | Cook Switch (Mechanical) | L407A | L407A |
| 29 | Contactor | C036AL | C036A |
| 30 | Auxiliary Circuit Terminal Block | B084A | B084A |
| 31 | Green Pilot | L421A | L421A |
| 33 | Solid State Timer | L744A | L744A |
| 34 | Fuse Block 208V 1 Phase | C137A | C137A |
| 34 | Fuse Block 208V 3 Phase | C137A | C137A |
| 34 | Fuse Block 240V 1 Phase | CA61A | C137A |
| 34 | Fuse Block 240V 3 Phase | CA61A | C137A |
| 35 | Fuse 208V | CA64A | CA36AL |
| 35 | Fuse 208V | CA64A | CA36A |
| 36 | O-Ring (heating elements) | K790A | K790A |

Wiring Diagram

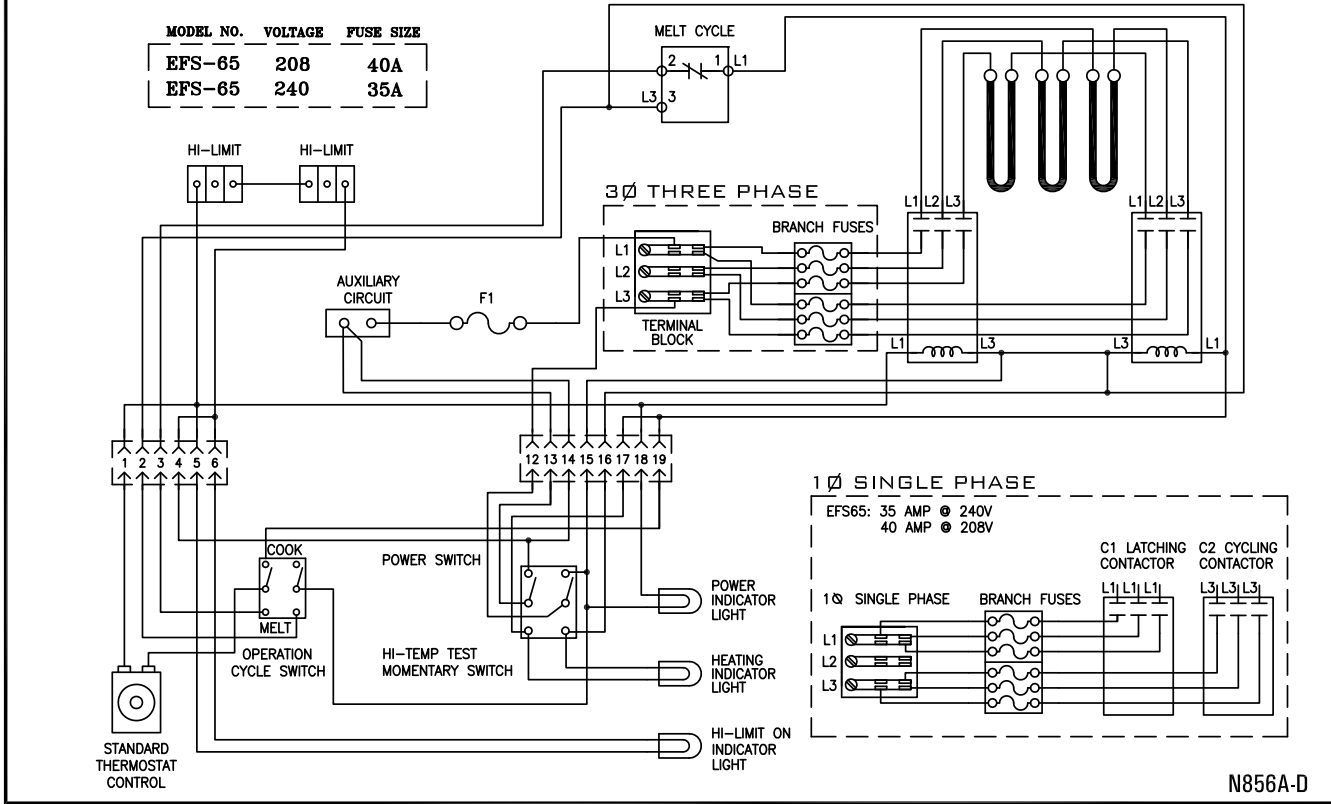
EFS/EFP-40 WITH STANDARD THERMOSTAT CONTROL

WIRING DIAGRAM : 18 KW 208/240V 1PH & 3PH



EFS/EFP-65 WITH STANDARD THERMOSTAT CONTROL

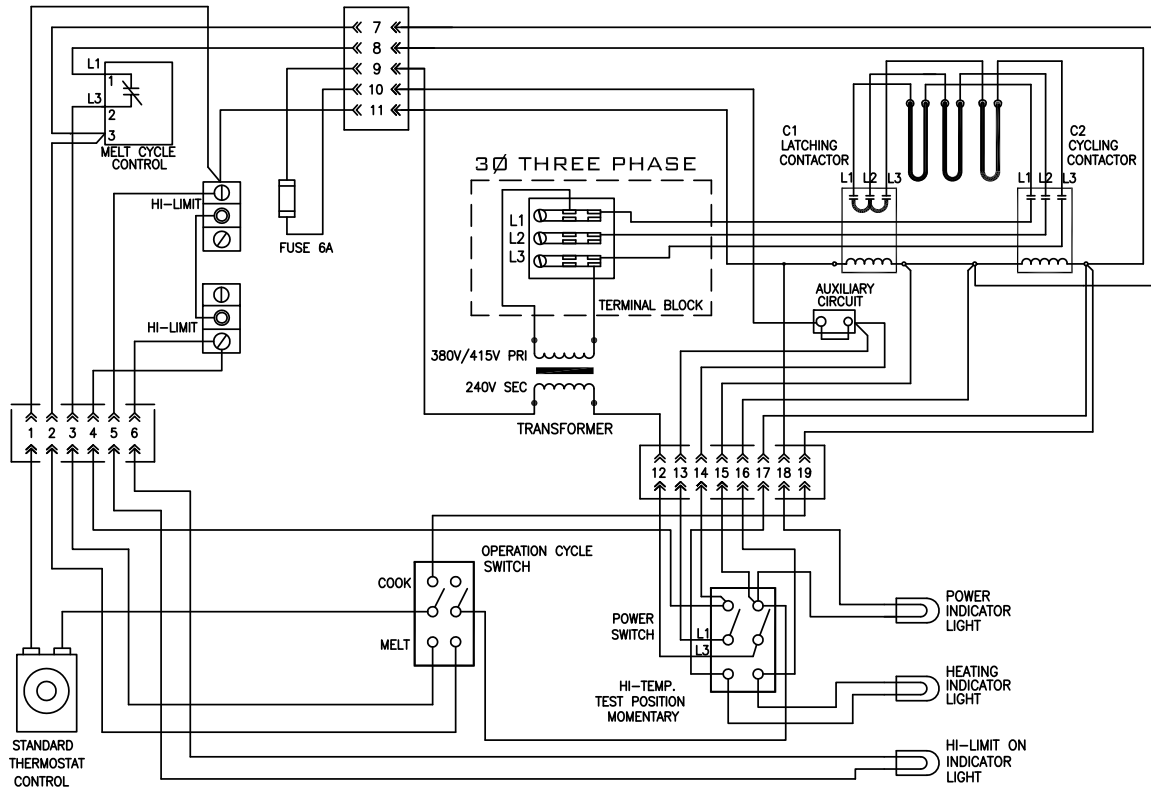
WIRING DIAGRAM : 21KW 208/240V 1PH & 3PH



Wiring Diagram (continued)

