

EEMAX TROUBLESHOOTING GUIDE

MODELS HA008240, HA011240, HA013240



**THIS STEP BY STEP TROUBLESHOOTING GUIDE IS DESIGNED FOR
THE INSTALLER SHOULD ANY ISSUES ARISE WITH YOUR
TANKLESS WATER HEATER**

Step by Step Troubleshooting Guide

This Guide is for Use by Qualified Electrical Professional

This Troubleshooting Guide will take you through simple steps to determine any problems or issues. This Guide takes you through a sequence of steps that MUST be followed.

All Eemax units have a simple design and are very easy to check with the use of a MULTI CLAMP METER able to measure both Voltage and Amperage.

Follow the steps as described and write down the readings/results on the back pages prior to contacting technical support. This practice will help expedite the troubleshooting process.



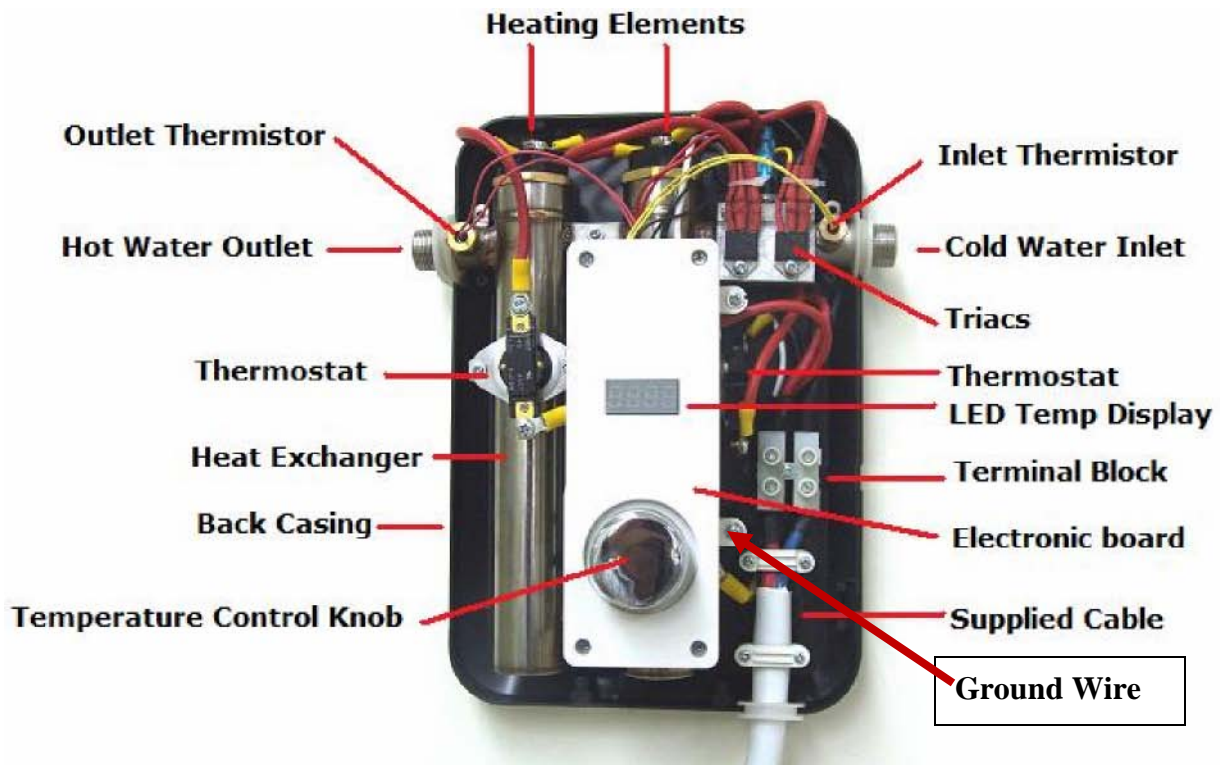
Eemax HA008240 = 1 HEATING ELEMENT (1 CHAMBER HEAT EXCHANGER)

