

TECHNICAL MANUAL  
FOR  
[*SGML VERSION; SEE RECORD OF  
REVISIONS* ]  
**STEAM JACKETED KETTLE,  
MODEL EE-AE/1**

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## FOREWORD

This technical manual provides description, operation, maintenance, troubleshooting, repair and parts list information for the (name of equipment). This technical manual is intended for guidance of and use by personnel operating and maintaining the equipment described herein.

This manual consists of one volume arranged in four sections.

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## SAFETY SUMMARY

### GENERAL SAFETY NOTICES

The following general safety notices supplement the specific warnings and cautions appearing elsewhere in this manual. They are recommended precautions that must be understood and applied during operation and maintenance of the equipment covered herein. Should situations arise that are not covered in the general or specific safety precautions, the commanding officer or other authority will issue orders as deemed necessary to cover the situation. No work shall be undertaken on energized equipment or circuits until approval of the commanding officer is obtained, and then only in accordance with Naval Ships' Technical Manual (NSTM) S9086-KC-STM-010/Chapter 300.

### DO NOT REPAIR OR ADJUST ALONE

Under no circumstances shall repair or adjustment of energized equipment be attempted alone. The immediate presence of someone capable of rendering first aid is required. Before making adjustments, be sure to protect against grounding. If possible, adjustments should be made with one hand, with the other hand free and clear of equipment. Even when power has been removed from equipment circuits, dangerous potentials may still exist due to retention of charges by capacitors. Circuits must be grounded and all capacitors discharged prior to attempting repairs. Equipment should be de-energized and properly tagged out according to the ship's Standard Operating Procedures.

### TEST EQUIPMENT

Make certain test equipment is in good condition. If a metal-cased test meter must be held, ground the case of the meter before starting measurement. Do not touch live equipment or personnel working on live equipment while holding a test meter. Do not ground any measuring devices; these devices should not be held when taking measurements.

### INTERLOCKS

Interlocks are provided for safety of personnel and equipment and should be used only for the purpose intended. They should not be battle shorted or otherwise modified except by authorized maintenance personnel. Do not depend solely upon interlocks for protection. Whenever possible, disconnect power at the power distribution source.

### MOVING EQUIPMENT

Personnel shall remain clear of moving equipment. If equipment requires adjustment while in motion, a safety watch shall be posted. The safety watch shall be qualified to administer CPR, have a full view of the operations being performed, and have immediate access to controls capable of stopping equipment motion.

### FIRST AID

An injury, no matter how slight, shall never go unattended. Always obtain first aid or medical attention immediately, and file an injury report in accordance with OPNAVINST 5102.1 series, subj: Mishap Investigation and Reporting.

**SAFETY SUMMARY - Continued****RESUSCITATION**

Personnel working with or near high voltage shall be familiar with approved methods of resuscitation. Should someone be injured and stop breathing, begin resuscitation immediately. A delay could cost the victim's life. Resuscitation procedures shall be posted in all electrically hazardous areas.

**GENERAL PRECAUTIONS**

The following general precautions are to be observed at all times.

1. Install and ground all electrical components associated with this system/equipment in accordance with applicable Navy regulations and approved shipboard practices.
2. Ensure that all maintenance operations comply with Navy Occupational Safety and Health (NAVOSH) Program Manual for Forces Afloat, OPNAVINST 5100.19 series.
3. Observe precautions set forth in NSTM S9086-KC-STM-010/Chapter 300 with respect to electrical equipment and circuits.
4. Ensure that protective guards and shutdown devices are properly installed and maintained around rotating parts of machinery and high voltage sources.
5. Do not wear loose clothing while working around rotating parts of machinery.
6. Ensure that special precautionary measures are employed to prevent applying power to the system/equipment any time maintenance work is in progress.
7. Do not make any unauthorized alterations to equipment or components.
8. Before working on electrical system/equipment, use the correct tag out procedure and check with voltmeter to ensure that system is not energized.
9. Consider all circuits not known to be "dead," "live" and dangerous at all times.
10. When working near electricity, do not use metal rules, flashlights, metallic pencils, or any other objects having exposed conducting material.
11. Deenergize all equipment before connecting or disconnecting meters or test leads.
12. When connecting a meter to terminals for measurement, use range higher than expected voltage.
13. Before operating equipment or performing any tests or measurements, ensure area is dry of water or other liquid conductive material and that frames of all motors and starter panels are securely grounded.
14. Ensure that area is well-ventilated when using cleaning compound or solvent. Avoid prolonged breathing of fumes and compound or solvent contact with skin or eyes.
15. Exercise extreme caution and care when handling hot oils, water, and other liquids or when operating steam valves and equipment.
16. Use proper personal protective equipment (PPE) such as face shield and protective gloves when handling chemicals or hot water,

**SAFETY SUMMARY - Continued**

**WARNINGS AND CAUTIONS**

Specific warnings and cautions applying to the system/equipment covered by this manual are summarized below. These warnings and cautions appear elsewhere in the manual following paragraph headings and immediately preceding the text to which they apply. They are repeated here for emphasis.

