



MARKET FORGE

ECOJET EJ-10E & EJ-7E ELECTRIC CONVECTION STEAMER W/TWIN GENERATORS PARTS AND SERVICE MANUAL

EFFECTIVE JULY 31, 2014

Superseding All Previous Parts Lists.

The Company reserves the right to make substitution in the event that items specified are not available.

ERRORS: Descriptive and/or typographic errors are subject to correction.

MARKET FORGE

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SERVICE ADJUSTMENTS

ADJUSTMENT FOR HIGH ALTITUDE LOCATIONS



NOTICE

Contact the factory, the factory representative or local service company to perform maintenance and repairs.

The steamer has been factory set so that when it is ON and during the READY phase, it will maintain water temperature in the steam generator tank at approximately 205 degrees Fahrenheit (just below water boiling point). However, for high altitude locations, an authorized servicer must adjust the steamer to achieve this temperature. To adjust:

1. Remove side panel and turn control panel power switch to ON.
2. Open compartment door, and after about 15 minutes, steam will be seen, entering the cooking compartment.
3. Turn thermostat shaft counterclockwise to lower temperature until steam just ceases to enter cooking compartment and READY light goes on.
4. Replace side panel.
5. Follow TESTING PROCEDURES in this manual.

WATER FLOWS INTO DRAIN DURING SHUTDOWN

When steamer is shut down and cold water is running continuously into the open drain, either or both solenoid valves did not close when steamer was turned off.

1. Disassemble solenoid valve(s) and examine for scale or foreign particles lodged in diaphragm or core tube.
2. Clean valve(s) thoroughly and reassemble, or replace valve(s).

DRAIN WATER TEMPERATURE TOO LOW OR TOO HIGH

Cooling solenoid valves are adjustable with fine adjustment screw on the bottom of the valve.

1. Run cooking compartment empty until drain temperature stabilizes.
2. Turn fine adjustment screw on cooling solenoid valve out to decrease drain temperature and in to increase drain temperature.

WATER OVERFLOWS INTO COOKING COMPARTMENT

When steamer is first turned on for the day, and the following conditions occur: - READY light does not come on after about 15 minutes,

- Water begins to overflow into cooking compartment,
- Water fill solenoid valve is open, then any or all of these symptoms may indicate a problem with the operating probe due to either:
 1. A short between the operating probe terminal and body of the steamer. Call your authorized servicer.
 2. Excessive scale build-up on the operating probe. This acts as an "insulation" and prevents the probe from sensing the water level. It is therefore unable to close the water fill (solenoid) valve to shut off the water.

As a temporary solution, with power OFF, unscrew probes, check visually, and clean or chip off scalant. Replace probe.

This problem is an indication of severe harmful water conditions which should be corrected immediately to avoid damage to the components and ultimate malfunction of the steamer.

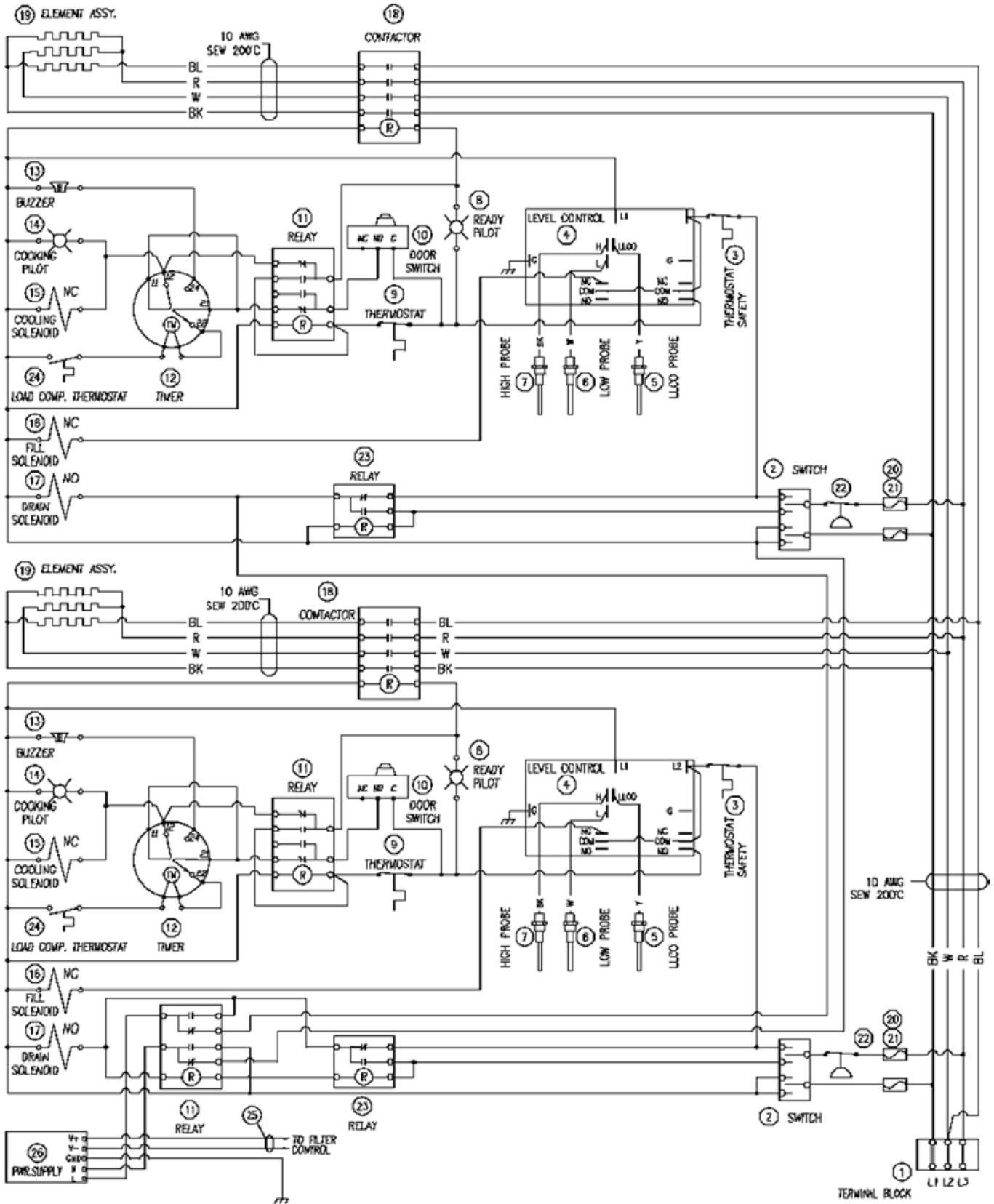
HEATER ELEMENTS DO NOT COME ON

When the steamer is turned ON and heater elements do not activate, and therefore, the READY light does not come on, then the contactors may be burned out. If a considerable amount of "chattering" of contactors has been previously experienced, then the thermostat bulb may be coated with scalant and unable to sense water temperature in the boiler accurately, and therefore unable to control the contactors.