EFS/EFP-40 WITH STANDARD THERMOSTAT CONTROL

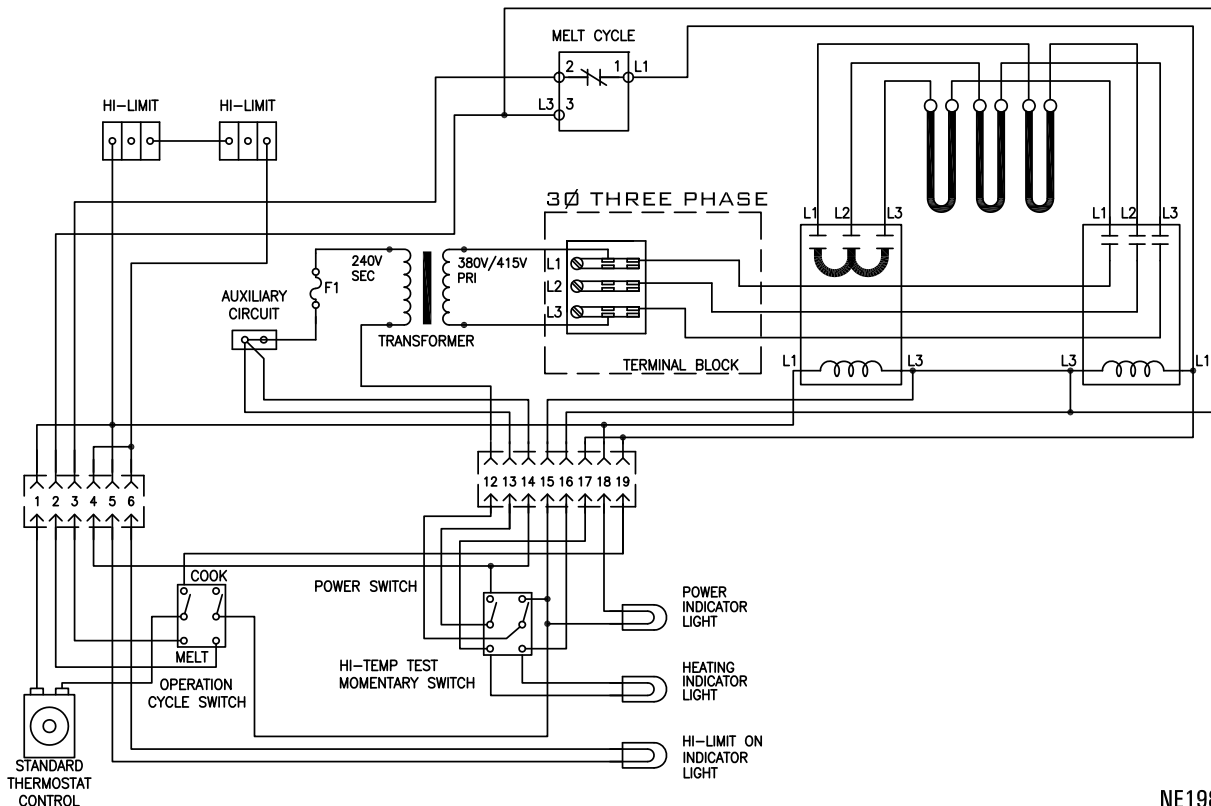
WIRING DIAGRAM : 18 KW 380/415V 3PH WYE