**WARNING**

**To prevent personal injury or death, do not use water to clean the control panel. This kettle is heated using electrical elements powered by 440V. All safety precautions listed in Naval Ships Technical Manual, Chapters 300 and 302 and in OPNAVINST 5100.19 series must be strictly observed. (Page 1-1, page 1-4)**

**WARNING**

**To prevent personnel injury, death, or equipment damage, ensure electrical power to equipment is deenergized and tagged OUT OF SERVICE before working on equipment. (Page 1-4)**

**CAUTION**

**Do not expose hands to escaping steam. (Page 1-1, page 1-5)**

## CHAPTER 1

### SECTION I

#### I-A. OPERATING INSTRUCTIONS

1. ALWAYS CHECK DAILY to be sure water is between "Mini-Max" marks in the water level gauge glass.
2. Make sure kettle electric power supply switch or circuit breaker is in the ON position.

#### CAUTION

##### **Do not expose hands to escaping steam.**

3. The pressure gauge should read between 20" and 29" of vacuum when kettle is COLD. If gauge reads between 20 and 0", the air in the jacket may be removed during normal cooking operation. Lift the safety relief valve lever and hold open momentarily when pressure gauge reads 5 Psi. Repeat procedure and allow valve lever to snap back.
4. To turn kettle ON, set the thermostat dial to die desired setting. The kettle will heat product in the cooking chamber to that setting and automatically maintain the temperature for an indefinite period of time. Red light will indicate when heating elements are on.
5. To turn the kettle OFF turn the thermostat dial to the OFF position.

#### I-B. GENERAL CLEANING INSTRUCTIONS

##### **Suggested Tools:**

Cleaner, such as Klenzade HC8, HC10 or comparable product.

One (1) each - long and short handle gong brush.

Liquid chlorine disinfectant.

Suitable disinfecting spraying or fogging equipment.

1. Clean as soon as possible after cooking.
2. Measure all cleaning and disinfecting material EVERY TIME you clean.

##### **Procedure:**

1. Flush kettle thoroughly with luke warm water and drain to remove all loose soil.
2. Brush and clean all parts soiled by food.
3. Clean the outside of the unit thoroughly using the solution from the kettle and rinse carefully.

#### WARNING

**To prevent personal injury or death, do not use water to clean the control panel. This kettle is heated using electrical elements powered by 440V. All**

**Warning - precedes**

**safety precautions listed in Naval Ships Technical Manual, Chapters 300 and 302 and in OPNAVINST 5100.19 series must be strictly observed.**

**NOTE**

Avoid spraying electrical controls and connections.

4. Flush entire unit with water and dry.

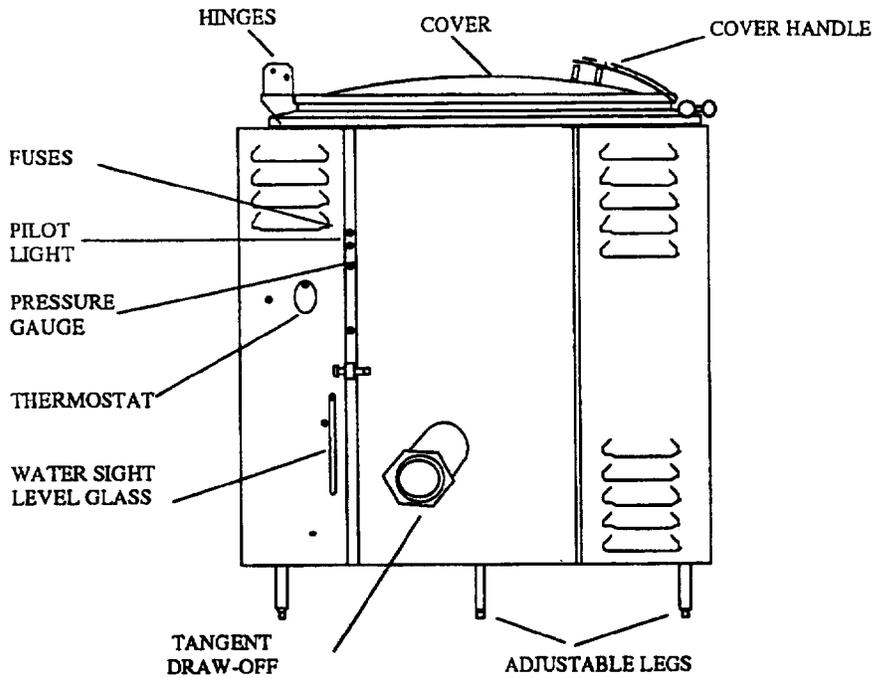
ADDITIONAL PROCEDURES

No. 5 IF REQUIRED

STEP No. 6 WILL KEEP EQUIPMENT BRIGHT, SHINY, AND MAKE CLEANING MUCH FASTER AND EASIER.

