AMERICAN METAL WARE

Operator Manual

Hot Water Boilers
810(E), 815(E), 830(E), 850(E)

Model 810(E)

Table of Contents

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

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

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Grindmaster Cecilware

0516 Form #AM-324-04
Part # 390-00072

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 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

To reduce risk of electrical shock, do not remove or open cover. No user-serviceable parts inside. Repair should be done by authorized service personnel only.

The appliance is not intended for outdoor use.

Do not clean with pressurized water or use in an area where pressurized water may be used.

Cleaning and maintenance shall be made only by properly trained persons with supervision.

This appliance is not intended for use by persons with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

Do not alter or deform the power cord or plug in any way! Altering or deforming the plug may cause electrical shock, damage unit and will void warranty.

To reduce risk of explosion or fire, do not use near combustibles.

⚠ CAUTION

For safe and proper operation, the appliance must be placed in a stable, vertical position.

To reduce risk of serious burns or scalding, do not place hand or other body parts under dispenser or container while product is brewing.

Always unplug unit from power supply before servicing.

Surfaces are hot and can cause burns.

NOTICE

Use only on a circuit that is properly protected and capable of the rated load.

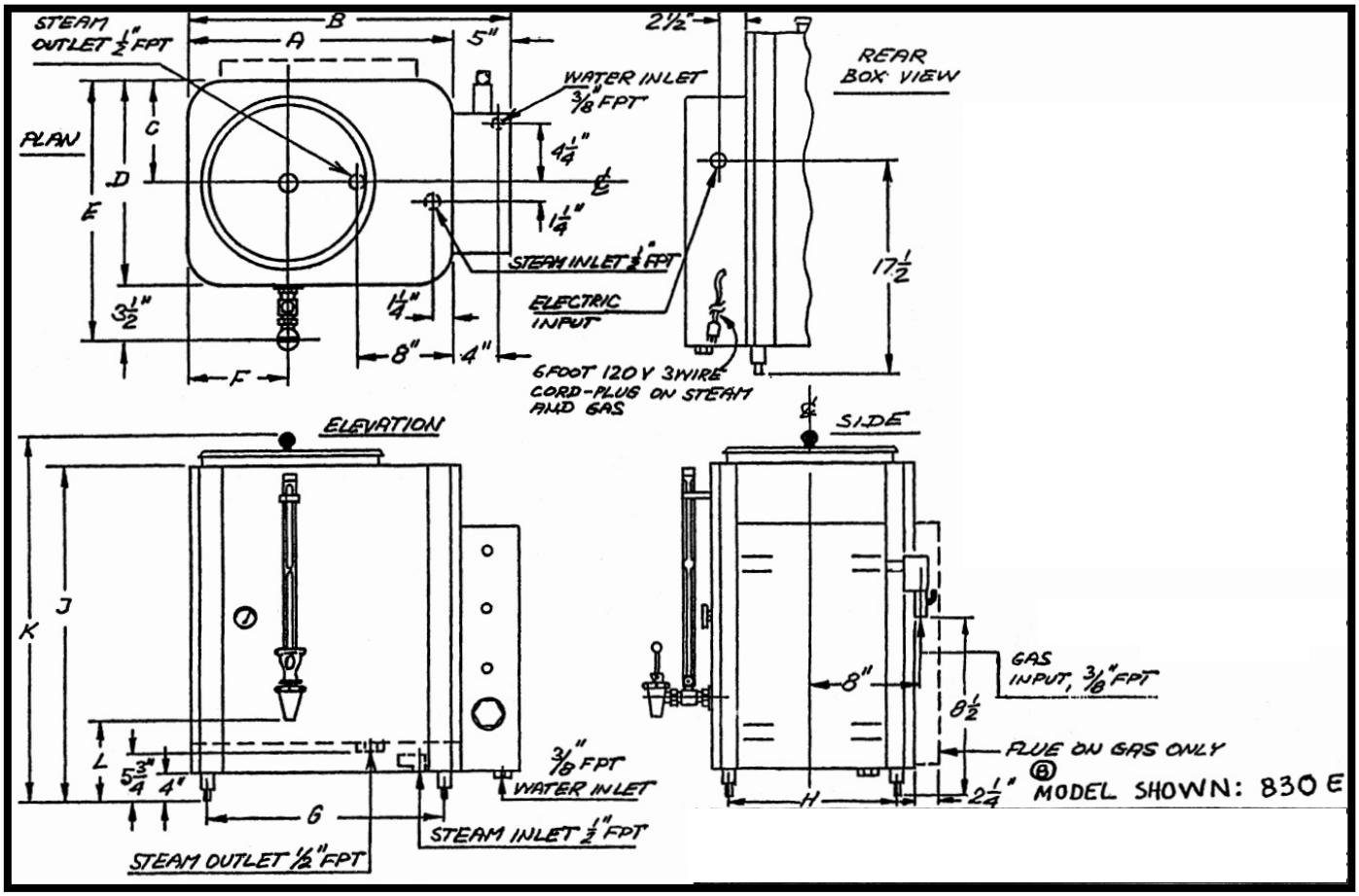
Electronically ground the chassis.