Eemax HA011240 = 2 HEATING ELEMENT (2 CHAMBER HEAT EXCHANGER)

Eemax HA013240 = 2 HEATING ELEMENTS (2 CHAMBER HEAT EXCHANGER)

TO REMOVE COVER MAKE SURE BREAKER IS TURNED OFF.
PULL TEMPERATURE ADJUSTMENT KNOB STRAIGHT OFF.
REMOVE TWO PHILLIPS HEAD SCREWS AT THE BOTTOM OF
THE UNIT. PULL COVER STRAIGHT OFF.

Below is a picture of an open view of an HA013240 - EEMAX TANKLESS
WATER HEATER.



You can contact our Technical Support at 800-543-6163 Mon-Fri 8:00 am—5:00 pm. EST or visit our web site at www.eemax.com Go to Customer Service and Select Tech Support to contact.

DISCONNECT ALL POWER TO UNIT BEFORE REMOVING COVER

The last page is designed to document all readings

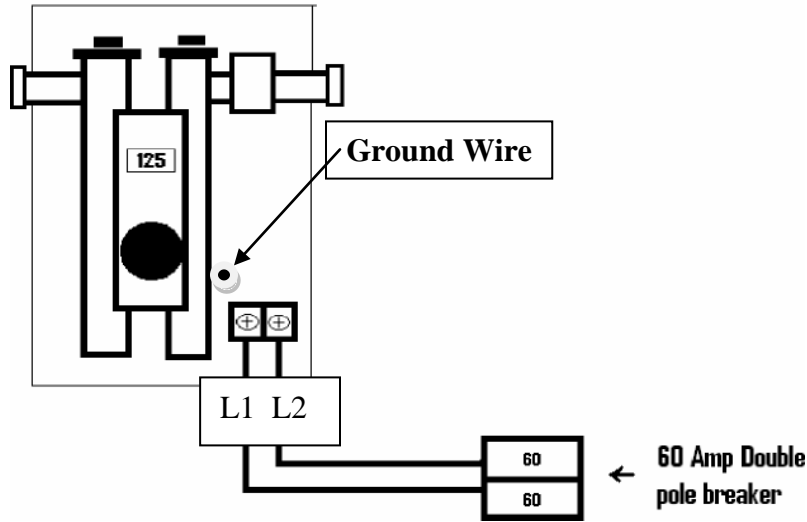
ELECTRICAL CONNECTION

MODELS HA008240, HA011240, and HA013240 ARE SUPPLIED WITH A 2 PRONG TERMINAL BLOCK AND ATTACHED CABLES.

SUPPLIED CABLES MUST BE CONNECTED TO AN INDEPENDENT 60 AMP DOUBLE POLE BREAKER DEPENDING ON THE MODEL.

IN ORDER TO MAKE SURE THE WIRING IS CONNECTED CORRECTLY PERFORM THE FOLLOWING TEST.

ONCE THE CABLES HAVE BEEN SECURELY ATTACHED TO A 60 AMP DOUBLE POLE BREAKER; TURN POWER ON TO UNIT. THEN MEASURE THE VOLTAGE GOING TO THE TERMINAL BLOCK.



How unit looks out of box



Measure voltage from L1 to L2
Should get 208/240



Measure voltage from L2 to Ground.
Should get 110-120



Measure voltage from L1 to Ground.
Should get 110-120

**This unit requires a 60 amp double pole breaker and #6 wire.
(Space saver breakers will not work)**

IF THE POWER GOING TO THE UNIT IS NOT CORRECT, THE UNIT WILL NOT OPERATE CORRECTLY, SO IT IS IMPORTANT TO PERFORM THIS TEST BEFORE PROCEEDING.

IF THERE IS NO VOLTAGE THE PROBLEM MIGHT NOT BE AT THE UNIT, BUT AT YOUR ELECTRICAL PANEL, OR BREAKERS.