5. Best sanitation practice recommends sanitation of each piece of equipment prior to use by flushing thoroughly with a 200 p.p.m. solution of the above sanitizing agent.
6. To reduce water spotting caused by mineral deposits or film due to hard water and certain food residues, the following procedure should be performed regularly as required.
  - a. Kettle must be clean. Using a deliming agent (such as Klenzade Ster-Kleen) and following the manufacturers suggested solution strength thoroughly brush and clean inside and out side of unit. Drain, rinse well, and proceed with Step No. 5 if required.

**IMPORTANT** Never use steel wool, metal sponges, or harsh scouring powders. They may scratch the equipment surface and make the cleaning job increasingly difficult, as well as ruin the general appearance. These minute scratches can provide a home for bacteria, which, although invisible to the naked eye can collect and develop rapidly, causing contamination of food. If especially difficult cleaning problems persist, contact your cleaning product representative for assistance. He has trained technical staff with complete laboratory facilities to serve you.



**KETTLE CHARACTERISTICS**

KETTLE	ELECTRICAL TABLE			
	208 v - 3PM		208 v - 3PM	
	KW.	AMP	KW	3 PM
EE-20	10.8	30	12	29
EE-30	21.6	60	24	58
EE-40	21.6	60	24	58
EE-60	32.4	90	36	87
EE-80	32.4	90	36	87
AE-1-20	5.6	16	6	14.5
AE-1-30	10.8	30	12	29
AE-1-40	10.8	30	12	29
AE-1-60	16.4	46	18	43
AE-1-80	16.4	46	18	43

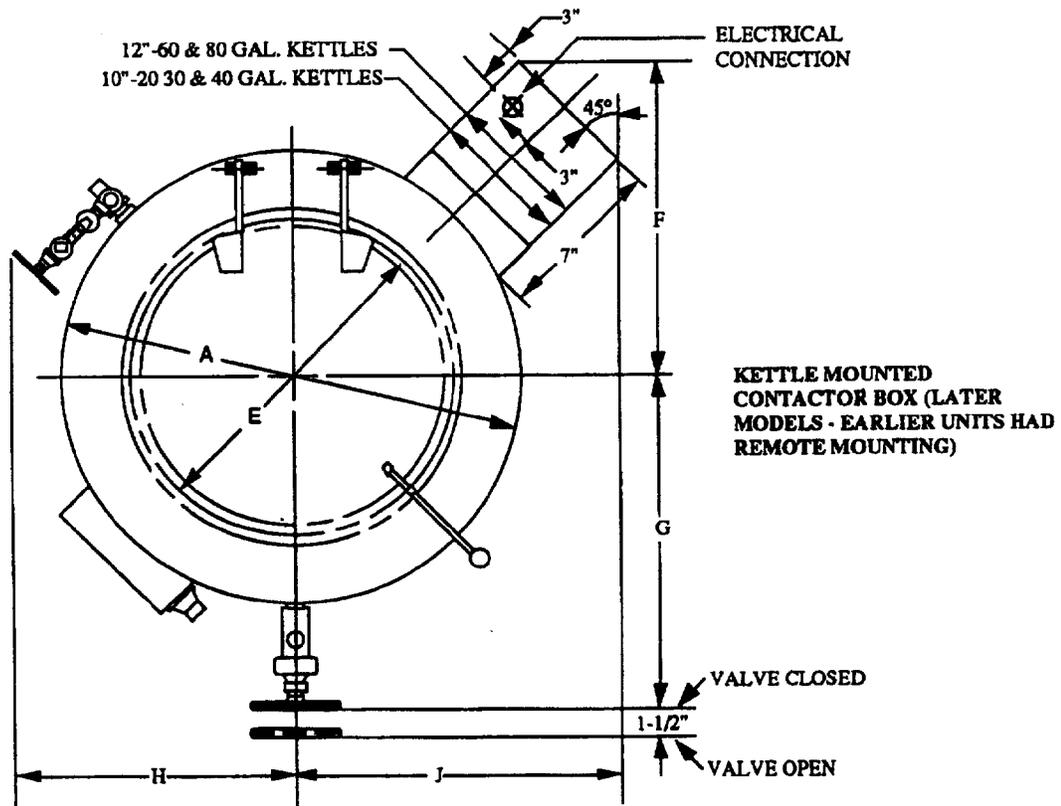


Figure 1 Operation Features

## I-C. CONTROLS

The electric control system consists of magnetic contactor, thermostat and a low water cut out relay. In addition a pressure gauge and safety valve are furnished.

1. THERMOSTAT-CONTACTOR- The thermostat is a "break circuit on temperature rise" type control. When the thermostat switch is ON, the coil in the contactor is energized. The contactor then closes, and current is supplied to the heater elements. When the temperature of the steam in the jacket reaches the set temperature, the thermostat switch opens and breaks the electric circuit to the contactor coil. The contactor opens, cutting off the electricity to the heaters. When the thermostat again calls for heat, the cycle will automatically be repeated. No additional attention is required by the operator of the kettle.
2. LOW WATER CUT OUT- The low water cut out is an electronic probe type in contact with the water. When the water level in the jacket falls below the probe, an electric circuit is broken and the power is interrupted.
3. PRESSURE GAUGE- A compound pressure-vacuum gauge is visible at right rear of kettle. Kettle control circuit is designed to operate up to a maximum of 25-27 PSI steam pressure when the thermostat dial is set to number 10.
4. SAFETY VALVE- Safety valve is located toward the left rear of the kettle.
5. ELECTRIC HEATER ELEMENTS- The electric heater elements are metal sheathed immersion elements designed to operate at the voltage stamped on the kettle nameplate. They are replaceable.