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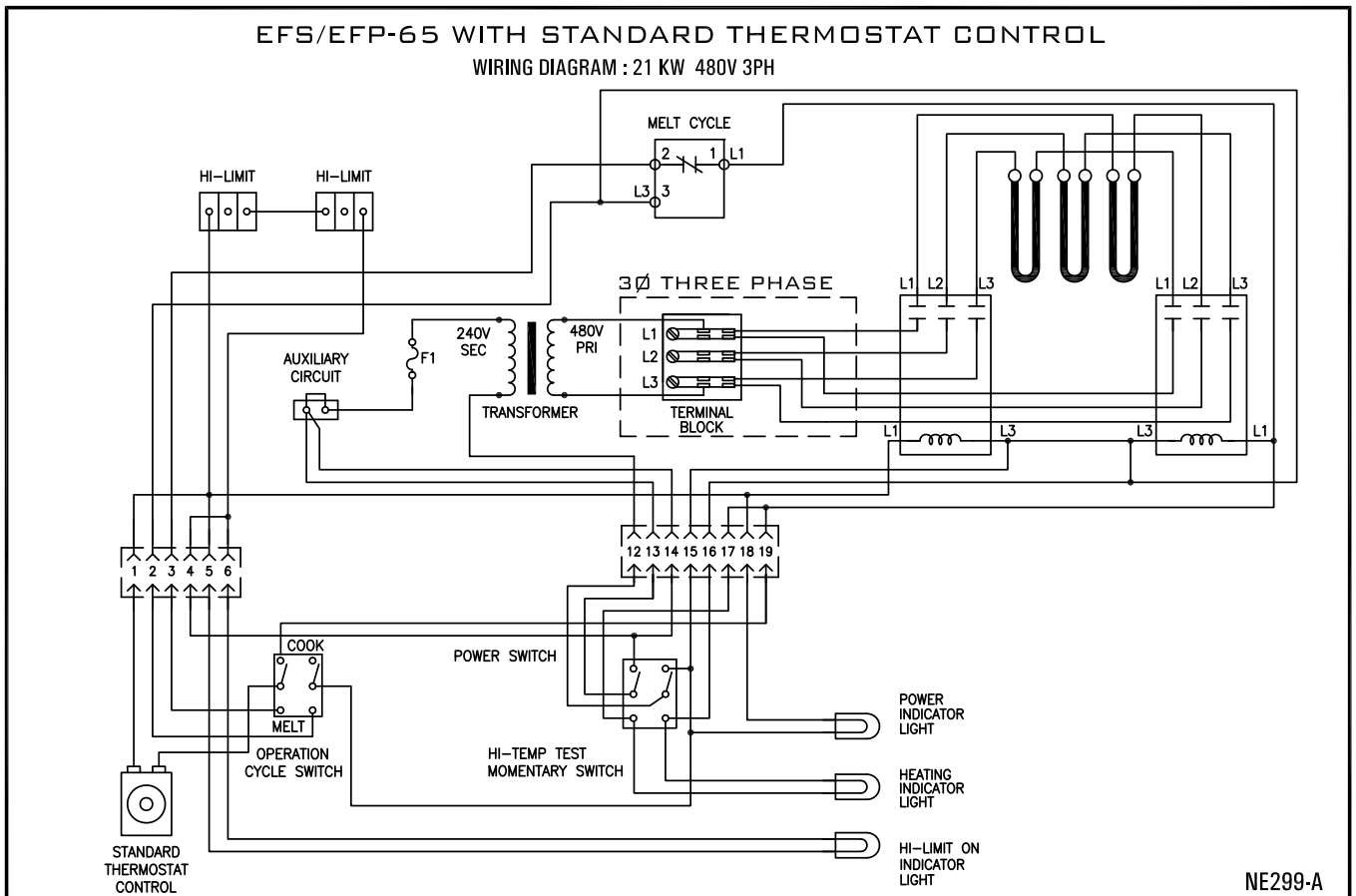
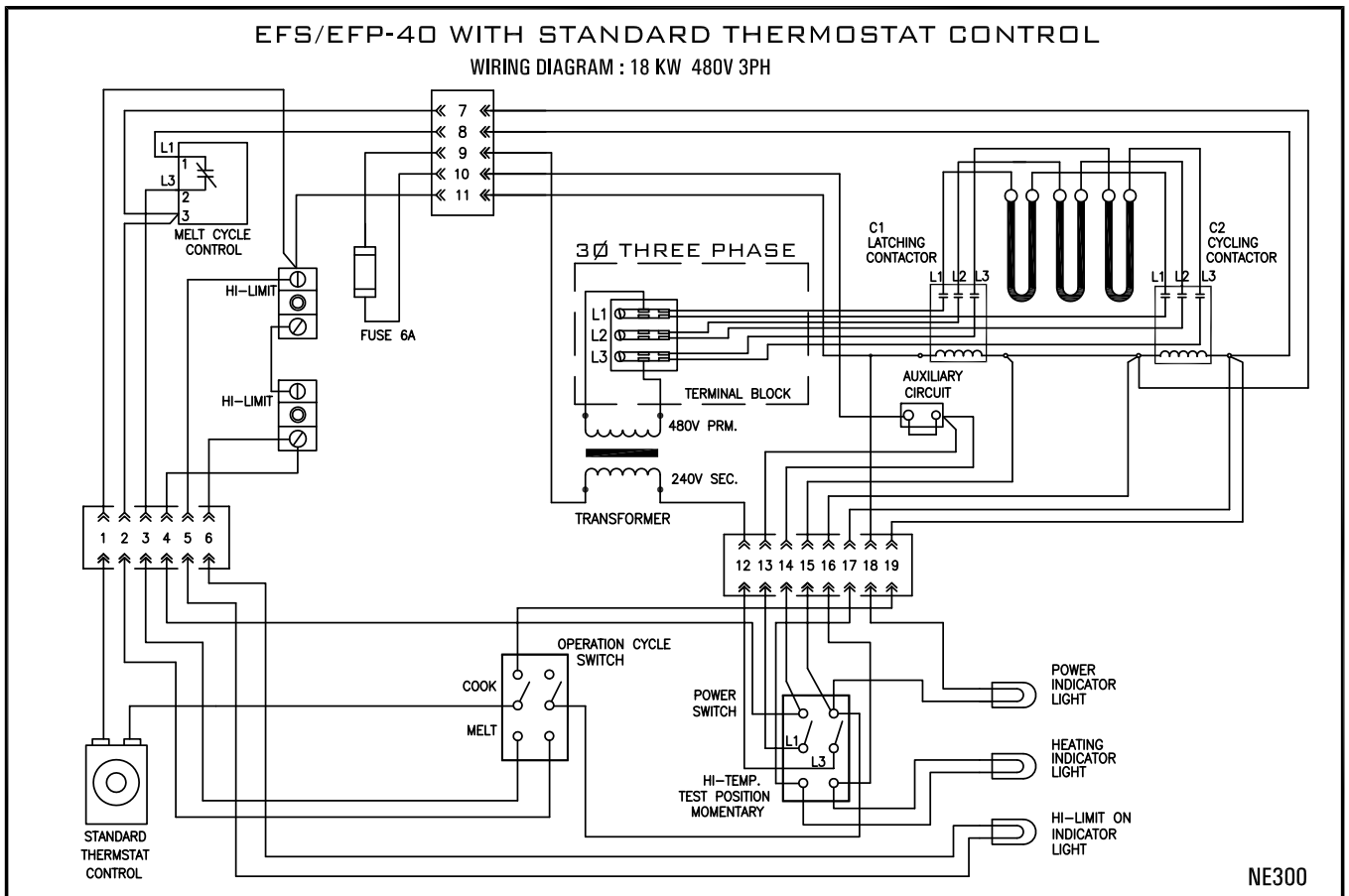
EFS/EFP-65 WITH STANDARD THERMOSTAT CONTROL