Follow national and local electrical codes.

Do not use extension cord.

This equipment must be installed in compliance with applicable Federal, State, and/or Local plumbing codes having jurisdiction. This product requires an approved back flow prevention water device, such as a double check valve, to be installed between the machine and the water supply.

Rough-In Drawing



	Dimensions (inches)										
Model	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**J**	**K**	**L**
815E,S	21	26	8.375	16.75	20.25	8.5	18	14	32	35	8
830E,S	21	26	8.375	16.75	20.25	8.5	18	14	27	30	8
850E,S	18	23	7.5	15	18.5	7.75	15	12	24	27	8

Model	**GAL DRAW OFF**	**HEATER SIZE**	**GPH RECOVERY**		**LBS/HR STEAM CONSUMPTION**
			50°F INLET WATER	**140°F INLET WATER**	
815E,S	15	5.5KW 208V 1PH	13	32	18
		7KW 240V 1PH	18	44	23
830E,S	30	12KW	30	74	40
850E,S	50	15KW	38	90	50
Standard operating steam pressure (models with suffix 'S') is 10 - 25 PSIG					

General Description

This unit is a high temperature hot water boiler. It consists of a non-pressure, vented water compartment into which is installed an electric immersion heater thermostatically controlled through a contactor relay, to keep the water always at the desired brewing temperature. Automatic refill maintains water level in water compartment. All control system components are enclosed in a stainless steel housing on the right end of the urn:

A master ON-OFF switch shuts off entire unit, including heater circuit. Separate low water cutoff system protects heater and entire unit from damage.

Installation

⚠ CAUTION
These urns are heavy pieces of equipment. It is recommended that moving or lifting the unit be done by two people to avoid injury.

Unpacking Instructions
Carefully unpack the machine and inspect immediately for shipping damage. The packaging may contain unattached parts. Your machine was shipped in a carton designed to give it maximum protection in normal handling. It was thoroughly inspected before leaving the factory. In case of damage, contact the shipper, not Grindmaster-Cecilware.

NOTICE: The person installing this appliance is responsible for ensuring that electric and water connections meet the requirements of the national electric code, national plumbing code, and any local ordinances.

See **Rough-in Drawing** for approximate dimensions and locations of electric and water input.

NOTE: When positioning the unit, leave a minimum 6 inch clearance on the right side of the water boiler for ease of service.

Water boilers are shipped with the thermostats in the OFF position. Do not turn the thermostat ON before filling the water boiler with water.

Mechanical Installation
NOTICE: **Do not turn thermostat on until all installation instructions have been followed.**

1. Inspect unit to see if any damage occurred in shipment.
2. Remove the boiler from the packing material. The four legs, faucets, and vent cap drain are packed separately with water boiler.
3. Install legs by tilting boiler on its side and screwing legs into leg supports until hand tight.
4. Carefully right unit and install in its permanent location, being sure to leave at least 6" on right side of boiler for access to controls. Position boiler so that the faucet drips into a drip trough or drain receptacle of some type.
5. Level the boiler by adjusting the bottom pad of the legs.
6. Place the vent cap into the recess in the top of the unit.
7. Mount the faucet assembly onto the shank.

Water Hook-up
NOTICE: This equipment must be installed in compliance with applicable Federal, State and/or Local plumbing codes having jurisdiction. This product requires an approved back flow prevention water device, such as a double check valve, to be installed between the machine and the water supply. Incoming pressure should be greater than 30 psi and not more than 70 psi.

NOTICE: Connecting the water boiler to a warm water supply will speed up heating and recovery times.

1. 3/8" NPT water inlet is located at right end.
2. Provide shut-off valve and union in supply line near boiler.
3. Minimum inlet pressure at boiler should be 30 PSI.
4. Maximum inlet pressure recommended at 70 PSI.
5. 3/8" O.D. copper flex tubing should be used for valve connections.
6. Turn on the water supply line and check for leaks.

NOTE: A filtering system is recommended to remove odors and inhibit lime and scale build up in the unit.
NOTE: In areas with extremely hard water, a water softener must be installed in order to prevent a malfunctioning of the equipment and in order not to void the warranty.

Electrical Hook-up

⚠ WARNING: ELECTRIC SHOCK HAZARD!
Installation of this appliance should 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. Do not use extension cords. Make sure that the outlet the boiler plugs into is grounded.

1. Check rating marking on boiler nameplate to be sure electric lines match voltage, phase, and amperage requirements of boiler. Select the proper cord and cord grip for electrical rating of the boiler.
2. Remove cover on control housing. Terminal block for line connections located in housing on right end. See drawing, as required.