## SECTION II

### II-A. MAINTENANCE SUGGESTIONS

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#### WARNING

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**To prevent personnel injury, death, or equipment damage, ensure electrical power to equipment is deenergized and tagged OUT OF SERVICE before working on equipment.**

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#### WARNING

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**To prevent personal injury or death, do not use water to clean the control panel. This kettle is heated using electrical elements powered by 440V. All safety precautions listed in Naval Ships Technical Manual, Chapters 300 and 302 and in OPNAVINST 5100.19 series must be strictly observed.**

1. Periodically the entire unit should be inspected and cleaned. The period of time between cleanings will vary, depending upon the operating conditions.

2. In the event the controls require cleaning, care must be taken not to get moisture in the controls. Electric controls should not be cleaned or sprayed with water.
3. The kettle should be cleaned after each use with a soap solution or commercial cleaner. Further, the kettle may be polished with a recognized stainless steel cleaner.
4. Steel wool is NOT recommended for cleaning any surface of the kettle. Particles of the steel wool may become imbedded in surface causing corrosion and pitting.

### CAUTION

**Do not expose hands to escaping steam.**

5. Approximately twice a month it is recommended that the safety valve should be checked. The valve should work freely. When the gauge pressure is approximately 5 pounds, lift the safety valve lever to vent a small amount of steam from the jacket. Release the lever sharply to seat the valve securely and prevent leaks. (Reference, Step No. 3 of Operating Instructions, A, Section 1.)

## II-B. WATER TREATMENT PREPARATION

**Table II-1** Kettle Water Capacity

Model EE and AE/1 Electric Kettles Jacket Capacity
20 Gallon kettle holds 3-1/4 gallons.
30 Gallon kettle holds 5-1/4 gallons.
40 Gallon kettle holds 4-1/4 gallons.
60 Gallon kettle holds 7-3/4 gallons.
80 Gallon kettle holds 10 gallons.

1. Fill mix container with approximate amount of water required (DISTILLED WATER PREFERRED). See Table 1 above.
  - a. Hang strip pH test paper on rim of container about 1 inch into water.
  - b. Stir water constantly while slowly adding boiler treatment compound until a color between 10.5 and 11.5 is reached as shown on pH test kit chart.
  - c. Use a measuring cup to add compound. Record exact amount of compound used for preparing treated water for additional mix.

### NOTE

Water treatment compound and pH test kit may be purchased direct from GROEN Division/Dover Corporation SPECIFY: Part No. 12390 - Water Treatment Compound Part No. 12391 - pH Test Kit.

## II-C. TROUBLE SHOOTING

This section outlines some difficulties that may in time be encountered. A wiring diagram is furnished in the control housing of the unit. The wiring of controls may be checked against this diagram.

1. KETTLE WILL NOT HEAT

- a. Pilot light out.
  - 1. Verify that electrical power is on.
  - 2. Check control circuit fuse(s).
  - 3. Check for loose or broken wire.
  - 4. Low water cut off defective.
  - 5. Contactor coil defective.
  - 6. Low water level.
- b. Pilot light on.
  - 1. Defective contactor.
  - 2. Heater element burned or shorted out.

2. THERMOSTAT WILL NOT SHUT OFF THE HEATERS WHEN PRODUCT REACHES DESIRED TEMPERATURE.

- a. Set thermostat lower.
- b. Thermostat may be inoperative. (It is recommended the entire thermostat be replaced if damaged or inoperative.)

3. WHEN THE PRODUCT IN THE COOKING CHAMBER DOES NOT REACH THE DESIRED TEMPERATURE:

- a. There may be air in the jacket. Air venting procedure is outlined in Section I, Item No. 3.
- b. Thermostat may be out of calibration or defective.
- c. Heater element may be defective. Check with OHM meter for ground short or Open element.

4. SAFETY VALVE POPS DURING OPERATION

- a. Air in jacket. Vent per Section I Item No. 3.
- b. Thermostat defective replace thermostat.
- c. Thermostat set to high - set at lower number.
- d. Safety valve defective - replace.

5. UNIT OPERATES ERRATICALLY

- a. Unit may be low on water.
- b. Pressure switch adjustment may be set too close. Proper setting is between 22 Off - 22 On.
- c. Contactor points may be rusted or dirty.
- d. Low water relay points may be rusted or dirty.

