

**SUBJECT: Troubleshooting Residential Steam Generators With a Volt Metre, from Serial # A-14900**



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## Visual Inspection

Ensure the steam generator is a Relax-A-Mist, and that the unit is installed in the correct position with the copper steam line(s) coming out of the top (please refer to your installation instructions and diagrams). Check that unit has the correct power and water supplied to it, and that both are turned on. There should be no steam traps in the steam line(s) and the steam nozzles must be installed with the "tear drop" shaped reservoir on the top and the steam slot pointing down. If there are any manual drains attached to the steam generator, ensure that they are in the "closed" position.

 **The following tests are to be performed with the steam generator's power supply ON.** 

 **CAUTION: Bare metal parts may be energized and cause an electric shock.**   
**Avoid touching metal wire connectors.**

If the visual inspection has been completed and the unit is found to be installed correctly, proceed to step 1 after locating and removing the electrical box cover plate on the steam generator (4 screws). The following tests will require the use of a volt metre and should only be performed by a qualified technician. We recommend using a digital volt metre as the displayed reading is more accurate than the analog metres.

### 1. Testing the Power Supply

Procedure: **JR1&2** - Test the power supply between the red wire (top right) and black wire (bottom right) of the contactor for 240VAC.

**Result** → Yes 240VAC, go to next procedure    No 240VAC    → Check **power supply**.  
→ Check **thermo. disc**.

Procedure: **JR3&4** - Test the power supply between **L1** and **L2** on the terminal blocks for 240VAC (test between phases).

**Result** → Yes 240VAC, go to next procedure    No 240VAC → Check **power supply**.

Procedure: Test contactor at bottom, left black wire and left red wire, for 240VAC.

**Result** → Yes 240VAC, go to step 2.    No 240VAC → Check **power supply**.  
→ Check **thermo. disc**.

### 2. Testing the 3AMP Fuses

Procedure: Test between the 3AMP fuses (black & red) for 240VAC at both ends of each fuse.

**Result** → Yes 240VAC, go to step 3.    No 240VAC → Check **burnt fuse**.

### 3. Testing the Voltage to the Printed Circuit Board (PCB)

Procedure: Locate and pull back the 5 pin connector (black, black orange, red, red) approximately 1/8 of an inch to check voltage from the silver strips **inside** the connector plug as follows:

a) Test between the black wire (position 1) and the red wire (position 5) for 240VAC.

**Result** → Yes 240VAC, go to step 3-b.    No 240VAC → Check the **wire's connection to the connector**.

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### 3. Testing the Voltage to the Printed Circuit Board (PCB) cont...

b) Test between all 5 wires and the grounding lug (green wire) for 120VAC.

**Result** → Yes 120VAC, go to step 3-c.                      No 120VAC → Check **wire's connection to the connector.**

c) Test between orange wire (position 3) and red wire (position 4 or 5) for **0-VAC** with the timer/switch control to the unit turned **ON**.

**Result** → Yes **0-VAC**, water valve not energized.    No 240VAC → Water valve energized.  
See note below, and repeat step 3-c\* with the timer/switch control turned **OFF**.

\* **NOTE:** There is a **15 second window** in which this test must be performed, before the PCB safety shuts off the 240VAC power supply to the water valve. Turn on the timer switch or insert the red tester. To energize the water valve, remove the 2 pin connector (blue wire) from the PCB. Once the connector is removed (with the timer control on), the green LED on the PCB will illuminate; begin the test.

**Result** → Yes 240VAC, go to next step.                      No 240VAC → Check **PCB**.

### 4. Testing the Voltage to the Timer/Control Switch Circuit

Procedure: Locate and pull back the 4 pin connector approximately 1/8 of an inch to check the voltage from the silver strips inside the connector plug and test for 24VAC between the green and white wires.

**Result** → Yes 24VAC, go to step 5.                      No 24VAC → Check **PCB fuses**.



**The following tests are to be performed with the steam generator's power supply OFF.**



### 5. Testing the Water Valve & Contactor Coil

Procedure: Locate and pull off the 5 pin connector (black, black orange, red, red) from the PCB to test the ohms metre reading as follows:

a) Test between the water valve, orange wire (position 3), and the red wire (position 4) to get a reading of 2.8 to 3.5k ohms.

