

EMB-W-185

Installation & Operating Instructions

Application – High temperature WarmFlo® Mini-Boiler conversion.



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Comment – This kit replaces the existing automatic reset temperature limit control (located on the top of the boiler vessel) and the control chip (located on the circuit board). This kit is supplied with two new control chips. One chip is programmed for older style supply temperature sensors and one chip is programmed for the new style supply temperature sensor. To determine which of the two chips to install, find the chip that is currently installed on the board. The chip is marked with a revision number and date. For chips that are marked with a date of 02-03-04 or older, use the chip marked 3.10.T. For chips that are marked with a date of 07-27-04 or newer, use the chip marked 13.XXT.

Installation

WARNING

DISCONNECT ALL ELECTRICAL POWER BEFORE ELECTRICALLY CONNECTING OR SERVICING THE UNIT. FAILURE TO DISCONNECT THE ELECTRICAL POWER BEFORE WORKING ON THIS PRODUCT CAN CREATE A HAZARD LEADING TO PERSONAL INJURY OR DEATH.

- 1) After disconnecting all power from the boiler, remove the outer sheet metal covers to gain access to the chip on the circuit board and the temperature limit control at the top of the boiler vessel.
- 2) Carefully remove the existing chip on the circuit board.

CAUTION

Before removing the chip familiarize yourself the orientation of the chip. You will notice that there is a small indentation on one side of the chip. This indentation **MUST** line up with the indentation that is located on the socket that the chip is inserted to. Failure to install the chip in the correct direction or pins that are misaligned will lead to permanent damage to the chip and possibly to the circuit board itself.

- 3) After the new chip has been installed, the boiler plumbing system will need to be depressurized and drained to a level so that water will not come out of the flange opening where the temperature limit control is installed.
- 4) Once the system has been depressurized and drained, carefully disconnect the two red/white wires attached to the switch and remove the existing switch from the boiler vessel.
- 5) Apply thread sealant to the new switch, thread the new switch into place and torque it to 35 ft/lbs.
- 6) Reconnect the red/white wires to the new switch. **NOTE:** The two red/white wires are not polarized, therefore it is not critical which wire is connected to which tab.
- 7) Refill the system according to the installation and operating instructions, check for leaks, and then reinstall the sheet metal covers.
- 8) Connect power to the boiler, and verify the boiler is operating correctly.

Temperature Set Point

The temperature set point is selected by a small screwdriver switch on the control board. Use the following chart:

Switch Position	T
0	110
1	120
2	130
3	140
4	150
5	160
6	170
7	180