**II-D. SERVICE DATA AND SUGGESTIONS**

- 1. In the unlikely event of control failure the kettle is equipped with a safety valve to relieve pressure in the jacket should excessive pressure develop. An elbow is provided to direct steam vapor downward if safety valve "pops".
- 2. Water must be above the minimum mark on the water level gauge glass when kettle is in leveled position. To add water to the jacket, remove pipe plug, open valve and pour slowly into water fill assembly. Safety valve must be held open during fill. Water should be treated in accordance outlined in Section II. (Cold Kettle Only)

3. It is recommended that only "TREATED WATER" be added to the jacket. The waste shipped in the new kettle chemically treated to insure maximum service from the unit controls and heater elements exposed to the water.

### NOTE

Contractors may be; a. remote mounted b. mounted to kettle within enclosure at right rear or c. mounted within enclosure to right front of kettle. Contractors are the same in each case.

4. Pilot light is either screw in assembly with replaceable bulb and lens or complete snap in assembly. (Not interchangeable)

## SECTION III

### III-A. INSTALLATION

1. Set kettle in place and level with adjustable legs.
2. All internal wiring for the kettle is complete.
3. Electrical service entrance is at contactor box or control housing. Make a waterproof connection for incoming lines at this point (ABX connection is not recommended). Grounding of kettle is recommended to terminal provided, in control housing.
4. A wiring diagram is on the inside of the control housing cover panel.
5. Each completed kettle has been factory operated to test all controls and heater elements.

**Table III-1** Contactor Element Table

MODEL	KW	AMP	QTY	CONTACTOR P/N	QTY	HEAT-ERS P/N	LOW WATER CUT-OFF	PILOT LIGHT	TRANS-FORMER
EE-20									
208V/1Ph	10.8	52	1	13368	3	8852	10410	16028	NONE
240V/1Ph	12	50	1	13368	3	8851	10410	16028	NONE
208V/3Ph	10.8	30	1	9210	3	8852	10410	16028	NONE
240V/3Ph	12	29	1	9210	3	8851	10410	16028	NONE
480V/3Ph	12	14	1	9574	3	3891	10412	2986	NONE
EE-30, 40									
208V/1Ph	21.6	104	2	9176	6	8852	10410	16028	NONE
240V/1Ph	24	100	2	9176	6	8851	10410	16028	NONE
208V/3Ph	21.6	60	2	9210	6	8852	10410	16028	NONE
240V/3Ph	24	58	2	9210	6	8851	10410	16028	NONE
480V/3Ph	24	28	1	9574	6	3891	10412	2986	12827
EE - 60,80									
208V/3 Ph	32.4	90	3	9Z10	9	8852	10410	16028	NONE
240V/3 Ph	36	87	3	9210	9	8851	10410	16028	NONE
480V/3 Ph	36	44	1	13432	6	8851	10412	2986	NONE

**Table III-1** Contactor Element Table - Continued

MODEL	KW	AMP	QTY	CONTACTOR P/N	QTY	HEAT-ERS P/N	LOW WATER CUT-OFF	PILOT LIGHT	TRANS-FORMER
					3	3891			
AE - 1 - 20									
208V/1 Ph	5.6	27	1	9178	3	8854	10410	16028	NONE
240V/1 Ph	6	25	1	9178	3	8853	10410	16028	NONE
208V/3 Ph	5.6	16	1	9210	3	8854	10410	16028	NONE
240V/3 Ph	6	14.5	1	9210	3	8853	10410	16028	NONE
AE-1 - 30,40									
208V/1Ph	10.8	52	1	13368	3	8852	10410	10028	NONE
240V/1Ph	12	50	1	13368	3	8851	10410	10028	NONE
208V/3Ph	10.8	30	1	9210	3	8852	10410	16028	NONE
240V/3Ph	12	29	1	9210	3	8851	10410	16078	NONE
480V/3Ph	12	14	1	9574	3	8801	10412	2986	12827
AE-1 - 60, 80									
					3	8852			
208V/1 Ph	16. 4	79	1	13369	3	8854	10410	16028	NONE
					3	8851			
240V/1 Ph	18	75	1	13369	3	8853	10410	16028	NONE
					3	8852			
208V/3 Ph	16.4	46	1	13370	3	8854	10410	16028	NONE
					3	8851			
240V/3 Ph	18	43	1	13370	3	8853	10410	16028	NONE
					3	8851			
480V/3 Ph	18	22	1	9574	3	8853	10412	2986	12827

To order replacement parts write or telephone:  
 Part/Service Department  
 GROEN Division/Dover Corp.  
 1900 Pratt Blvd.  
 Elk Grove Village, Illinois 60007  
 Telephone: 708-439-2400

The following information is required:  
 Model  
 Description of Part  
 Part Number  
 Quantity  
 NB Number

**Table III-2** Parts List

Figure 2 Index No.	Description	Part No.
1	1/4" - 20 N.C. Cap Nut	5471
2	Handle (Kettles 40 Gal. & Under)	13717
3	Knob (Friction)	12691
4	Spacer	12733
5	Handle (Kettles 60 Gal. & Over)	13720
6	Cover Actuator (60 Gal.)	12520
7	Cover Actuator (80 Gal.)	12521
8	1/2" - 20 N.F. x 1" Hex. Hd. Capscrew	2212
9	1/2" Brass Washer	1213