WIRING DIAGRAM : 21 KW 380/415V 3PH, WYE



NE198

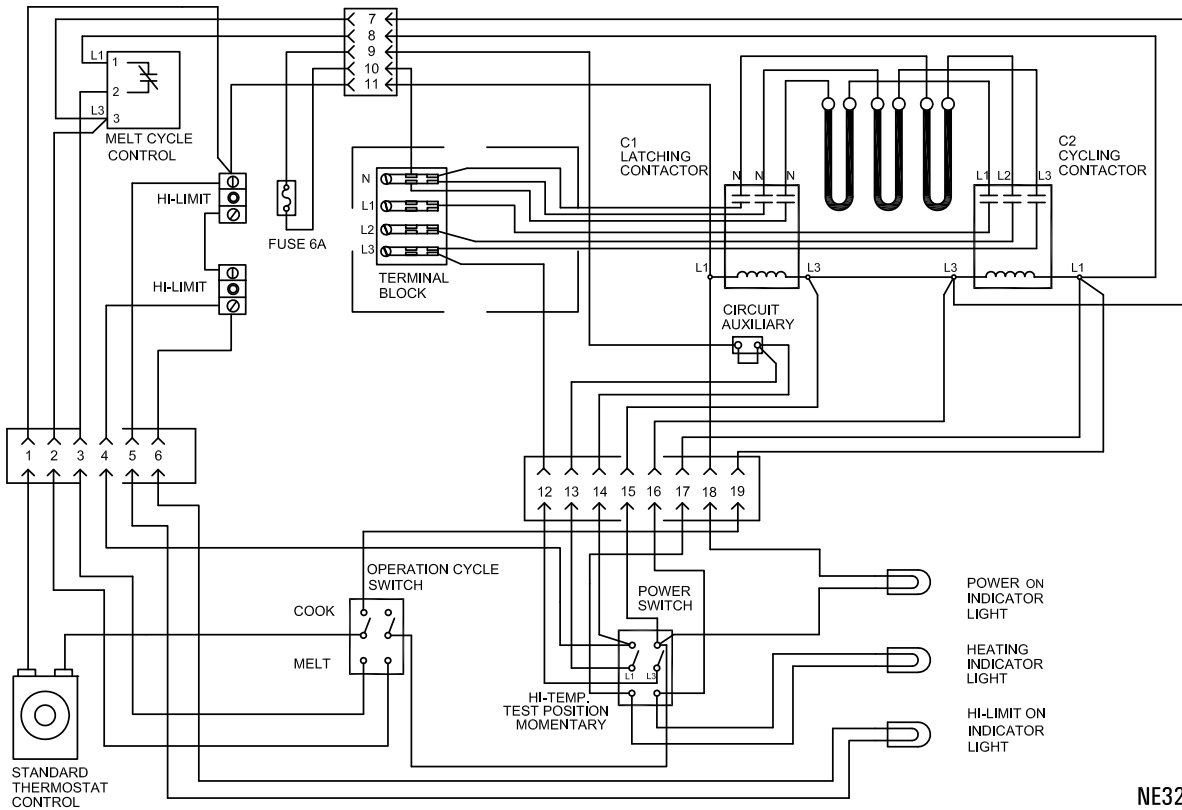
Wiring Diagram (continued)