**Result** → Yes 2.8 to 3.5k ohms, go to step 5-b.                      No 2.8 to 3.5k ohms → Check **water valve**.

b) Test between the contactor coil, black wire (position 2), and the red wire (position 5) to get a reading of 0.875 to 1.5 ohms.

**Result** → Yes 0.875 to 1.5 ohms, go to step 6.                      No 0.875 to 1.5 ohms → Check **contactor coil**.

**NOTE:** The contactor coil reading may also be taken at each contactor by disconnecting the 18awg red and black wires from the coil, and then performing the test.



# SERVICE BULLETIN

MODEL NO'S. JR-1, JR-2, JR-3, & JR-4

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## 6. Testing the Heating Elements

Procedure: **JR1&2** - Test between the black 12awg wire (bottom left) and the red 12awg wire (top left) on the contactor.

**JR3&4** - Test between the black 12awg wire (left) and the red 12awg wire (left) on the top of the contactor.

**JR3&4** - Test between the black 12awg wire (right) and the red 12awg wire (right) on the top of the contactor.

3000W 240V Element = 19.20 ohms  
3000W 208V Element = 14.42 ohms

4500W 240V Element = 12.80 ohms  
4500W 208V Element = 9.61 ohms

**Result** → Yes correct reading, go to step 7.

No, incorrect reading. → Check **element**.

## 7. Testing the Timer/Control Switch Circuit

Procedure: Locate and pull off the 4 pin connector and test for continuity between the red wire (position 4) and the black wire (position 3).

**Result** → Yes continuity, repeat steps 1 through 7  
or call **1-800-Y-U-STEAM** for assistance.

No continuity → Check **control** and **circuit**.



## WARRANTY POLICY

For a period of one year from the date of installation, or 18 months from the date of manufacture, whichever comes first, all parts and assemblies are warranted as to workmanship and materials used in their manufacture. There is no cosmetic warranty on installed parts or controls.

Any RELAX-A-MIST™ steam generator containing defective parts, if returned prepaid to an authorized service depot within the one year or 18 month time limit, will be repaired free of charge, F.O.B. the authorized service depot making such repairs.

The Company will not be responsible for any breakdown, damage, or losses, direct or indirect, arising in contract or in tort from any cause whatsoever, including corrosion and/or electrolysis, improper voltage supply, careless handling, or a build-up of minerals on the parts or assemblies for any reason or from any source; nor for transportation and/or other charges incurred in the replacement or repair of defective parts; and there are no warranties or conditions expressed or implied or otherwise applicable, to the company's products except as expressly stated herein.

**WARRANTY IS VOID IF RESIDENTIAL STEAM GENERATORS  
ARE USED IN A COMMERCIAL INSTALLATION.**

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## AUTHORIZED SERVICE DEPOTS

### BRITISH COLUMBIA

LEISURE BATHS LTD.  
6909 Antrim Avenue  
Burnaby, BC V5J 4M5

TEL 604-437-4717  
or 1-800-Y-U-STEAM  
(1-800-987-8326)  
FAX 604-437-5776

### MANITOBA

BALCAEN & SONS LTD.  
1392 Pembina Highway  
Winnipeg, MB R3T 2C1

TEL 204-475-1506  
FAX 204-287-2222

### ALBERTA

FRASER-BOND LTD.  
9452 Almond Crescent S.E.  
Calgary, AB T2J 1B6

TEL 403-253-7533  
FAX 403-253-7583

### ONTARIO

ACCORD APPLIANCE INC.  
#17 – 750 Oakdale Road  
Downsview, ON M3N

TEL 416-743-4181  
FAX 416-743-4183

### ALBERTA

LEHMANN PLUMBING  
3649 73 Avenue  
Edmonton, AB T6B 2T8

TEL 780-465-4434  
FAX 780-465-4595

### QUEBEC

THOMAS & SCHMIDT  
2825 rue Sabourin  
Saint-Laurent, QC H4S 1M9

TEL 514-254-9956  
FAX 514-251-2562

For assistance please call Relax-A-Mist at 1-800-Y-U-STEAM (1-800-987-8326) or send an email to [steamman@relax-a-mist.com](mailto:steamman@relax-a-mist.com).