VERIFYING SAFETY THERMOSTATS

THE FOLLOWING STEPS WILL VERIFY POWER IS GOING THROUGH THE SAFETY THERMOSTATS. THIS TEST WILL VERIFY THAT ELECTRICAL POWER IS GOING TO THE BOTTOM AND ACROSS THE THERMOSTAT.

IF A THERMOSTAT IS DAMAGED THE HEATING ELEMENT WILL NOT FUNCTION OR HEAT UP.

STEP 1

YOU NEED TO HAVE THE BREAKERS TURNED ON.

STEP 2

PLACE YOUR METER TO READ AC VOLTS

STEP 3

USING YOUR VOLT METER YOU NEED TO PLACE ONE PROBE TO GROUND AND YOUR OTHER PROBE TO THE BOTTOM OF THE THERMOSTAT.

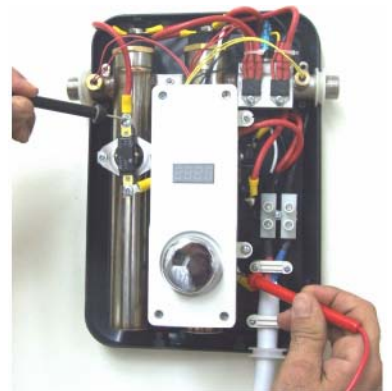
STEP 4

THEN PERFORM THE SAME TEST ON THE TOP PART OF THE THERMOSTAT.

STEP 5

ALL READING ON THIS TEST SHOULD BE IN THE 110-115V RANGE.

THIS TEST MUST REPEATED ON ALL THERMOSTATS, ONE BY ONE.



VERIFYING HEATING ELEMENTS

THE HEATING ELEMENTS WILL ONLY DRAW VOLTAGE WHEN HOT WATER IS BEING USED AND ONLY THE VOLTAGE THAT IT NEEDS BASED ON WHERE YOU HAVE YOUR DIGITAL TEMPERATURE SETTING.

WHEN HOT WATER IS DEMANDED THE ELEMENTS WILL INSTANTLY DRAW VOLTAGE. THE HEATING ELEMENTS WORK IN SERIES WHICH MEANS THAT THE FIRST ELEMENT LOCATED ON THE INLET SIDE OF THE UNIT WILL BE THE FIRST ONE TO DRAW POWER, THEN THE OTHER ONE.

IN ORDER FOR THE SECOND ELEMENT TO DRAW POWER THE FIRST ELEMENT MUST BE DRAWING 100% CAPACITY.

THERE ARE TWO RED WIRES CONNECTED TO THE TOP OF THE ELEMENT.

THE FOLLOWING STEPS WILL VERIFY THE HEATING ELEMENTS ARE WORKING CORRECTLY:

STEP 1

IN ORDER TO CHECK IF THE ELEMENT IS WORKING YOU MUST TURN ON A HOT WATER TAP. **WE SUGGEST THAT YOU RUN THE TUB OR A SHOWER AND SINK. THIS WAY ALL ELEMENTS WILL DRAW VOLTAGE AND CAN BE CHECKED.**

STEP 2 (PIC 1)

ONCE YOU HAVE WATER RUNNING THROUGH THE UNIT THE LED DISPLAY WILL LIGHT UP AND DISPLAY THE TEMPERATURE SETTING ON THE UNIT.

USING YOUR VOLT METER, PLACE ONE PROBE ON ONE SCREW AND THE OTHER PROBE ON THE OTHER SCREW LOCATED ON THE TOP OF THE ELEMENT. CHECK WHAT VOLTAGE YOU ARE DRAWING. YOU NEED TO START ON THE FIRST ELEMENT (FARTHEST RIGHT WHEN FACING UNIT) SINCE THE ELEMENTS ACTIVATE IN SERIES).