Wiring Diagram (continued)

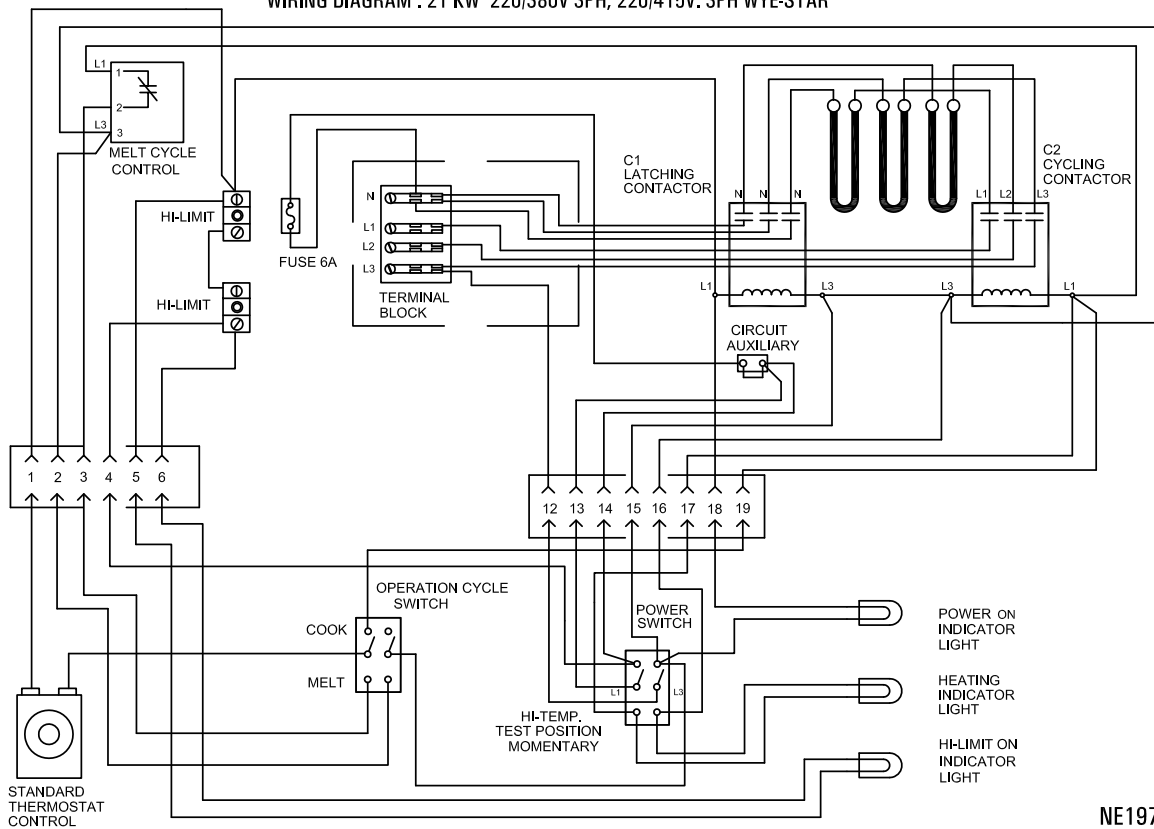
EFS/EFP-40 WITH STANDARD THERMOSTAT CONTROL

WIRING DIAGRAM : 18KW, 220-380V. 3 PH - 220-415V. 3 PH WYE-STAR



EFS/EFP-65 WITH STANDARD THERMOSTAT CONTROL

WIRING DIAGRAM : 21 KW 220/380V 3PH, 220/415V. 3PH WYE-STAR



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