



Asnuntuck Community College  
170 Elm Street  
Enfield, CT

On Wednesday, May 4<sup>th</sup>, 2023, Shaffer Beacon Mechanical performed a pressure test on three vessels within the 2017 Viessman boiler Serial # 7769874700014101, Model # CA35.0

Starting from the front of the boiler at the control panel the vessels are labeled as #1 at the control, #2 in the center, and #3 at the rear.

We started by removing the water/ glycol mix from each of the vessels. We added a block off plate at the 4-bolt flange of the boiler supply at each vessel.

We then bypassed the Belimo isolation valve actuator at each 4-bolt flange for each vessel on the boiler water return by manually rotating the handle to the closed position.

We then attached a pressure gauge, boiler drain, ball valve, and pneumatic access fitting to each of the vessels drain locations.

We started by filling each of the vessels with 10 psig of air pressure to test each of the connections of the vessel that attach to or penetrate the outer wall of the vessel.

These penetrations include flanges, plugs, studs for support bracket connection, and sensor wells. These were tested with leak detection fluid (soap). These penetrations were not leaking so we added pressure to 20 psig.

We found that the center section, although all connections external to the vessel were tested and not leaking, the #2 vessel continued to drop in pressure during the 10 psig test point and the 20 psig test point. Both tests were approximately 1 hour at each pressure. The #2 vessel dropped to zero prior to the 1-hour test.

The center, #2 vessel had a small amount of the water/glycol mix at the base of the vessel on the left side of the unit. This water/glycol mix appeared at the connection of the vessel to the combustion air duct at the bottom of the vessels.

Conclusion: The testing shows that the leak is within center vessel, #2.

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