Installation (continued)

3. It is recommended that a fused disconnect switch be installed near unit.
4. Boiler body must be grounded either through metallic conduit or else by means of ground wire.
5. An experienced electrician should be responsible for the installation of the unit, and its associated supply line.

NOTE: Neutral wire required on all single phase and on 208 volt 3 phase power supplies to operate 120volt AC control circuit.

6. Do not replace cover until completion of installation.

Priming

NOTE: THERMOSTAT MUST BE IN THE "OFF" POSITION.

1. Open water supply line valve to boiler.
2. Turn on or plug in the power supply to the boiler. Do not power up the boiler when the water line is off.
3. Turn master switch on. Do NOT turn on thermostat until water shows in gauge glass (approximately 6 minutes).
4. When water shows, remove adhesive WARNING label from thermostat knob. Turn thermostat knob maximum clockwise to BREW position. Pilot light over knob should light showing heater power on.
5. Water compartment will fill automatically to stop-full level, and should reach operating temperature approximately 45 minutes later.
6. When the pointer on thermometer approaches the "W" in the blue BREW zone, unit is ready for operation.
7. In high altitude locations (over 5000 ft. above sea level), thermostat may have to be lowered to prevent boiling. See the **Adjustments** section if changes are needed.
8. Heat and discard at least one batch of water.

⚠ CAUTION: BURN HAZARD

Water from boiler is very hot. Use caution when pouring or transporting hot water. Accidental spills may result in severe burns.

Cleaning

⚠ CAUTION: BURN HAZARD

Boiler surfaces and water inside boiler are very hot. Use caution when cleaning unit to prevent burns.

⚠ CAUTION: BURN HAZARD

Never remove faucet when the liner has water in it. Switch OFF the power to the unit at the circuit breaker. Turn off the water line running to the boiler.

NOTICE: All sanitizing agents in the food zone must comply with 21 CFR 178.1010. Sanitize all food dispensing units periodically. All parts to be sanitized must be cleaned first. Cleaning and sanitizing frequency must follow state and local health department regulations.

NOTICE: Do not use cleansers, bleach liquids, powders or any other substance containing chlorine. These products promote corrosion and will pit the stainless steel. USE OF THESE PRODUCTS WILL VOID THE WARRANTY.

Daily

Wipe the outside of the unit with a damp cloth, using soap solution or a non-abrasive compound when required.

Sanitizing

1. With power to the unit disconnected, fill unit to capacity.
2. Prepare a sanitizing solution in accordance with local health department regulations. You may also refer to the US Food and Drug Administration regulation 21 CFR 178.1010 “Sanitizing Solutions” and US Environmental Protection Agency 40 CFR 18.940 “Tolerance exemptions for active and inert ingredients for use in antimicrobial formulations (Food-contact surface sanitizing solutions)”.
3. Follow the instructions provided with the sanitizing agent.
4. Drain all water from the unit slowly.
5. Let all sanitized parts drain and dry naturally. DO NOT WIPE THEM DRY.
6. If the unit is not to be used again immediately after sanitizing - do not rinse with water. If the unit is to be used immediately after sanitizing - rinse with water before refilling the unit for further use.

Adjustments

⚠ WARNING: SHOCK AND BURN HAZARD
To prevent electric shock and burn hazard this procedure must be performed by a trained and qualified service technician.

WARNING: SHOCK HAZARD
Disconnect power before attempting any electrical repairs or adjustments.

Refill Rate Adjustment
To gain maximum capacity of the boiler, and shorten heat recovery time, adjust the water inlet flow regulator (located inside the control box) according to the chart provided. Turning the threaded adjustment shaft clockwise increases the flow rate, counterclockwise will decrease it.
TO CHECK REFILL RATE, allow water to fill to stop/full level automatically; then turn off master switch. Draw off 1 gallon of water from faucet. Turn master switch back on and time how long it takes for the water level to come up to stop/full mark again. Compare time with chart provided and adjust accordingly.

Heater Size	Time to refill 1 gallon	
	Cold Water* Connection	Hot Water Connection
5.5 kW/208 V or 7 kW/240 V	3 min. 30 sec.	1 min. 25 sec.
12KW	1 min. 50 sec.	45 sec.
15KW	1 min. 25 sec.	35 sec.

*Factory Setting

Thermostat Adjustment
Factory set so that knob on BREW setting holds unit at brewing temperature toward HIGH end of brew zone on thermometer dial. Then, if turned back to HOLD position, thermostat should cycle on and off and hold at LOW end of BREW zone on thermometer.

1. If water temperature is below HIGH end of BREW zone on thermometer dial with knob on BREW setting, remove knob by pulling straight outward. Using a small screwdriver, insert in hole in center of shaft, turn slotted screw counter-clockwise until red pilot light goes on.
2. Check to see that water in unit holds at HIGH end on BREW zone on thermometer and does not boil.
3. If water boils with thermostat knob set at the BREW position, remove knob by pulling straight outward. Using a small screwdriver, insert into hole in center of shaft, turn slotted screw clockwise until red pilot light goes out. Hold shaft so it does not turn while adjusting screw.
4. Add cold water and check that heat comes back on (Pilot light glows), and that thermostat cycles at temperature at HIGH end of BREW zone on thermometer dial.
5. If thermostat will not cycle, replace entire control.