1. Replace contactors.
2. Unscrew operating thermostat bulb, clean off scalants and screw thermostat bulb back in.

This problem is an indication of inadequate water quality and is not covered under warranty. Have water quality analysed and corrected immediately to avoid complete malfunction of the steamer.

WIRING DIAGRAMS

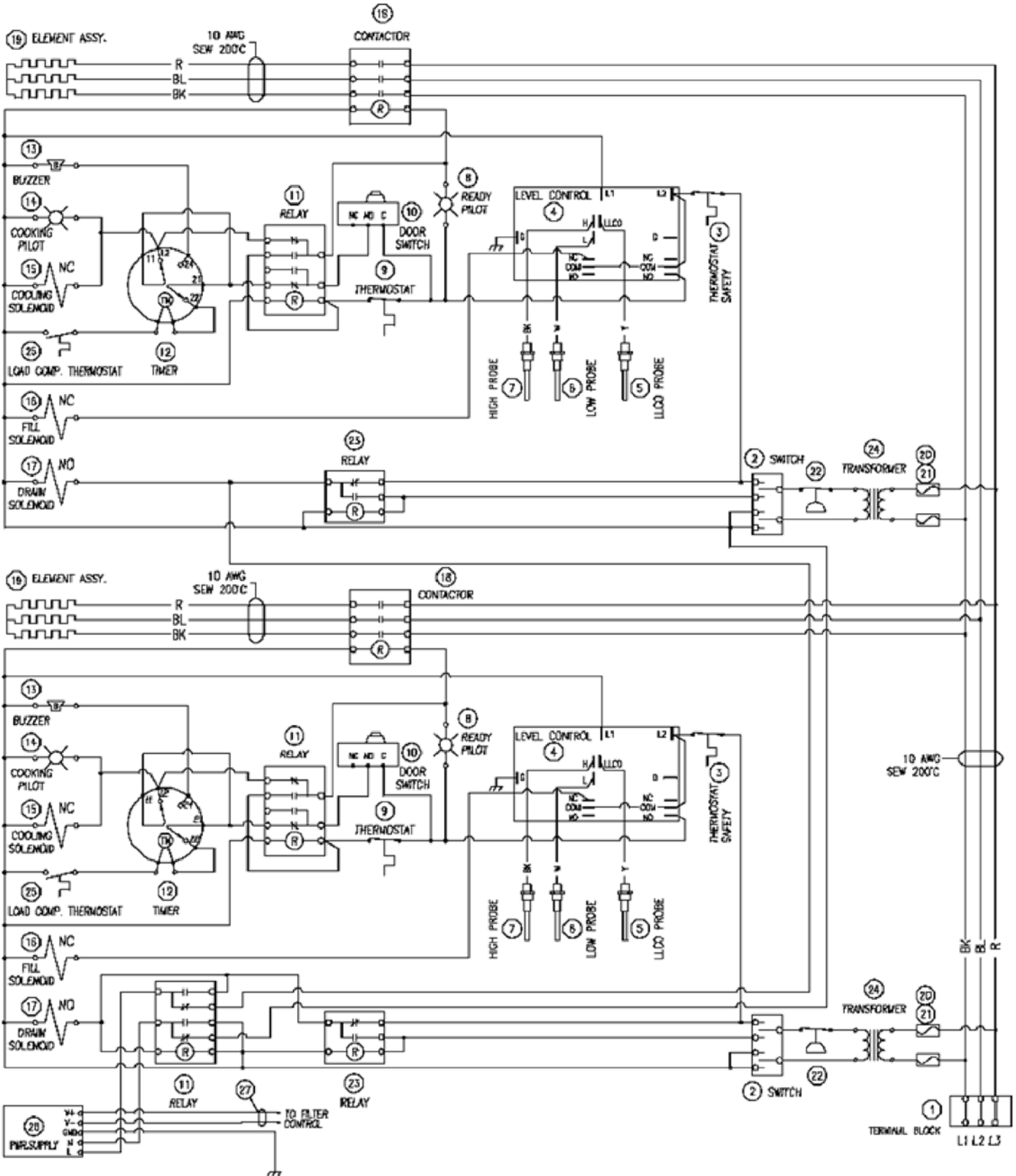


3E-15055R1

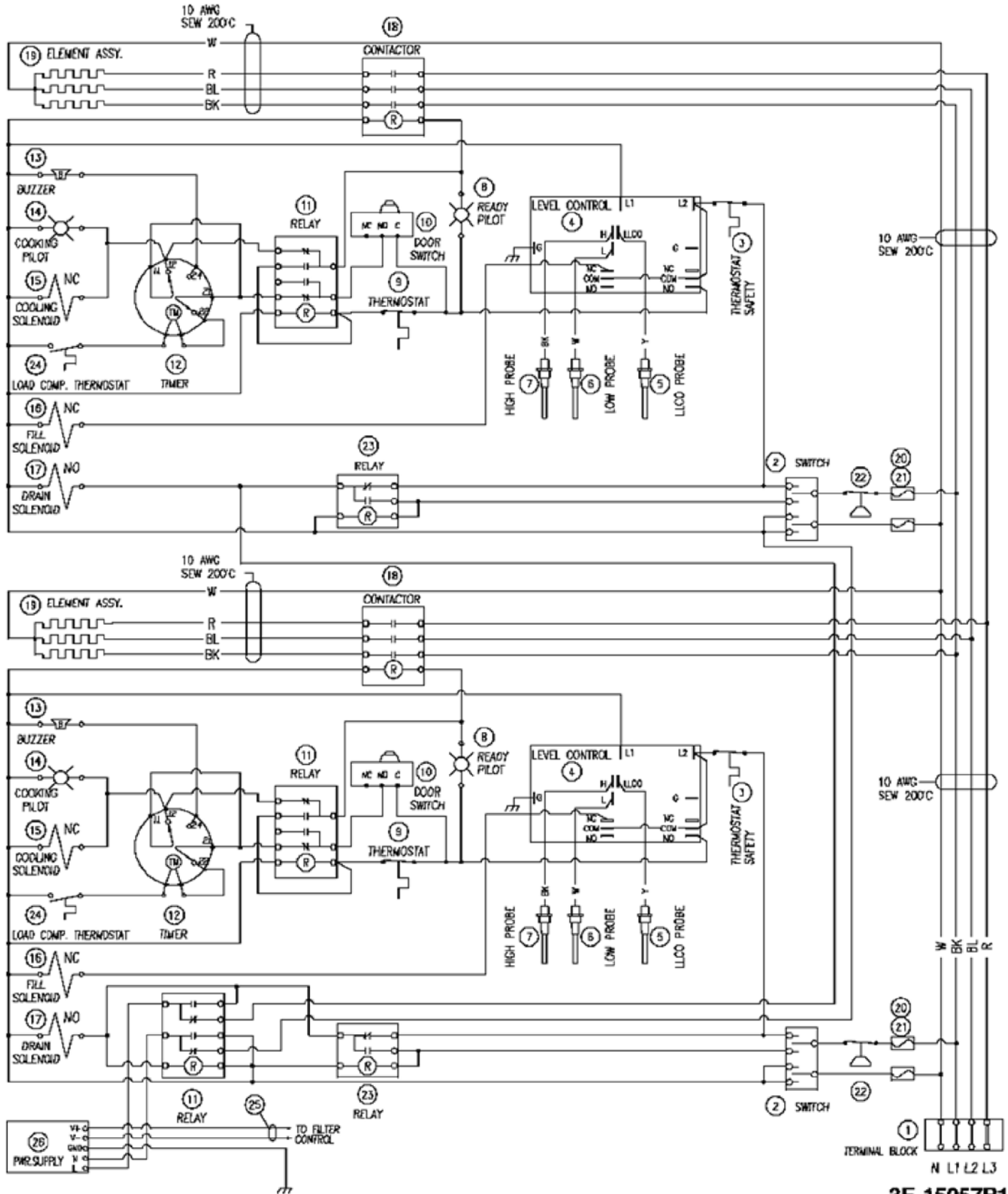
208-240V

EJ-7E, EJ-10E, 10K OHM LEVEL CONTROL

WIRING DIAGRAMS

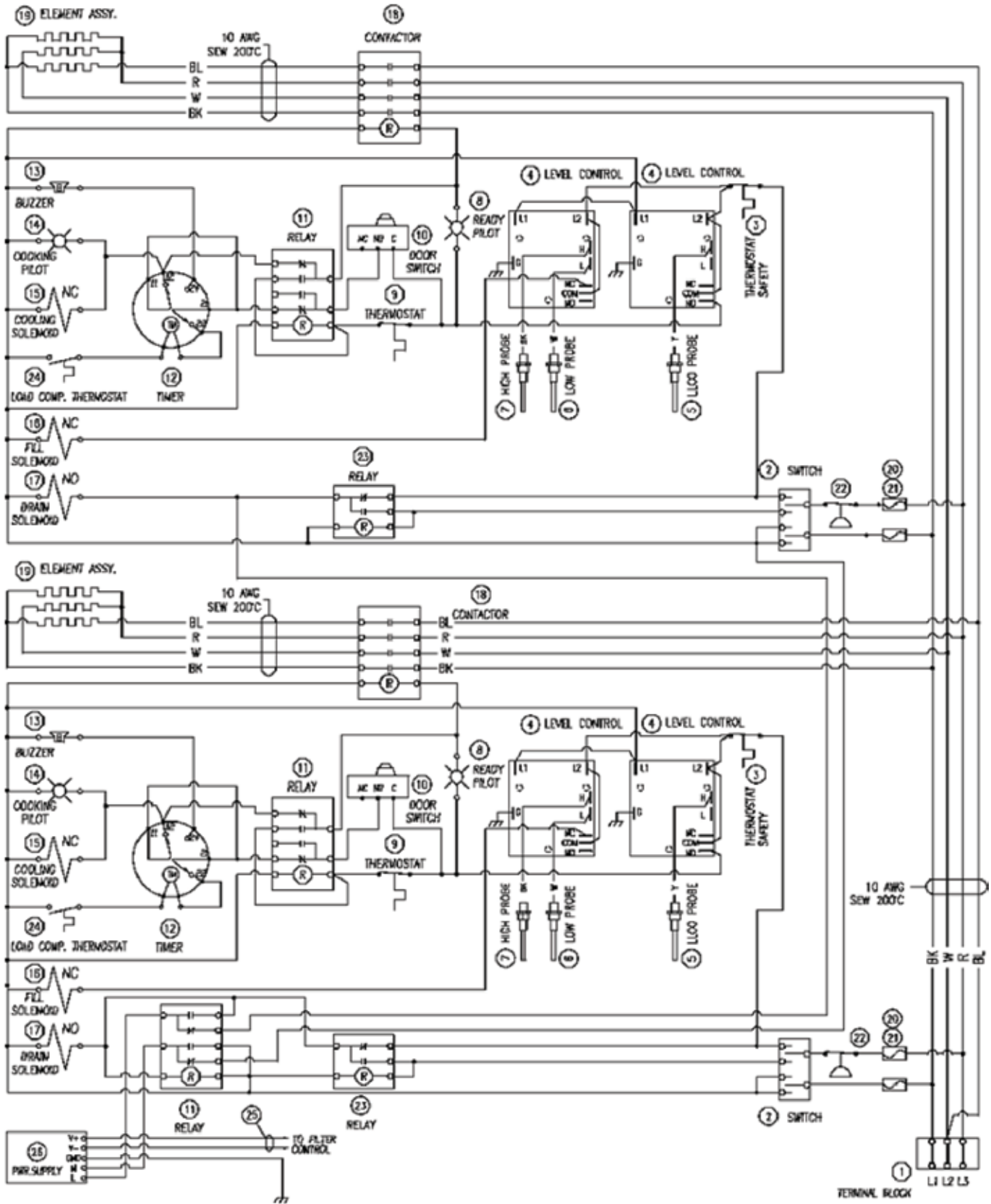


