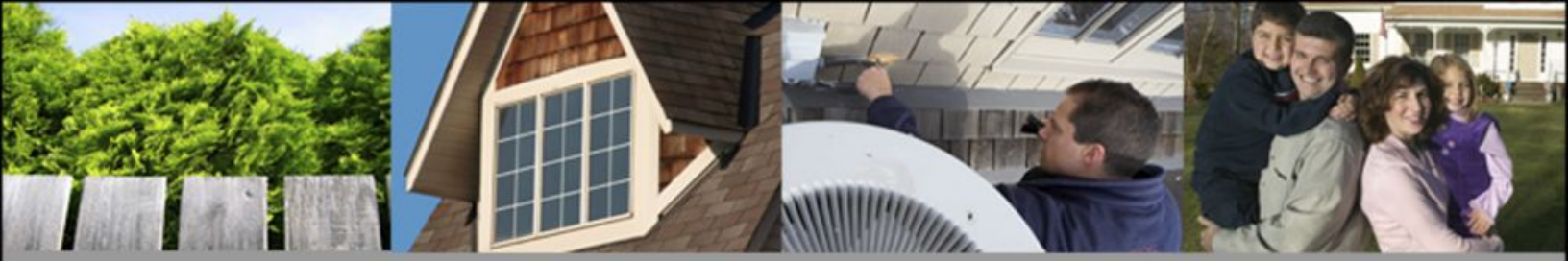

Your Inspection Report

187 Panorama Dr.
Oakbrook, IL

PREPARED FOR:
PETER SAMUELS

INSPECTION DATE:
Sunday, December 13, 2009

PREPARED BY:
Alan Carson

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HEATING

187 Panorama Dr., Oakbrook, IL December 13, 2009

HEATING

Note: For the purpose of this report the building is considered to be facing **North**.

Descriptions

Main Heating System - Fuel/Energy Source: • Natural gas

Main Heating System - Type:
• Boiler (4.0)
Galaxy Slant Fin - manufactured in 1995. Installed Oct 1996.

Chimney Liner (7.0): • Metal

Efficiency (8.0): • Mid-efficiency

Approximate Input Capacity (9.0): • 350,000 BTU/hr.

Approximate Output Capacity: • 280,000 BTU/hr.

Approximate Age: • 13 years

Typical Life Expectancy : • Boiler (cast iron) - 25 to 50 years

Observations and Recommendations

BOILER \ 13.0

Condition: • Observations: the house temperature had dropped to 61° on the morning of Friday, December 11. I visited the property on the evening of Friday, December 11 and noted the boiler to be short cycling on high-temperature limit (set at 170°). I closed a valve on the bypass loop and the boiler ON cycle lengthened from 1 to 2 minutes to approximately 3 to 4 minutes. It was still turning off on high-temperature limit, rather than thermostat satisfaction.

The one-inch system bypass loop was very hot. It is possible that the boiler is cycling on high-temperature limit because too much of the hot supply water is being redirected to the input side of the boiler.

There is a manual valve on the bypass loop. The operation of this valve is suspect.

There is a thermostatically controlled bypass valve on the loop as well. Its installation and operation is suspect.

The vent connector slope is marginal. Solutions include moving the boiler closer to the chimney and replacing the expansion tank so that the connection to the chimney could be raised.

The flame rollout switch and spillage switch at the vent connector appeared to be in good order.

The automatic vent damper appeared to operate properly.

The boiler location (close to wall) and orientation is unfortunate in that it is very difficult to read the temperature and pressure gauge.

Priority Consideration:

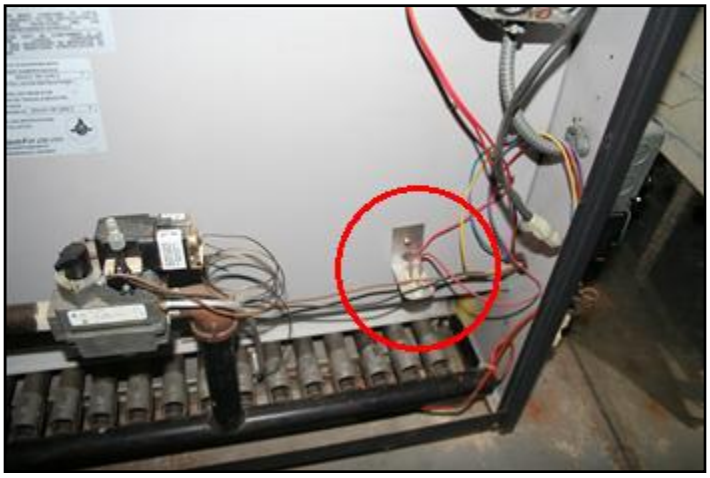
Further evaluate and improve the system bypass loop as needed.

Discretionary Considerations:

Move the boiler closer to the chimney to improve the slope of the vent connector and improve the access to the temperature and pressure gauge.

Replace the expansion tank with a diaphragm type tank.

Relocate the circulating pump to pump away from the boiler.