**Table III-2** Parts List - Continued

<b>Figure 2 Index No.</b>	<b>Description</b>	<b>Part No.</b>
10	1/2" - 20 N.F. x 5/16" Thick Jam Nut	2218
11	30 Lb. Safety Valve	4010
12	Pressure Gauge	8435
13	Fuse - 3A - 208 & 240V	2945
14	Contactora (See Note)	
15	Water Fill Assembly	13541
16	Thermostat	12313
17	Pressure Limit Control	8453
18	Thermostat Knob	12314
19	1-1/2" Draw-Off Valve Complete	9000
20	Valve Stein	9027
21	Valve Bonnet	9024
22	Rubber "O" Ring	9034
23	Sanitary Hex Nut #13 H	8911
24	Valve Handle	9029
25	Wing Nut	9028
26	1/2" Gauge Glass Connector Assembly Complete	4071
27	Rubber Gauge Glass Gasket	8917
28	Washer (With Assembly #4071)	
29	Hex. Nut (With Assembly #4071)	
30	Water Gauge Glass	8742
31	Warrick Electrode	8275
32	Double Heater Element 230/460V-4000W	8801
33	Double Heater Element 230/460V-2000W	8802
34	Bullet Foot Assembly	2479
35	Snap-In Pilot Light 125V	2986
36	Snap-In Pilot Light 125V	16028
37	Warrick Relay 230V	10410
38	Tolerance Ring	12692
39	Warrick Relay 115V & 440V	10412
40	Removable Strainer 9" Dia. 1/8" Holes	9007
41	Removable Strainer 9" Dia. 1/4" Holes	9040
42	Removable Strainer 9" Dia. No Holes	9057
43	Single Heuser Element 240V - 4000W	8851
44	Single Heater Element 208V - 3600W	8852
45	Single Heater Element 240V - 2000W	8853
46	Single Heater Element 208V - 2000W (240V - 2500W)	8854
47	Fuse Holder	2944