WIRING DIAGRAMS



3E-15057R1
 380/220V, 415/240V
 EJ-7E, EJ-10E, 10K OHM LEVEL CONTROL

WIRING DIAGRAMS

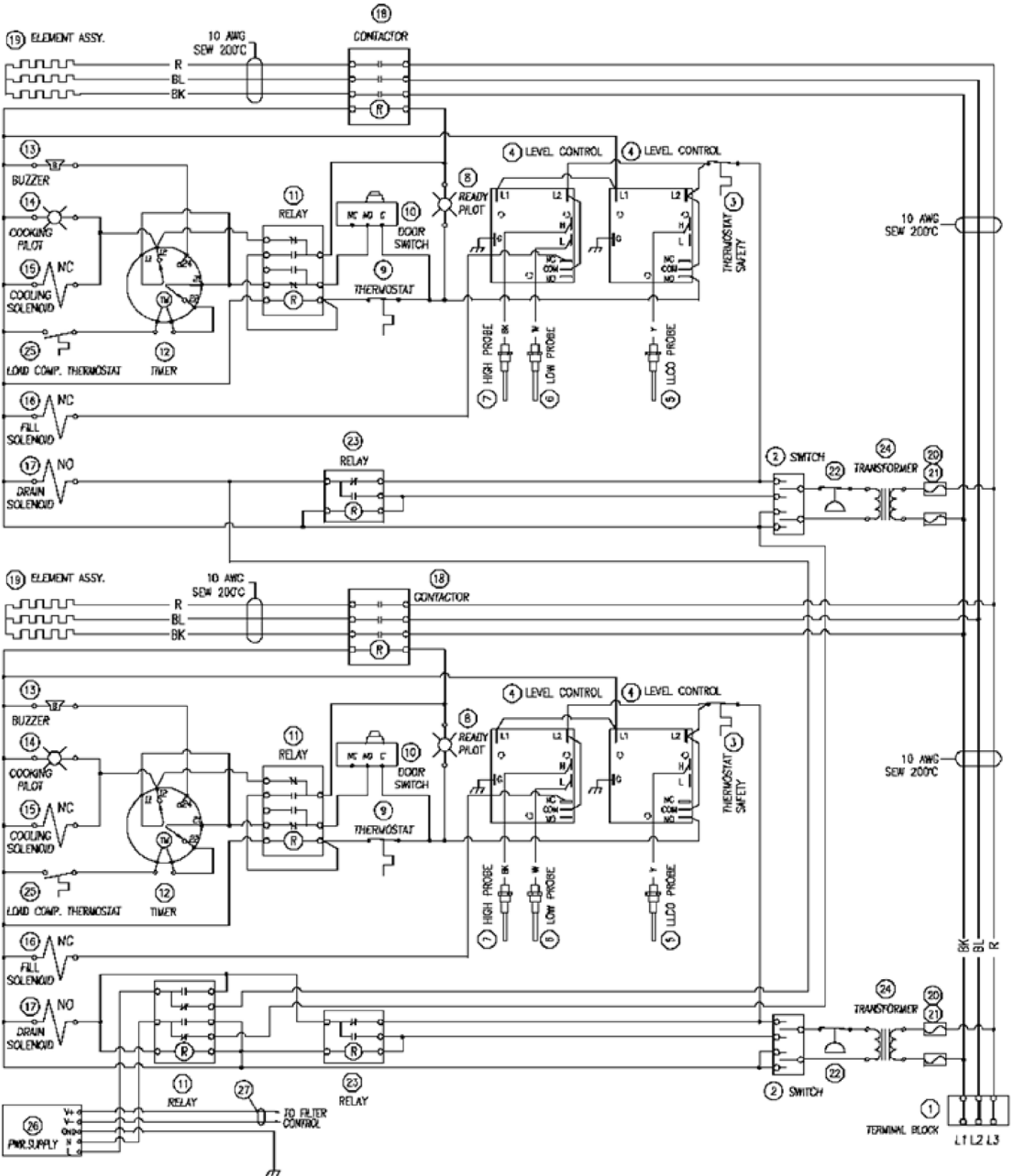


3E-15058R1

208-240V

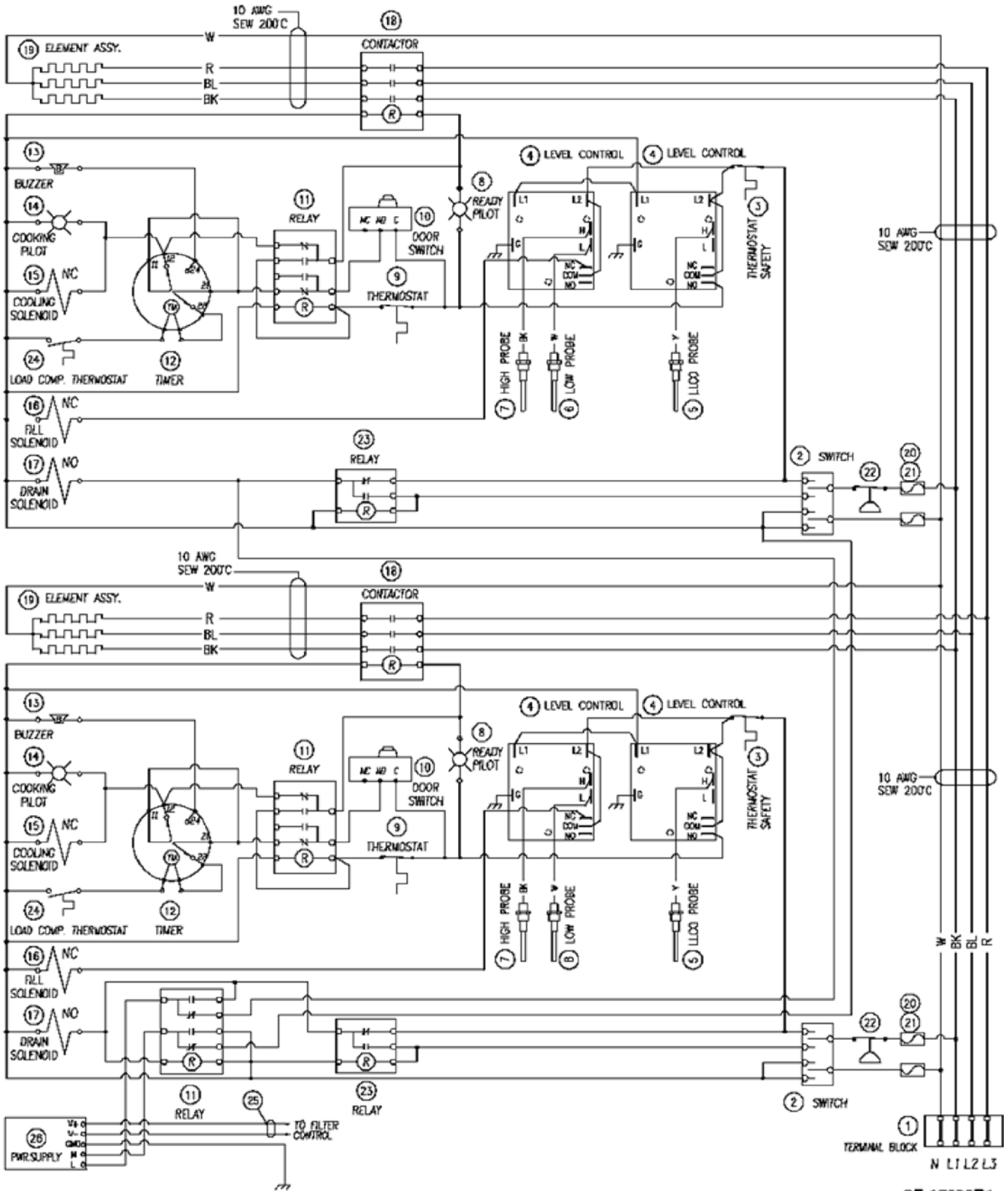
EJ-7E, EJ-10E, 1M OHM R.O. LEVEL CONTROL

