

90 MONOBLOCK BOILER

P/N# 240006247, Rev. 1.2 [11/06]

IMPORTANT

Failure to set up the unit in accordance with these instructions may void the warranty. This product can only be installed and set up with the use of a combustion analyzer. The information in this *Addendum Instruction* is to be used in place of that in the following *Installation Manuals*: 240004826D rev 1.3, 240004826U rev 1.3, 240004826BF rev 1.3, 240004826B rev 1.3.

ADJUSTMENTS AND CHECKOUT

ADDENDUM

It is important that this appliance operate between 8.5 and 10% CO₂ (5.5 and 2% O₂). To verify that the appliance is operating in this range, follow the steps below.

1. Check incoming gas pressure to the appliance using a pressure gauge with a resolution of 0.1" w.c. or better and a range from 0" to at least 14" w.c. Close the gas shut-off inside the boiler jacket. Locate the inlet pressure tap on the gas valve (see *Figure 15 in Section XI*). Open the inlet pressure tap screw ½ turn and connect the positive side of the pressure gauge to the inlet pressure tap. Open the gas shut-off. The gas pressure should read between 4" and 10" w.c. for natural gas and between 10" and 14" w.c. for propane gas.
2. Drill a hole in the plastic CPVC vent pipe or exhaust tee, just large enough to allow access for the sample probe of your combustion analyzer.
3. Turn the thermostat to the closed position so the appliance is activated.
4. Allow the appliance to run for approximately 5 minutes.

ADJUSTMENTS AND CHECKOUT

5. Insert the sample probe of your combustion analyzer into the hole you drilled in step 2 above, about halfway into the exhaust gas stream. Take a flue gas reading and observe the CO₂ value. Adjust the throttle screw until the CO₂ value is between 8.5 and 10% (5.5 and 2% O₂). Turning the throttle screw counterclockwise increases the rate and the CO₂ value (also decreases the O₂ value). Turning the throttle screw clockwise decreases the rate and the CO₂ value (also increases the O₂ value). Allow the appliance to stabilize for approximately 1 minute after adjusting the throttle screw before you take a reading with your combustion analyzer.
6. After adjustments are made stop the appliance, disconnect the pressure gauge, tighten the inlet pressure tap on the gas valve, remove the combustion analyzer from the CPVC pipe, and seal the hole with an appropriate material.
7. Return the thermostat switch to its original position.

FINAL CHECKOUT OF THE INSTALLATION

After any adjustment to the appliance, observe several complete cycles to ensure that all components function correctly.

ATTENTION: VENTING REQUIREMENTS

The first 5 feet of exhaust air vent pipe must be 2" CPVC, which is supplied by the factory. All field installed venting must be 3" PVC. The combustion air vent pipe length is counted from the jacket of the boiler. The exhaust air vent pipe is counted from the CPVC tee supplied with the boiler. The CPVC tee is not counted toward the overall length of the vent pipe.

Minimum Venting Length: 6 ft

Maximum Venting Length: 60 ft

Note: Every 3" 90 degree elbow is equivalent to 5 ft of vent pipe.

Ex: 15 ft of straight pipe plus 3 elbows

15 ft + (3 * 5 equivalent ft)


15 ft + 15 ft = 30 equivalent ft total

ATTENTION: VENTING REQUIREMENTS

When vent pipe is exposed to temperatures below freezing, such as when it passes through an unheated space or when a chimney is used as a chase way, vent pipe must be insulated with 1/2" Armaflex or equivalent. In extremely cold climate areas, use 3/4" Armaflex or equivalent.

GAS TRAIN SCREW TORQUE SPECIFICATIONS

All screws located on the fuel/fuel-air mixing components must have a torque value of 53 in-lb (6 N.m) to ensure an adequate seal between components. Failure to maintain an adequate seal could result in a dangerous condition.

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