**NOTES:**  
 When Ordering Contactor or parts  
 for same- specify kettle, voltage,  
 phase and number on contactor.

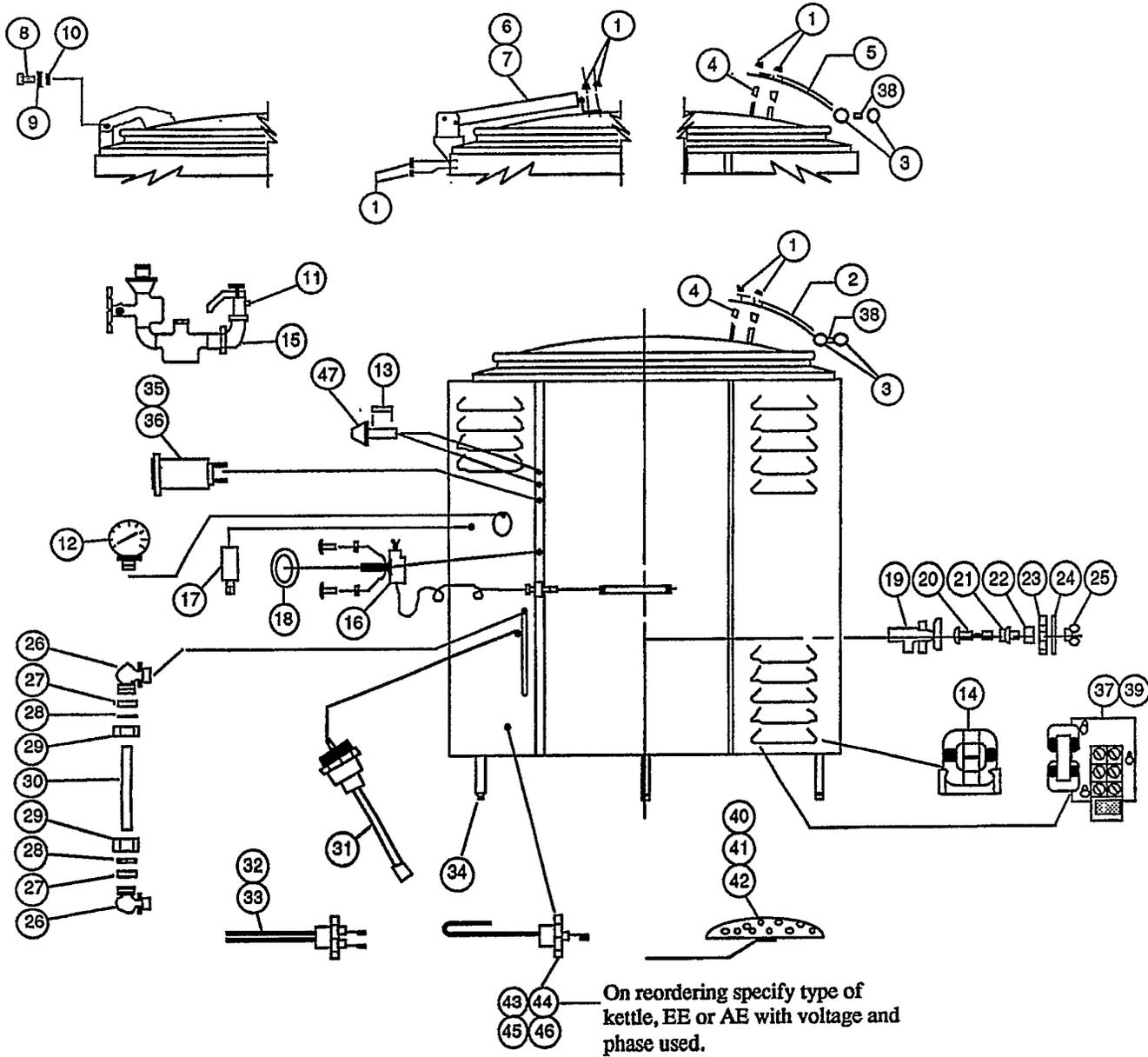


Figure 2 Parts Drawing  
 SECTION IV

**IV-A. ACCESSORIES**

Did you know these custom accessories are available to new or existing kettles? They may be purchased through your local food service equipment dealer, (or direct to Groen where food service dealer is not available).

Why not place your order NOW!

**Brush Kit** - Kettle brush, drain valve brush and paddle (sold as complete set only) No. 770101 Strainer Hook - For kettles fitted with Tangent Draw-Off.

20 gallon No. 4015

40 gallon No. 4027

60 gallon No. 4028

80 gallon No. 3999

#### COVERS

Modd	Part Number	Modd	Part Number
D 10	No. 2255	TDA-10,TDC/10	No. 1107
D-20	No. 1134	TDB/6,TDA-20,TDC-20	No. 1108
D-30	No. 1135	TDB/4,TDB/7-20	No. 1566
D-40	No. 1116	TDB/4-40,TDB/7-40	No. 13496
D-60	No. 1116	TD/FPC	No. 13927
D-80	No. 1112	TD/2-40	No. 1109

MEASURING STICK-Shallow Kettles Only GT, GPT, GN

40 gallon No. 5747

60 gallon No. 5748

80 gallon No. 5749

100 gallon No. 5750

MEASURING STICKS-Deep kettle Only D, PT, FT, AH, HH, EE, AE/1, DEE, CEE

10 gallon No. 5740

20 gallon No. 5741

30 gallon No. 5742

40 gallon No. 5743

60 gallon No. 5744

80 gallon No. 5745

100 gallon No. 5746

TRI BC (Three Basket Cooking System)  
for

PT, FT, D, AH, HH, EE, AE/1, DEE, CEE

20 gallon No. 1159

30 gallon No. 1160

40 gallon No. 1161

60 gallon No. 1162

80 gallon No. 1167

BASKET INSERTS (Individual)

Model

TDA-10,TDC-10 (10")

TDB/5-8-10,TDB/6-10,TDA-20,TDC-20 (12")

TDB/4-20,TDB/7-20 (14")

TDB/4-40,TDB/7-40 (16")

Part Number

No. 1110

No. 1120

No. 1607

No. 1121

NYLON BAGS for TRI BC Inserts (one size fits all baskets) No. 12300.

Please specify quantity, part number(s), model and gallon capacity when placing your order.