WIRING DIAGRAMS



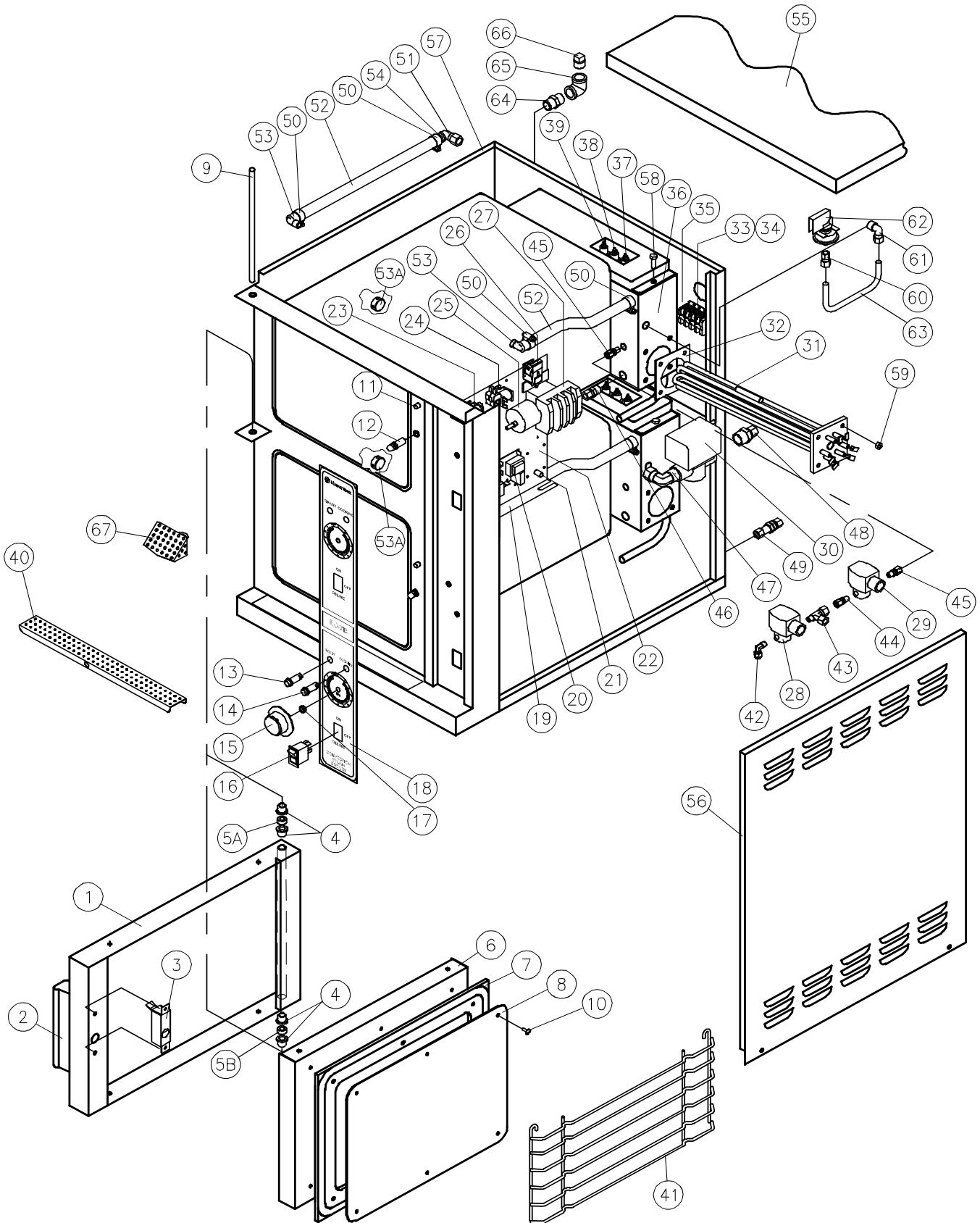
3E-15059R1
 380V, 415V, 480V, 600V
 EJ-7E, EJ-10E, 1M OHM, R.O LEVEL CONTROL