Maintenance

PROBLEM: THERMOSTAT DIAL TURNED TO BREW AND WATER IN COMPARTMENT REMAINS COLD

POSSIBLE CAUSES

1. No power at urn.
Check main switch, Check main fuses. (3 on 3 phase power, 2 on single phase power). Check that Pilot Light by On-Off switch is ON.

2. Power at urn, but no power at heater terminals.
Check control circuit fuse. Check that pilot light over thermostat dial is lighted with dial set to BREW. Check that water level is at FULL mark on water gauge glass. NOTE: If urn is equipped with Option 39, Low Water Cut-off System, level in gauge glass should be minimum 2 inches showing to have power ON to control circuit. Check low water cut-off and auto refill system and replace if necessary. Check that contactor clicks on and off as thermostat dial is turned from BREW to OFF. Check control transformer if so equipped. Lastly, check for voltage at heater terminals. If OK, check for broken or loose wire on terminal. If necessary, replace heater.

PROBLEM: WATER BOILS CONTINUOUSLY WITH THERMOSTAT DIAL ON POSITION BREW OR HOLD.

POSSIBLE CAUSES

1. Thermostat out of calibration.
Set knob on BREW and remove knob by pulling outward. Using small screwdriver in center of shaft, turn slotted screw clockwise until pilot light goes out. Check holding temperature by adding cold water. Red light should come on, and water heat up to HI end of BREW zone on thermometer dial and then shut off. NO BOILING.

2. Thermostat is inoperative. Fluid has leaked out of diastat assembly of thermostat.
If impossible to get control to cycle on and off and control temperature, replace entire control. Be sure to drain water in urn below level at which bulb enters urn. Also shut off all power before service is attempted.

3. Relay sticking in closed position.
Relay must click on and off. If it sticks, replace.

Maintenance (continued)

⚠ WARNING: SHOCK AND BURN HAZARD
To prevent electric shock and burn hazard all tasks described in this section are to be performed by a trained and qualified service technician.

⚠ WARNING: SHOCK HAZARD
Disconnect power before attempting any electrical repairs.

Dual Level Control

Auto Refill and Low Water Cutoff System

I) Dual Level Control: What it does:

A. AUTO REFILL of the water compartment to keep the tank filled with water. When water is used, the fill valve opens automatically to let in more. The fill valve closes when the water level reaches full.

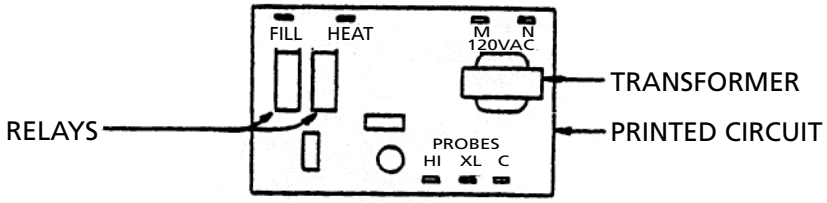
B. LOW WATER CUTOFF to prevent burn out of the electric immersion heater when there is not enough water to cover it. When low water occurs, the heat automatically switches off. The heat stays off until more water is added.

C. A device called a DUAL LEVEL CONTROL keeps the tank filled with water and turns off the heat when water is low by simultaneously monitoring two different water levels.

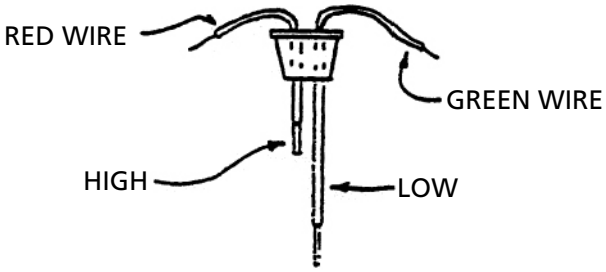
II) Description and Operation of Dual Level Control System:

A. Components

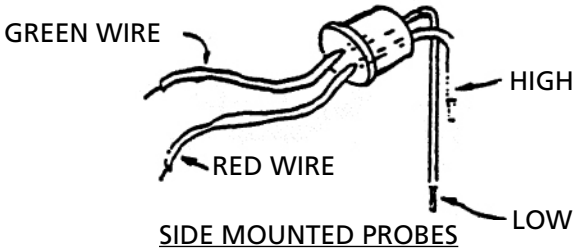
1. DUAL LEVEL CONTROL - switches power to both the thermostat and water inlet solenoid valve by sensing changes in water level.