STEP 3

IF YOUR LED DISPLAY IS LIT AND YOU HAVE WATER RUNNING THROUGH THE UNIT AND HAVE 0 VOLTAGE READING WHEN MEASURING WITH PROBES ON EACH SCREW- PERFORM THE SAME TEST. THEN PLACE ONE PROBE ON ONE SCREW AND THE OTHER PROBE TO GROUND. DO THE SAME ON THE OTHER SCREW. IF YOU ARE GETTING VOLTAGE READINGS WHEN TESTING ON ONE SCREW TO GROUND BUT NO VOLTAGE WHEN MEASURING FROM SCREW TO SCREW YOUR ELEMENT MIGHT BE BAD AND MUST BE REPLACED.



VERIFYING AMPERAGE DRAW ON ELEMENTS

THIS TEST IS TO MEASURE AMPERAGE DRAW ON EACH ELEMENT.

STEP 1

USE THE CLAMP PORTION OF THE METER TO CLAMP AROUND THE RED WIRE THAT COMES FROM THE TOP OF THE BLACK ROUND THERMOSTATS LOCATED ON THE SILVER PLATE TO THE HEATING ELEMENT.



STEP 2

WHILE WATER IS RUNNING GET THE AMPERAGE DRAW FOR EACH ELEMENT. (FROM RIGHT TO LEFT SINCE ELEMENTS ACTIVATE IN SERIES) THE FIRST ELEMENT WILL DRAW FULL AMPERAGE BEFORE THE SECOND ELEMENT STARTS TO DRAW ANY AMPERAGE.



THESE STEPS WILL ASSIST IN A QUICK RESOLUTION TO ANY ISSUES YOU MIGHT HAVE WHEN CONTACTING OUR TECHNICAL SUPPORT DEPARTMENT.

THE LAST PAGE IS DESIGNED TO DOCUMENT ALL READINGS

IF YOU SHOULD YOU HAVE ANY QUESTIONS BEFORE, DURING OR AFTER INSTALLATION YOU CAN CONTACT OUR TECHNICAL SUPPORT DEPARTMENT TOLL FREE AT 800-543-6163.

Info@eemaxinc.com

Or visit our web site at

www.eemax.com



HOW TO SET AND SELECT YOUR TEMPERATURE SETTING

EEMAX GUARANTEES YOU UNLIMITED HOT WATER AND THEREFORE IT IS NOT NECESSARY TO SET IT AT A HIGH TEMPERATURE SETTING.

THE CONCEPT BEHIND THE DIGITAL MODULATING TECHNOLOGY IS TO NOT ONLY SAVE ENERGY, BUT ALSO SAVE WATER

- **U.S. DOE**-Lowering the thermostat on your water heater by 10°F can save you between 3%-5% in energy costs. Most households only require a water heater thermostat setting of 120°F, or even 115°F.

THIS STEP SHOULD BE PERFORMED BY THE PERSON IN THE HOUSEHOLD WHO LIKES THE HOTTEST SHOWER.

ONCE THE UNIT HAS BEEN PROPERLY INSTALLED—SET THE THERMOSTAT TO 115°F (TO CONVERT DISPLAY TO CELCIUS PUSH AND HOLD BUTTON FOR 3 SECONDS).

RUN YOUR SHOWER USING ALL HOT WATER. LET THE WATER RUN UNTIL YOU FEEL THE HOT WATER. IF THE TEMPERATURE IS TOO HOT THEN YOUR SETTING ON THE UNIT CAN BE LOWERED. ADJUST THERMOSTAT DOWN UNTIL THE WATER IS COMFORTABLE WITH NO COLD WATER.

BY SELECTING THE APPROPRIATE TEMPERATURE SETTING ON YOUR TANKLESS WATER HEATER YOU WILL HAVE GREATER ENERGY SAVINGS, GREATER WATER SAVINGS, AND INCREASE THE SAFETY AS IT PERTAINS TO HOT WATER SCALDING.