WIRING DIAGRAMS



3E-15060R1
380/220V, 415/240V
EJ-7E, EJ-10E, 1M OHM, R.O LEVEL CONTROL

STEAMER EXPLODED VIEW



STEAMER EXPLODED VIEW

| | ITEM | PART NO. | DESCRIPTION | EJ-7E | EJ-10E |
|----|------|----------|---|-------|--------|
| * | 1A | 97-7225 | Door Assembly, (Top) Door Assembly, (Top) | 1 | |
| | 1A | 97-6255 | Door Assembly, (Top) Door Assembly, (Lower) | 1 | |
| | | 97-6173 | Door Assembly | | 2 |
| | 1 | 97-6232 | Door Frame, Top | 1 | |
| | | 97-6647 | Door Frame, Lower | 1 | |
| | | 97-6227 | Door Frame | | 2 |
| | 2 | 97-6262 | Door Handle Assembly | 2 | 2 |
| * | | 97-6235 | Door Handle Decal | 2 | 2 |
| * | | 97-6258 | Door Handle | 2 | 2 |
| * | | 97-6259 | Door Handle Plate | 2 | 2 |
| * | | 98-6265 | Socket Set Screw, 1/4-20 x 1-3/4 | 2 | 2 |
| * | | 97-5349 | Socket Set Screw, 1/4-20 x 3/4 | 1 | 1 |
| * | | 97-6260 | Spacer | 2 | 2 |
| * | | 97-6297 | Lock Washer, 1/4 | 2 | 2 |
| * | | 97-6298 | Hex Nut, 1/4 - 20 UNC | 2 | 2 |
| | 3 | 97-6232 | Latch Assembly | 2 | 2 |
| | 4 | 97-6261 | Door Bushing | 8 | 8 |
| | 5A | 97-7146 | Spacer - Upper | 2 | 2 |
| | 5B | 97-6735 | Spacer - Lower | 2 | 2 |
| | 6 | 97-6262 | Door Panel, Top | 1 | |
| | | 97-6263 | Door Panel, Lower | 1 | |
| | | 97-6230 | Door Panel | | 2 |
| ** | 7 | 97-6264 | Door Gasket, Top | 1 | |
| | | 97-6265 | Door Gasket, Lower | 1 | |
| | 7 | 97-6228 | Door Gasket | | 2 |
| ** | 8 | 97-6266 | Gasket Plate, Top | 1 | |
| | | 97-6267 | Gasket Plate, Lower | 1 | |
| | | 97-6229 | Gasket Plate | | 2 |
| | 9 | 97-6268 | Hinge Rod | 1 | |
| | | 97-6289 | Hinge Rod | | 1 |
| * | | 97-6648 | Stainless Steel Washer | 1 | 1 |
| | 10 | 97-6233 | Gasket Panel Screws, 10-32 x 1/2 | 14 | 16 |
| | 11 | 97-6301 | Actuator c/w Retaining Ring | 2 | 2 |
| * | | 97-6191 | Door Switch | 2 | 2 |
| | 12 | 97-6178 | Striker | 2 | 2 |
| * | | 97-6302 | Stainless Steel Washer | 2 | 2 |

* NOT SHOWN. ** SELECT AS REQUIRED

STEAMER EXPLODED VIEW

| | ITEM | PART NO. | DESCRIPTION | EJ-7E | EJ-10E |
|----|------|-----------|---|-------|--------|
| * | | 97-6650 | Lock Washer, 1/2 | 2 | 2 |
| * | | 97-5601 | Hex Nut, 1/2-20 UNF | 2 | 2 |
| | 13 | 97-6270 | Pilot Light - Green | 2 | 2 |
| | 14 | 97-6271 | Pilot Light - Red | 2 | 2 |
| | 15 | 08-3826 | Timer Dial, 60 Minutes, 60 Hz | 2 | 2 |
| | 16 | 97-6272 | Power Switch | 2 | 2 |
| | 17 | 98-6047 | Rotary Shaft Seal | 2 | 2 |
| ** | 18 | 97-7147 | Control Decal | 1 | |
| | | 97-7148 | Control Decal | | 1 |
| | 19 | 97-6275 | Component Mounting Board | 2 | 2 |
| ** | 20 | 97-6276 | Level Control Board, 10K OHM | 2 | 2 |
| ** | 20 | 97-6277 | Level Control Board, 1M OHM | 4 | 4 |
| | 21 | 97-5048 | Operating Thermostat | 2 | 2 |
| * | | 97-6987 | Dial | 2 | 2 |
| | 22 | 97-6278 | High Limit Thermostat | 2 | 2 |
| | 23 | 97-6279 | Relay, Single Pole, 240V | 2 | 2 |
| | 24 | 97-6280 | Relay, Double Pole, 240V | 2 | 2 |
| | 25 | 97-6988 | Timer, 60 Minutes, 240V | 2 | 2 |
| | 26 | 97-6307 | Buzzer, 240V | 2 | |
| ** | 27 | 98-6189 | Contactor (208, 220, 240V) | 2 | 2 |
| | | 97-5609 | Contactor (380, 415, 480, 600V) | 2 | 2 |
| | 28 | 97-7149 | Cooling Solenoid, 240V | 2 | |
| | 29 | 97-6308 | Fill Solenoid, 240V | 2 | 2 |
| | 30 | 97-6283 | Blowdown Solenoid, 240V | 2 | 2 |
| ** | 31 | 97-6565 | Element ASM, 7.5 kW, 208V, (Top) | 1 | |
| | | 97-6653 | Element ASM, 7.5 kW, 380 (220)V, (Top) | 1 | |
| | | 97-6359 | Element ASM, 7.5 kW, 415 (240)V, (Top) | 1 | |
| | | 97-6654 | Element ASM, 7.5 kW, 480 (277)V, (Top) | 1 | |
| | | 97-6655 | Element ASM, 7.5 kW, 600 (347)V, (Top) | 1 | |
| | | 97-6309 | Element ASM, 10 kW, 208V, (Lower) | 1 | |
| | | 97-6310 | Element ASM, 10 kW, 380 (220)V, (Lower) | 1 | |
| | | 97-6311 | Element ASM, 10 kW, 415 (240)V, (Lower) | 1 | |
| | | 97-6312 | Element ASM, 10 kW, 480 (287)V, (Lower) | 1 | |
| | | 97-6313 | Element ASM, 10 kW, 600 (347)V, (Lower) | 1 | |
| | 31 | 2349-1208 | Element ASM, 12 kW, 208V | | 2 |
| | | 2349-1220 | Element ASM, 12 kW, 380 (220)V | | 2 |