2. ELECTRODE ASSEMBLY - consists of a high (short) and a low (extra-long) sensing electrode, or probe, molded in an epoxy body.



TOP MOUNTED PROBES



SIDE MOUNTED PROBES

3. METAL ENCLOSURE (TANK BODY) - provides a common (ground) connection for the electrode circuit.

Maintenance (continued)

⚠ WARNING: SHOCK AND BURN HAZARD
To prevent electric shock and burn hazard all tasks described in this section are to be performed by a trained and qualified service technician.

⚠ WARNING: SHOCK HAZARD
Disconnect power before attempting any electrical repairs.

Dual Level Control

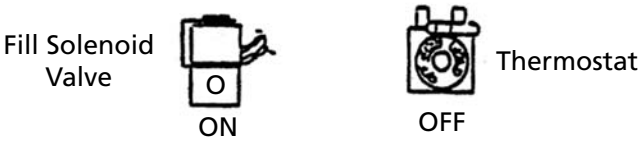
Auto Refill and Low Water Cutoff System (continued)

II) Description and Operation of Dual Level Control System (continued)

B. Operation

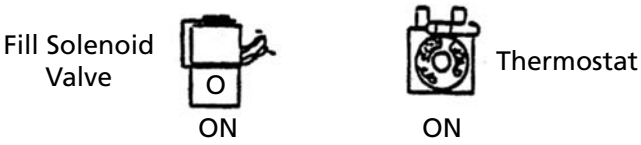
1.) Below both electrodes

Both "HI" and "XL" electrode circuits open. Dual Level Control turns power on to fill valve and keeps power off to thermostat.



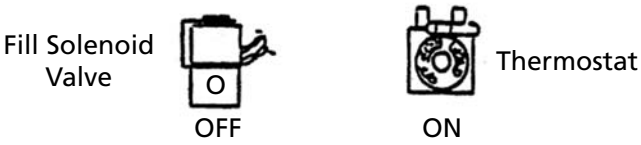
2.) Rises to low electrode above heater coils

"XL" electrode circuit closes. Power to thermostat turned on. Power to fill valve remains on.



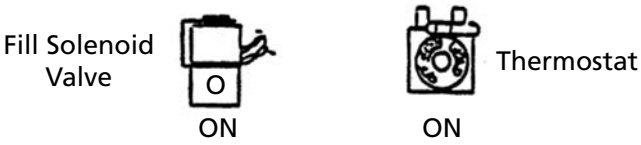
3.) Rises to high electrode

"HI" electrode circuit closes. Dual Level Control turns power off to fill valve and continues power to thermostat.



4.) Falls below high electrode only

"HI" electrode circuit opens. "XL" circuit stays closed. After a few seconds delay, power to fill valve is turned on.



5.) Falls below low electrode
(Same condition no. 1)

"XL" electrode circuit now opens. Power to thermostat is turned off. Power to fill valve remains on.

III) Quick Service Check of Dual Level Control System:

1.) All wire secure and properly connected.
2.) Clean the electrodes. Lime (mineral scale) build-up can interfere with the operation of any liquid level control system.
3.) Check the common (ground) connection. A little looseness or dirt can cause erratic operation.

Troubleshooting Guide

⚠ **WARNING:** To reduce the risk of electrical shock, unplug the power cord before repairing or replacing any internal components of the unit. Before any attempt to replace a component be sure to check all electrical connections for proper contact. Only a qualified service technician should perform electrical and mechanical adjustments or repairs.

The following procedures must be performed by a qualified service technician. Disconnect power to machine before servicing.

Before you call for help, please read the following:

Troubleshooting Auto Refill, Low Water Cutoff, and Dual Level Control System			
PROBLEM	**POSSIBLE CAUSE**	**SERVICE CHECK**	**REMEDY**
Overfilling of water tank when power is off.	• Fill solenoid valve leaking due to dirt or scale holding valve open, or worn plunger seat.	• Visual. Water entering tank continuously, and usually slowly.	• Disassemble and clean out. May require new plunger assembly. Caution is advised to avoid damage to valve. See valve instruction sheet.
	• Fill solenoid valve installed backwards.	• Visual.	• On valves **without** integral strainer: Install so that port marked "IN" is connected to outside fresh water supply. On valves **with** integral strainer: Install so that arrow points in direction of tank, away from fresh water supply.
Overfilling of water tank only when power to unit is on.	• High electrode coated with scale, or faulty.	• Jumper from "HI" terminal to metal enclosure stops fill.	• Remove electrode assembly. Clean both electrodes. If still no remedy and connections are good, replace assembly.
	• Missing or faulty common connection for electrode circuit ("C"terminal to metal enclosure).	• Jumper "C" terminal (next to XL) to metal enclosure stops fill.	• Make good secure connection. May require cleaning or replacement.
	• Fill valve connected to "HEAT" terminal.	• Visual.	• Connect "BLACK" wire lead to "FILL" terminal.
	• Dual Level printed circuit board faulty.	• Jumper from "HI" to "C" does not stop fill.	• Replace Dual Level Control.