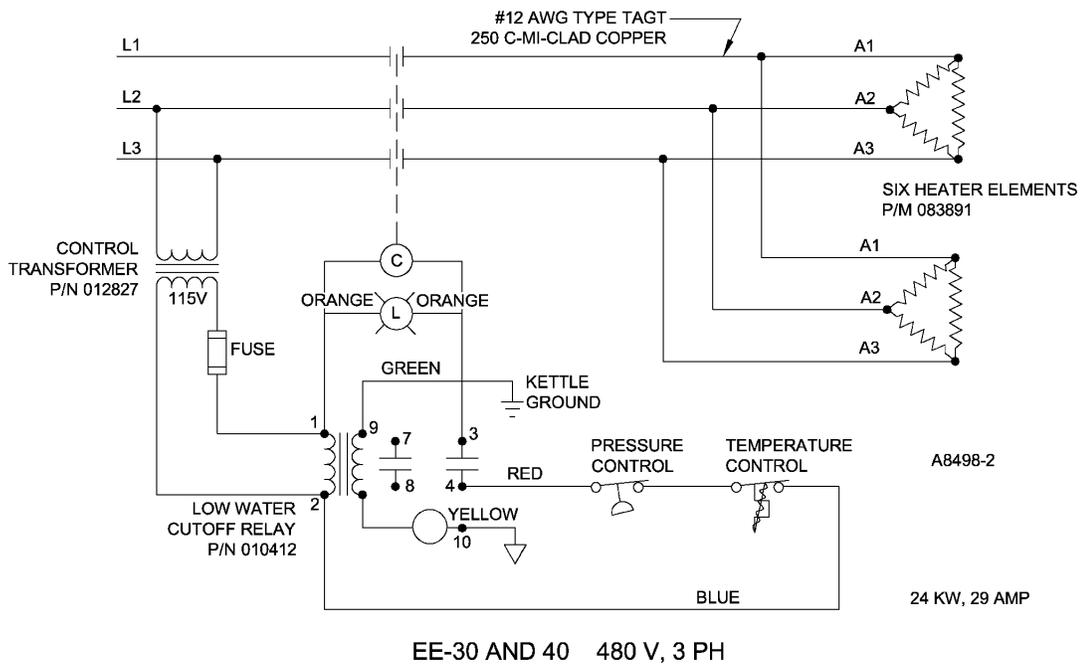


Figure 3 Model EE-30/40 Wiring Diagram

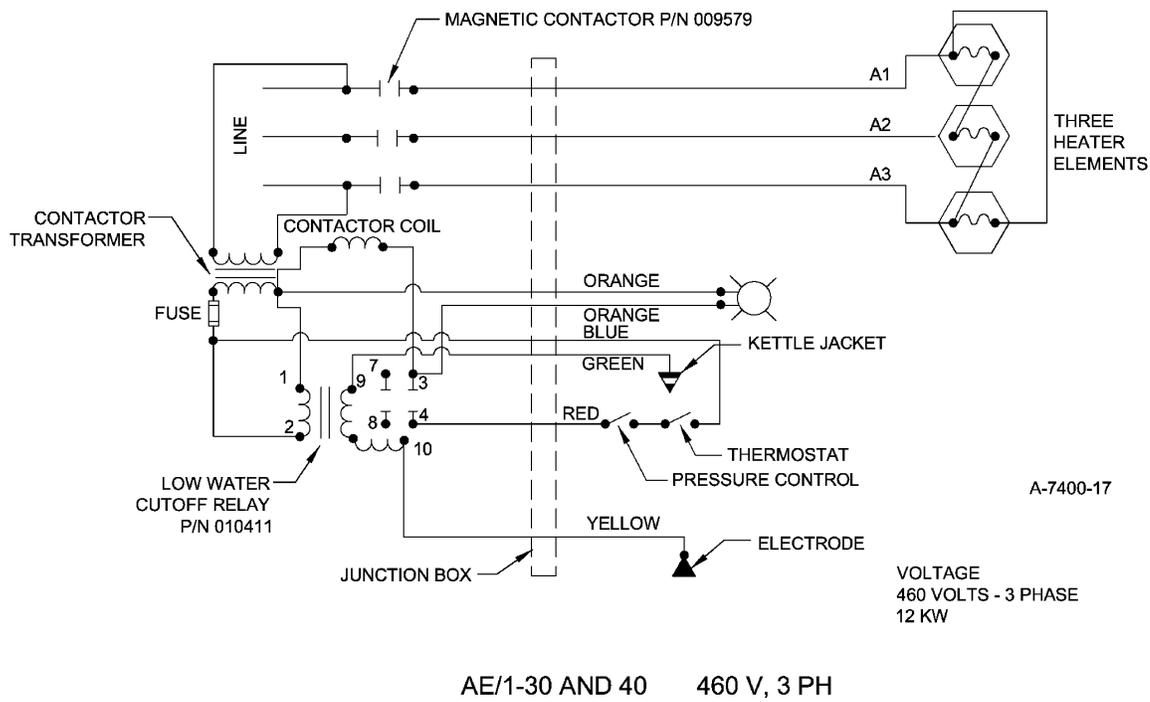


Figure 4 Model AE/1-30/40 Wiring Diagram

**GROEN Guarantee***Three-Year Limited Warranty To Commercial Purchasers \**

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 thirty-six months from the date the Equipment is shipped from Groen's factory (the "warranty period") on the following conditions and subject to the following limitations.

- I. This warranty is limited to Groen Equipment sold to commercial purchaser/users (but not original equipment manufacturers) and installed in the continental United States and-Hawaii. This warranty extends to subsequent commercial owner/users only if the transfer of ownership does not involve movement or reinstallation of the product.
- II. Product must be inspected and registered with Groen by buyer upon receipt. Damage during shipment is to be reported to the carrier, and is not covered under this warranty.
- 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. This warranty includes all parts and labor costs for the warranty period. As to warranty service in the territory described above; Groen will absorb portal to portal transportation costs (time and mileage) during the first twelve months of the warranty period; however, buyer will be liable for portal to portal transportation costs (time and mileage) during the remaining twenty-four months of the warranty period.
- IV. This warranty does not cover normal maintenance, calibration and regular adjustments, as specified in operating instructions or manuals (see operating manual of specific product); consumable parts such as scraper blades, gaskets, and packing; or defects caused by improper storage or handling prior to placing the Equipment; poor water quality (see recommended water standards); and/or abuse, carelessness of operation, or improper maintenance of the Equipment.
- 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 written warranty.

\*(Cover All Food Service Equipment Shipped After 1 October 1981)



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