* NOT SHOWN. ** SELECT AS REQUIRED

STEAMER EXPLODED VIEW

| | ITEM | PART NO. | DESCRIPTION | EJ-7E | EJ-10E |
|----|------|-----------|---|-------|--------|
| | | 2349-1240 | Element ASM, 12 kW, 415 (240)V | | 2 |
| | | 2349-1277 | Element ASM, 12 kW, 480 (287)V | | 2 |
| | | 2349-1247 | Element ASM, 12 kW, 600 (347)V | | 2 |
| | | 97-6314 | Element ASM, 15 kW, 208V | | 2 |
| | | 97-6315 | Element ASM, 15 kW, 380 (220)V | | 2 |
| | | 97-6316 | Element ASM, 15 kW, 415 (240)V | | 2 |
| | | 97-6317 | Element ASM, 15 kW, 480 (287)V | | 2 |
| | | 97-6318 | Element ASM, 15 kW, 600 (347)V | | 2 |
| | 32 | 97-6319 | Element Gasket | 2 | 2 |
| ** | 33 | 10-6962 | Terminal Block Section | 4 | 4 |
| * | | 97-6737 | Terminal Block Rail | 1 | 1 |
| | | 10-6962 | Terminal Block Section, 380, 415, 480, 600V | 3 | 3 |
| * | | 97-6586 | Terminal Block Rail | 1 | 1 |
| | 34 | 10-6963 | Terminal End Section | 1 | 1 |
| | 35 | 97-5052 | Ground Lug | 1 | 1 |
| | 36 | 97-6321 | Steam Generator Tank | 2 | 2 |
| * | | 97-6322 | Tank Cover | 2 | 2 |
| * | | 97-6323 | Tank Gasket | 2 | 2 |
| | 37 | 3738-3 | Probe 5", (Low Level Cut-Off) | 2 | 2 |
| | 38 | 3738-2 | Probe 4.25", (Low Level) | 2 | 2 |
| | 39 | 97-6326 | Probe 3.688", (High Level) | 2 | 2 |
| | 40 | 97-6177 | Perforated Trough | 1 | 1 |
| | 41 | 97-6338 | Pan Rack, (Upper) | 2 | |
| | | 97-6656 | Pan Rack, (Lower) | 2 | |
| | | 97-6175 | Pan Rack | | 4 |
| * | | 97-6340 | Hanger Pin Assembly | 8 | 8 |
| | 42 | 98-6089 | Elbow, Brass, 1/4 C x 1/8 MPT | 2 | 2 |
| | 43 | 97-6327 | Tee, Brass, 3/8 C x 1/8 MPT | 2 | 2 |
| | 44 | 97-6344 | Connector, Brass, 3/8 C x 1/8 MPT | 2 | 2 |
| | 45 | 98-6129 | Connector, Brass, 1/4 C x 1/8 MPT | 4 | 4 |
| | 46 | 97-5619 | Thermostat Fitting, Brass, 3/8 C x 3/8 MPT | 2 | 2 |
| | 47 | 97-6208 | Elbow, Brass, 1/2 C x 3/4 MPT | 2 | 2 |
| | 48 | 97-6328 | Connector, Brass, 1/2 C x 3/4 MPT | 2 | 2 |
| | 49 | 97-6226 | Water Connection, 3/8 C | 1 | 1 |
| | 50 | 97-6481 | Hose Clamp, 1" | 8 | 8 |
| | 51 | 97-6207 | Elbow, 90°, Brass, 1/2 C | 2 | 2 |

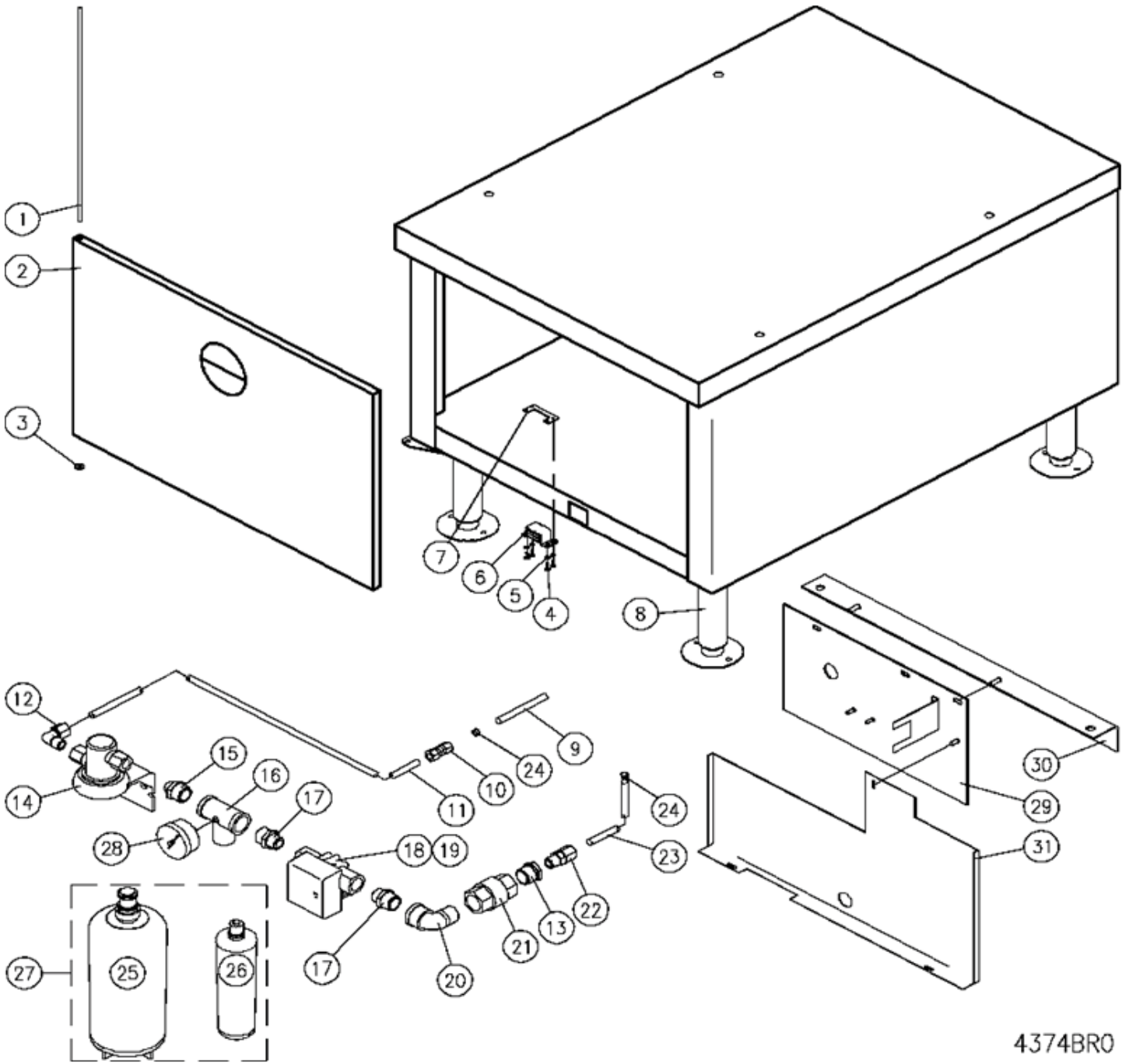
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STEAMER EXPLODED VIEW