Troubleshooting Guide (continued)

⚠ **WARNING:** To reduce the risk of electrical shock, unplug the power cord before repairing or replacing any internal components of the unit. Before any attempt to replace a component be sure to check all electrical connections for proper contact. Only a qualified service technician should perform electrical and mechanical adjustments or repairs.

The following procedures must be performed by a qualified service technician. Disconnect power to machine before servicing.

Before you call for help, please read the following:

Troubleshooting Auto Refill, Low Water Cutoff, and Dual Level Control System

PROBLEM	POSSIBLE CAUSE	SERVICE CHECK	REMEDY
Auto refill fails to fill water tank.	• No power at equipment.	• Nothing operates on machine.	• Make sure main switch(es), fuse(s), circuit breaker(s) provide power to unit, that machine's circuit breaker is OK and power switch, if provided, is on.
	• No water at equipment.	• "Crack" fitting at water inlet for pressure check.	• Make sure all water supply line valves are open.
	• Water strainer clogged.	• Water pressure before strainer and not after.	• Remove and clean micromesh screen filter located in water strainer.
	• No power on Dual Level Control.	• Check for 120V AC across "H" and "N" terminals.	• If voltage missing or incorrect, check wiring for looseness, breaks, and proper connections.
	• Fill solenoid valve clogged with scale or frozen closed.	• Disassemble.	• Clean out and/or replace plunger assembly or entire valve. May require new coil. Caution is advised to avoid damage to valve. See valve instruction sheet.
	• Fill solenoid valve coil inoperative.	• Jumper from "FILL" terminal to "H" terminal does not start fill.	• Replace coil. Also check for frozen plunger. See valve instruction sheet.
	• Electrodes shorting to ground.	• Tank fills with electrode wire disconnected from "HI" terminal.	• Replace electrode assembly. If no remedy, check for improper wiring (cut insulation) or electrode tips touching metal.
	• Dual Level Control faulty.	• Tank does not fill with electrode wire disconnected from "HI" terminal.	• Replace Dual Level Control.
Auto Refill is erratic.	• Electrode shorting to ground completely or intermittently.	• Tank fills with electrode wire disconnected from "HI" terminal.	• Replace electrode assembly.
	• Loose connection.	• Visual. Check for "C" and "HI" probe terminals as well as "FILL." Also check neutral (white) wire at valve.	• Push wire lead connector securely onto terminal(s). Replace connector if wire is frayed or broken.
	• Dual Level Control faulty.	• Tank does not fill with electrode wires disconnected from "XL" and "H" terminals.	• Replace Dual Level Control.

Troubleshooting Guide (continued)

⚠ **WARNING:** To reduce the risk of electrical shock, unplug the power cord before repairing or replacing any internal components of the unit. Before any attempt to replace a component be sure to check all electrical connections for proper contact. Only a qualified service technician should perform electrical and mechanical adjustments or repairs.

The following procedures must be performed by a qualified service technician. Disconnect power to machine before servicing.

Before you call for help, please read the following:

Troubleshooting Auto Refill, Low Water Cutoff, and Dual Level Control System

PROBLEM	POSSIBLE CAUSE	SERVICE CHECK	REMEDY
Tank fills with water, but heat does not come on.	• Thermostat off.	• Visual.	• Make sure knob is turned fully clockwise.
	• Thermostat inoperative or out of calibration.	• Jumper across thermostat terminals causes heat to come on.	• Recalibrate thermostat. If no remedy, or thermostat does not cycle, replace.
	• Power relay or contactor inoperative.	• Check for voltage (120V AC) across coil terminals.	• If correct voltage, replace coil or entire device. If not correct voltage, check for loose wires, improper wiring or other cause.
	• Low electrode faulty or covered with lime scale.	• Jumper from "XL" terminal to metal enclosure allows unit to heat.	• Clean electrodes. Check wiring. If still no remedy, replace electrode assembly.
	• Dual Level Control faulty.	• Jumper from "XL" terminal to "C" does not cause unit to heat.	• Replace Dual Level Control.
No water in tank, but heat comes on (heater damage likely).	• Thermostat and fill valve connected to wrong terminals on Dual Level Control.	• Visual.	• Thermostat (brown wire) must be connected to "HEAT" and fill valve (black wire) to "FILL".
	• Electrode(s) shorting to ground.	• Disconnecting wire (white) from "C" probe terminal provides low water heat cutoff and tank fill.	• Replace electrode assembly. If no remedy, check for improper wiring (cut insulation for instance), or electrode tips touching metal inside tank.
	• Dual Level Control faulty.	• Heat comes on with no probe wires (HI, XL, C) connected.	• Replace Dual Level Control.

NOTE: The level control board works on the principle that water is conductive and with some pure water installations, an increased sensitivity may be required in the level control system. Consult factory if this be the case.

