Series Peerless® *PUREFIRE*®
Installation, Operation and Maintenance Manual Supplement

⚠ NOTICE

These instructions are intended as a supplement to the Peerless® *PUREFIRE*® Installation, Operation and Maintenance Instructions and are intended for use by a qualified boiler repair technician.

Scope:

These instructions are intended to:

1. Notify installing contractors about the temperature reset requirements required by the Federal government under the Energy Policy and Conservation Act.
2. Provide information about a new internal reset feature designed to enhance the efficiency of Peerless® *PUREFIRE*® boilers.

Compliance with the Energy Policy and Conservation Act:

⚠ IMPORTANT

In accordance with Section 325 (f) (3) of the Energy Policy and Conservation Act, this boiler is equipped with a feature that saves energy by reducing the boiler water temperature as the heating load decreases. This feature is equipped with an override which is provided primarily to permit the use of an external energy management system that serves the same function.

THIS OVERRIDE MUST NOT BE USED UNLESS AT LEAST ONE OF THE FOLLOWING CONDITIONS IS TRUE:

- **An external energy management system is installed that reduces the boiler water temperature as the heating load decreases.**
- **This boiler is not used for any space heating**
- **This boiler is part of a modular or multiple boiler system having a total input of 300,000 BTU/hr or greater.**
- **This boiler is equipped with a tankless coil.**

- The Federal Regulations affect only the Central Heating (CH) Mode settings of Peerless® *PUREFIRE*® boilers.
- The following chart lists the CH modes and indicates which modes can only be used under the conditions listed above.

Central Heating (CH) Mode	Description	Restrictions
0 (Indoor Thermostat)	Fixed Setpoint	Not for space heating
1 (Thermostat and Outdoor Reset)	Outdoor Reset	No restrictions
2 (Permanent Demand and Outdoor Reset)	Outdoor Reset	No restrictions
3 (Permanent Demand and Setpoint)	Fixed Setpoint	Not for space heating
4 (Analog 0-10 VDC Input – Setpoint)	Analog Input	External Energy Management System
5 (Analog 0-10 VDC Input – Modulation Rate)	Analog Input	
6 (Hydro-Air Unit)	Fixed Setpoint	Not for space heating
7* (Internal Reset) Default	Internal Reset	No Restrictions

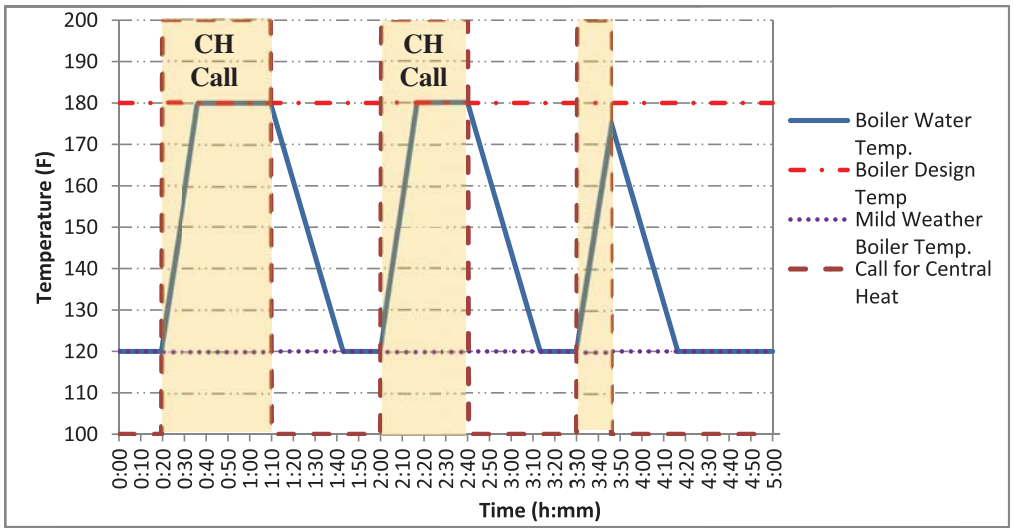
* New default CH mode which adjusts boiler water temperature based on thermostat call duration.

Outdoor Sensor Open Warning:

1. In accordance with Federal Regulations, a warning error has been added to alert the installing contractor or homeowner if the outdoor sensor circuit is open.
   a. Warning errors on *PUREFIRE*® boilers result in a blinking display screen.
      - The error message is accessed by pressing the “RESET” key on the display module.
      - This warning only affects CH mode #1 & #2 which use outdoor reset.
   b. Pressing the “RESET” key on the display module will reveal the following text: “Warning Number #W00, Outdoor Sensor Open”.
   c. In this condition, the control will target a fixed value which is the Boiler Design Temperature.
   d. To operate at the maximum efficiency while the sensor circuit is being repaired or replaced, use CH Mode 7.

CH Mode 7, Internal Reset Operation:

2. This is the new default Central Heating (CH) mode for *PureFire*® boilers which is designed to work comfortably and efficiently without an outdoor sensor or any adjustments to the Installer Menu.
3. In CH Mode 7, the control calculates the target boiler water temperature based on the frequency and duration of calls for central heat (CH) at the thermostat input of the boiler.
   - As the calls for central heat get longer and more frequent, which indicates a larger heating load, the boiler temperature will be higher.
   - As the central heating calls get shorter and less frequent, the boiler temperature will be lower.



4. The rate of temperature change can be adjusted to enhance the efficiency and comfort level:
   - The graph above shows how the temperature target increases and decreases over time depending whether or not there is a call for heat.
   - The following table shows the range and default values for increment and decrement.
     Using a larger number for the temperature increase makes the boiler target a higher temperature faster.
     Using a larger number for the temperature decrease makes the boiler target a lower temperature faster.

	Minimum	Default	Maximum
Increment (Temperature Increase) Installer Menu – CH Settings – Screen #15	0.9°F	1.8°F	36.0°F
Decrement (Temperature Decrease) Installer Menu – CH Settings – Screen #14	0.9°F	0.9°F	36.0°F

5. The target boiler water temperature will not increase beyond the Boiler Design Temperature or decrease below the Mild Weather Boiler Temperature.
   - Both values are defined in the installation instructions in section 8.D.3.
   - The default value of the Mild Weather Boiler Temperature has been changed.

	Minimum	Default	Maximum
Boiler Design Temperature Installer Menu – CH Settings – Screen #7	60°F	180°F	195°F
Mild Weather Boiler Temperature Installer Menu – CH Settings – Screen #8	35°F	120°F	160°F

PeerlessBoilers.com

PB HEAT, LLC
131 S. CHURCH STREET • BALLY, PA 19503

PF8205 R0 (9/12-1.5M)
Printed in U.S.A.