1. *Flame rollout switch*

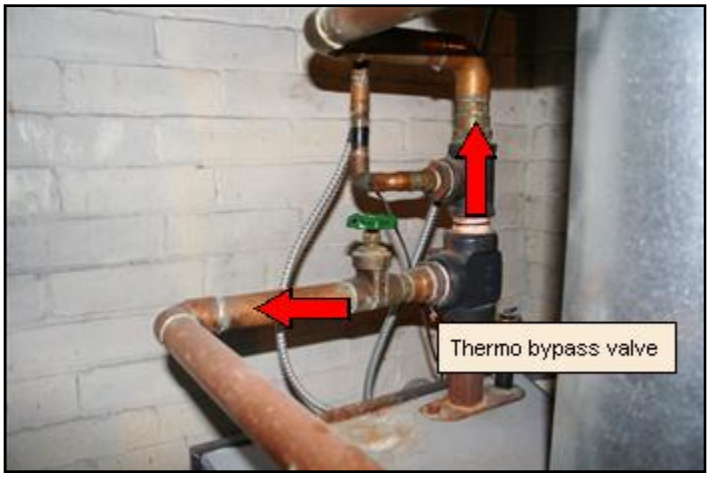
2. *Thermostatic bypass valve*

3. *Draft spillage switch*

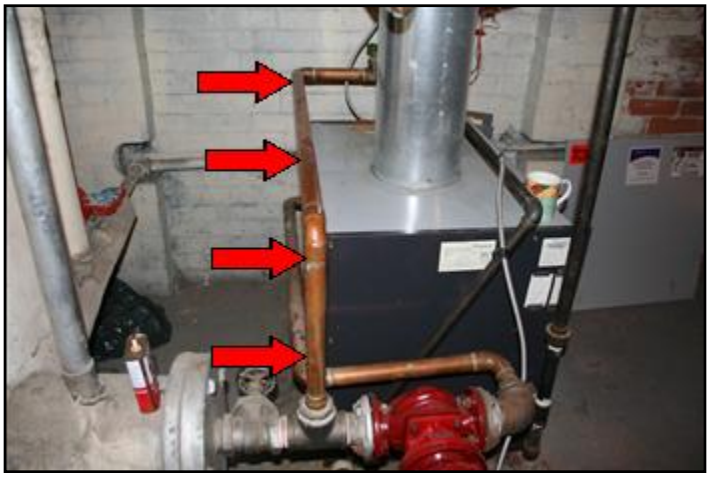
4. *Front of burners*

5. *Draft spillage switch*

6. *Thermostatic bypass valve*



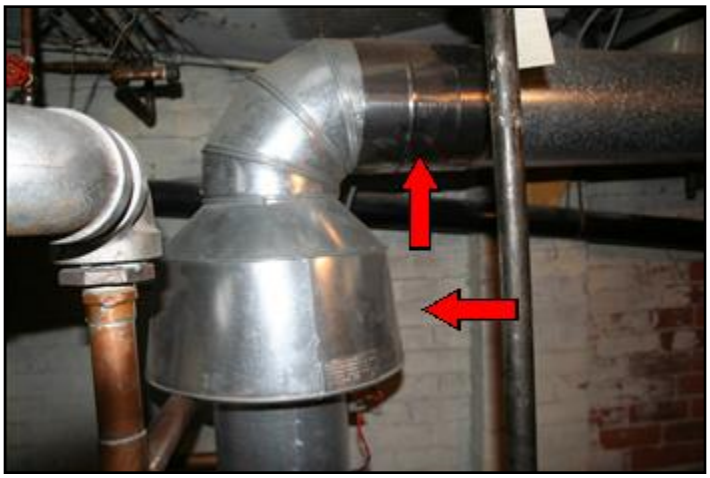
7. *Red arrows show flow direction*



8. *Bypass loop*

9. *Suspect manual valve on bypass loop*

10. *Bypass loop upstream of pump*



11. *Draft hood - auto vent damper is above*

12. *Marginal vent connector slope*

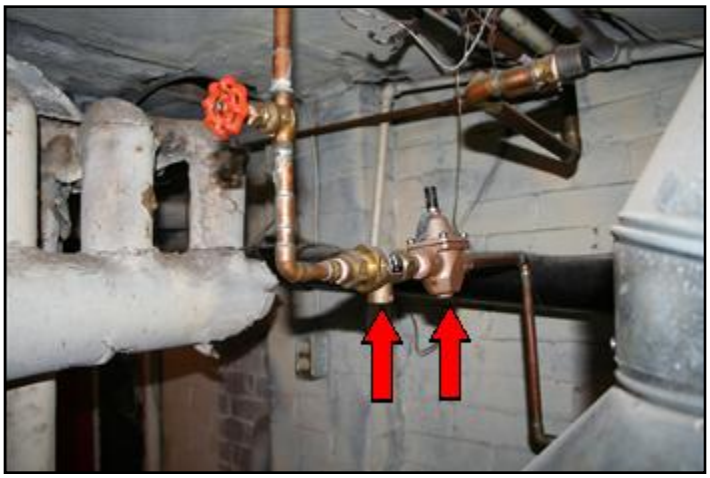
13. *Marginal vent connector slope*

14. *Pump control and high limit switch*

15. *Thermostatic bypass valve*

16. *Thermostatic bypass valve*

17. *Circulator on return side*



18. *Backflow preventer and water make-up*

END OF REPORT