If you still 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.

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 List

815, 830, 850 - Electric or Steam Heat

AMW Part #	Description
A522004	Aluminum Gauge Shield Only for 815 - 5/8" x 13"
A522006	Aluminum Gauge Shield Only for 830 - 5/8" x 16"
A522010	Aluminum Gauge Shield Only for 850 - 5/8" x 20"
A522034	Gauge Glass Only for 815 - 5/8" x 13"
A522036	Gauge Glass Only for 830 - 5/8" x 16"
A522129	Gauge Glass Only for 850 - 5/8" x 20"
A522030	Aluminum Bracket for Gauge Shield
A522026	Upper Gauge Glass Washer
A522027	Lower Gauge Glass Washer
A-682	Gauge Shield Cap for Plug-in Cleanout Cap
A-1132	Plug-in Cleanout Cap w/Vent Hole
A522094	Water Faucet
A522102	Silicone Seat Cup for Faucet
A532064	Water Line Strainer
A506001	Thermometer
A549-000	Dual Liquid Level Control
A712-017	Electrode Assembly for 815, 830
A712-007	Electrode Assembly for 850
A505021	Adjustable Water Flow Regulator (1/4- NPT)
A504001	Thermostat
A515017	Red Pilot Light
537-060	Solenoid Valve, Water Inlet
537-061	Repair Kit for Solenoid
A515012	On-Off Master Switch

Electric Heat Only

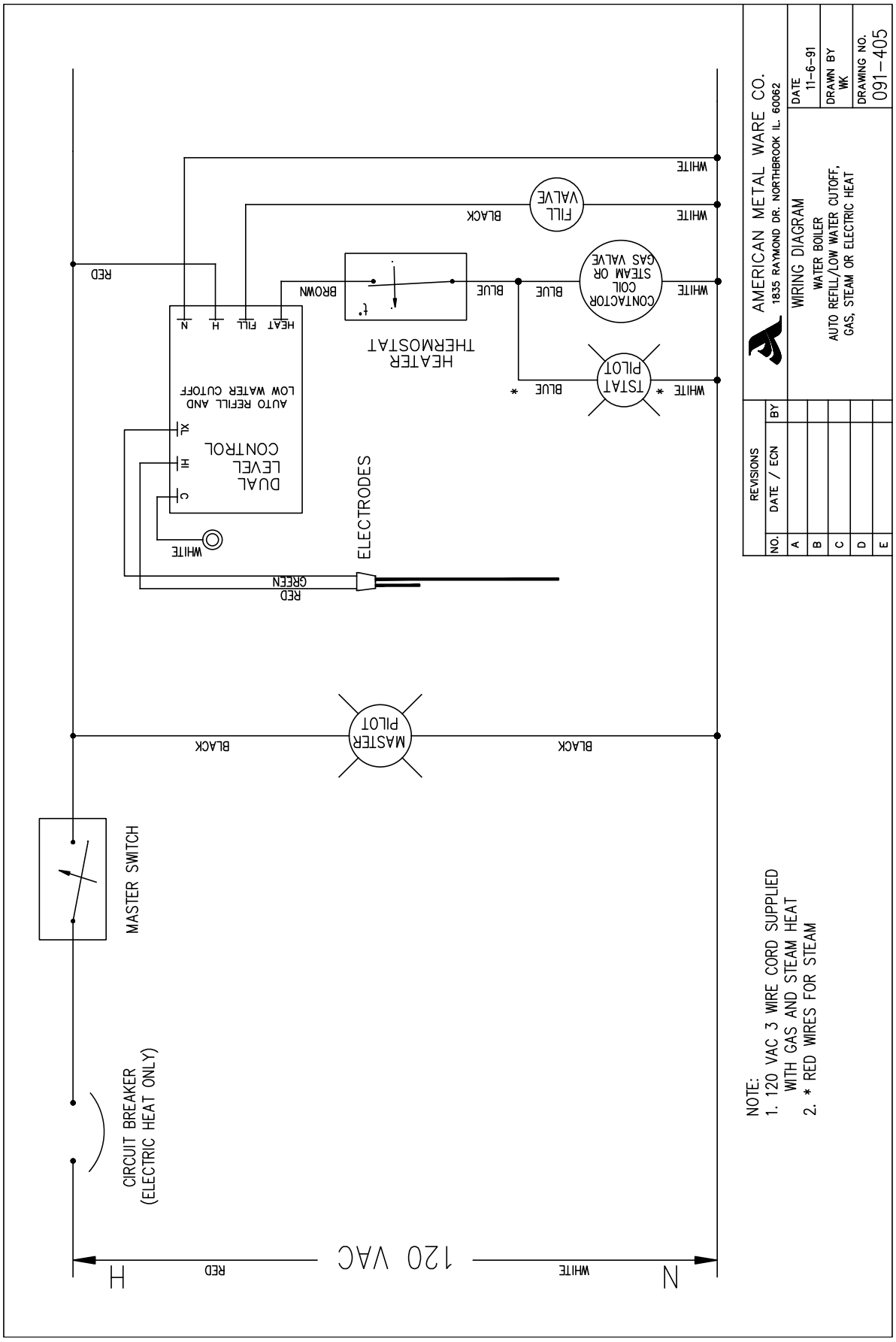
A514009	Heater Contactor - 3 Pole
A514005	Heater Contactor - 4 Pole Control
A515043	Control Circuit Transformer
A515072	Circuit Breaker
320-000__	Heater -- specify model and serial number, voltage, watts and phase