| | ITEM | PART NO. | DESCRIPTION | EJ-7E | EJ-10E |
|----|------|-------------------------|---|-------|--------|
| | 52 | 9268-100 | Silicone Hose, Right Hand/Left Hand, 1/2 I.D. x 10" | 4 | 4 |
| | 53 | 97-7157 | Hose Barb Elbow, Brass, 1/2" x 1/4" MPT | 4 | 4 |
| | 53A | 97-7158 | Steam Diverter | 4 | 4 |
| | 54 | 97-7159 | S.S. Tube, 1/2 x 2 | 2 | 2 |
| | 55 | 97-7160 | Top Panel | 1 | 1 |
| | 56 | 97-6658 | Side Panel | 1 | |
| | | 97-6659 | Side Panel | | 1 |
| | 57 | 97-6660 | Left Hand Back and Side Panel | 1 | |
| | | 97-6661 | Left Hand Back and Side Panel | | 1 |
| * | 57 | 9084-1 | Nut Cage, 1/4 - 20 | 2 | 2 |
| | 58 | 97-6663 | Hex HD. Bolt, 5/16-18 x 1 Long | 4 | 4 |
| | 59 | 97-6298 | Hex Nut, 1/4" - 20 | 8 | 8 |
| | 60 | 97-6591 | Connector, Brass, 3/8 C x 1/8 FPT | 2 | 2 |
| | 61 | 97-6189 | Elbow, 90°, Brass, 3/8 C x 3/8 MPT | 2 | 2 |
| | 62 | 5445-1 | Pressure Switch, Safety 5 PSI | 2 | 2 |
| | 63 | 5494-1 | Copper Tube, 3/8" | 2 | 2 |
| | 64 | 97-6341 | Hex Nipple, Brass, 1/2" - 14 | 2 | 2 |
| | 65 | 97-6342 | Forged Elbow, 90°, Brass 1/2" - 14 | 2 | 2 |
| | 66 | 97-6740 | Hex HD, Plug, Brass 1/2" -14 | 2 | 2 |
| | 67 | 5224-1 | Compartment Strainer | 2 | 2 |
| * | 68 | 97-6664 | Thermal Switch | 2 | 2 |
| ** | 69 | 98-6188 | Fuse, 600V, 1/2 A, (380 - 600V) | 2 | 2 |
| | | 97-6186 | Fuse 2A, 250V (208, 220, 240V) | 4 | 4 |
| | | 97-6186 | Fuse 2A, 250V (380/220, 415V/240V) | 2 | 2 |
| ** | 70 | 97-5864 | Fuse Holder (208, 220, 240V) | 4 | 4 |
| | | 97-5864 | Fuse Holder (380/220, 415/240V) | 2 | 2 |
| | | 98-6187 | Fuse Holder (380, 415, 480, 600V) | 4 | 4 |
| ** | 71 | 97-5613 | Transformer, 480 - 240V, 60 Hz, 100 VA | 2 | 2 |
| | | 4-T251 | Transformer, 380/220V, 50/60 Hz, 100 VA | 2 | 2 |
| | | 4-T251 | Transformer, 415/240V, 50/60 Hz, 100 VA | 2 | 2 |
| | | 98-6191 | Transformer, 600/240V, 60 Hz, 100VA | 2 | 2 |
| * | 72 | 4204-29 | Wiring Harness | 2 | 2 |

* NOT SHOWN. ** SELECT AS REQUIRED

CABINET BASE EXPLODED VIEW



4374BR0

| | REF. | PART NO. | DESCRIPTION | EJ-7E | EJ-10E |
|---|------|-------------------------|-------------------------------------|-------|--------|
| | 1 | 97-6537 | Hinge Rod | 1 | 1 |
| | 2 | 97-6474 | Cabinet Door Assembly | 1 | 1 |
| | 3 | 97-6601 | Flat Washer | 1 | 1 |
| | 4 | 97-6487 | Pan Slot Head Screw, # 6-32 x 3/8 | 4 | 4 |
| | 5 | 97-6488 | Spring Lock Washer, #6 | 4 | 4 |
| | 6 | 97-6489 | Magnetic Catch | 1 | 1 |
| | 7 | 97-6490 | Magnetic Catch Plate | 1 | 1 |
| | 8 | 97-6486 | Adjustable Flange Foot | 4 | 4 |
| | 9 | 97-7163 | Tubing, 3/8" OD x 10" Long, Copper | 1 | 1 |
| | 10 | 97-6550 | Connector, 3/8 C x 3/8 Nylon | 1 | 1 |
| | 11 | 97-7164 | Tubing, 3/8" OD x 48" Long, Nylon | 1 | 1 |
| | 12 | 97-6541 | Elbow, 3/8 C x 3/8 MPT, Nylon | 1 | 1 |
| | 13 | 97-6542 | Bushing, 3/4" to 3/8", Nylon | 1 | 1 |
| | 14 | 08-8055 | Filter Head, VH3 - NPT | 1 | 1 |
| | 15 | 08-8061 | Nipple, Reducing, 3/4 x 3/8, Nylon | 1 | 1 |
| | 16 | 08-8057 | Filter Tee | 1 | 1 |
| | 17 | 08-8062 | Nipple, Reducing, 3/4 x 1/2, Nylon | 2 | 2 |
| | 20 | 97-6545 | Reducing Elbow, 3/4" to 1/2", Brass | 1 | 1 |
| | 21 | 08-8053 | Check Valve, Nylon | 1 | 1 |
| | 22 | 97-6547 | Connector, 3/8 C x 3/8 MPT, Nylon | 1 | 1 |
| | 23 | 97-7167 | Tubing, 3/8" OD x 20" Long, Nylon | 1 | 1 |
| | 24 | 97-6549 | Sleeve, 3/8", Brass | 2 | 2 |
| | 25 | 97-7169 | Filter - Large | 1 | 1 |
| | 26 | 97-7170 | Scale Inhibitor, Small | 1 | 1 |
| | 27 | 08-8052 | Kit, Filter Replacement Cartridges | 1 | 1 |
| | 28 | 08-8059 | Pressure Gauge | 1 | 1 |
| * | 29 | 97-7171 | Mounting Bracket | 1 | 1 |
| * | 30 | 97-7172 | Mounting Bracket | 1 | 1 |

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