THIS STEP IS DONE AT THE TIME OF INSTALLATION. THERE IS NO NEED TO MAKE ADJUSTMENTS DURING WINTER OR SUMMER MONTHS SINCE OUR SELF MODULATING TECHNOLOGY RECOGNIZES INLET TEMPERATURE CHANGES AND ADJUST ITSELF ELECTRONICALLY.

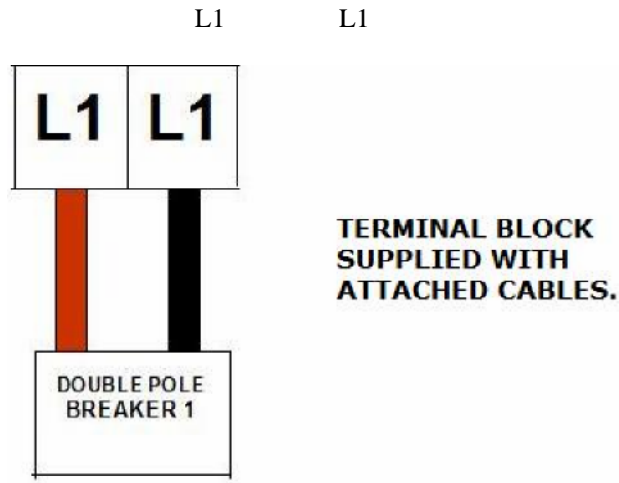
YOU JUST SET IT AND FORGET IT...

U.S. CONSUMER PRODUCT SAFETY COMMISSION -Each year, approximately 3,800 injuries and 34 deaths occur in the home due to scalding from excessively hot tap water. The majority of these accidents involve the elderly and children under the age of five. The U.S. Consumer Product Safety Commission (CPSC) urges all users to lower their water heaters to 120 degrees Fahrenheit. In addition to preventing accidents, this decrease in temperature will conserve energy and save money.

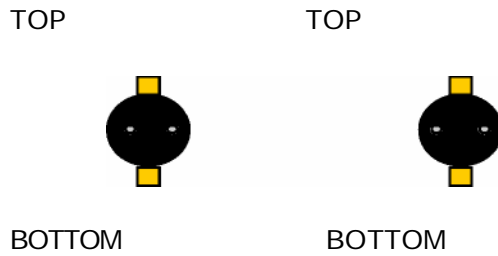
Most adults will suffer third-degree burns if exposed to 150 degree water for two seconds. Burns will also occur with a six-second exposure to 140 degree water or with a thirty second exposure to 130 degree water. Even if the temperature is 120 degrees, a five minute exposure could result in third-degree burns.



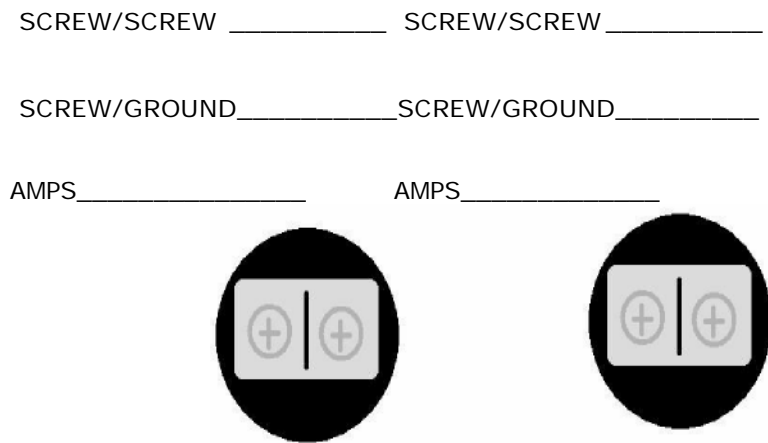
VOLTAGE AT TERMINAL BLOCK



VOLTAGE AT THERMOSTATS



VOLTAGE AT HEATING ELEMENTS





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