Steam Heat Only

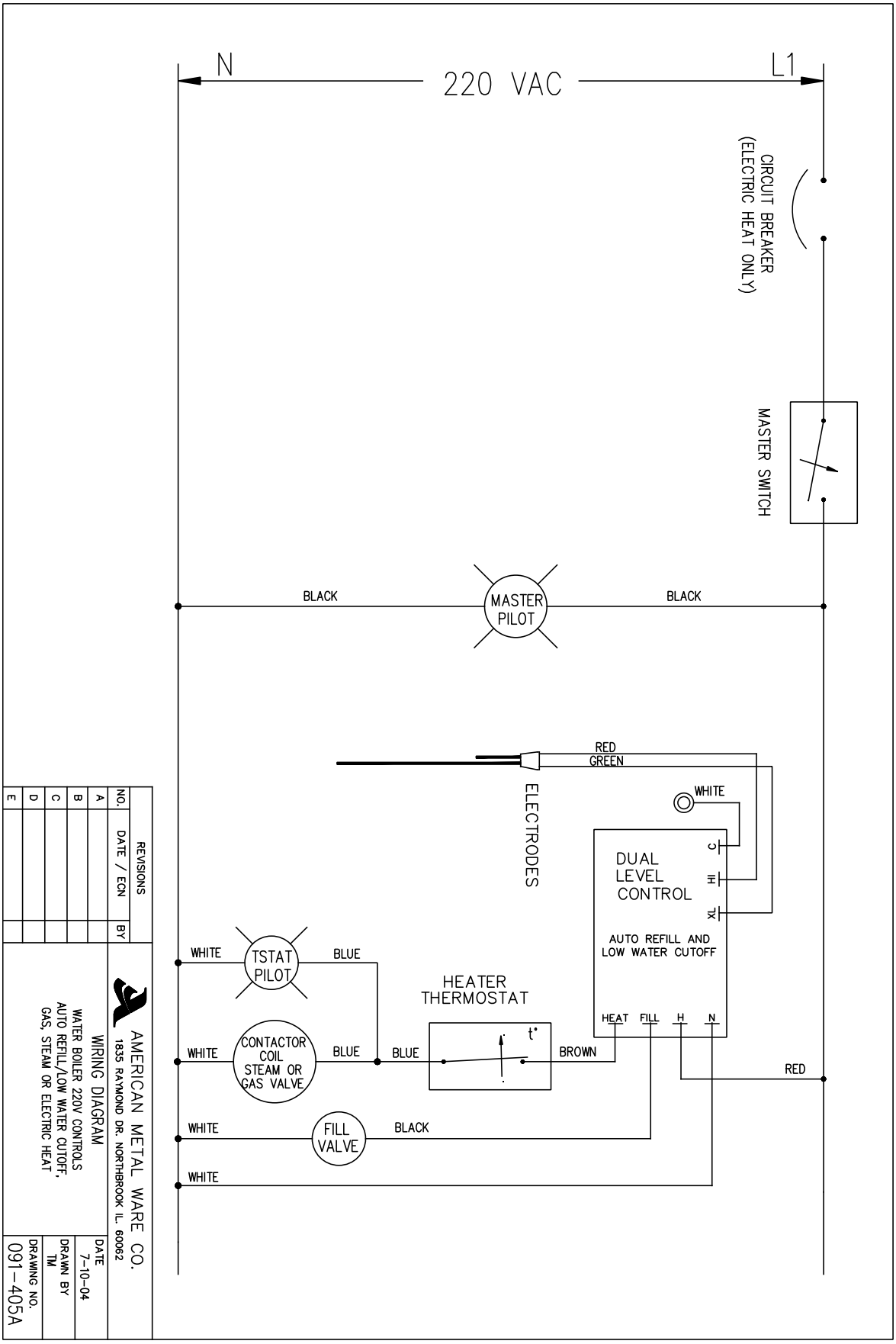
A506009	Steam Solenoid Valve - 10-40 PSI
A506014	Repair Kit for Steam Solenoid
A506016	Replacement Coil Only for Steam Solenoid
A532027A	Steam Strainer

IMPORTANT: Give Model Number and Serial Number when ordering

Wiring Diagram



Wiring Diagram (continued)



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