

Regal Home Inspections, LLC

Find of the Week 2/23/2019

This week's find of the week is a recipe for death. I recall hearing on the radio this week about someone dying of carbon monoxide poisoning. Carbon monoxide is a colorless, odorless gas that is a byproduct of combustion. Regardless if it's your car's combustion engine, a water heater, furnace or kerosene heater, they all exhaust carbon monoxide. This week's find of the week was a very poor exhaust from a water heater. Natural gas water heaters burn natural gas to create heat. That natural gas, when burned, creates carbon monoxide. It must be properly vented (exhausted) to the exterior.

In this case, there was a large gap in the exhaust. That's problem #1. Problem #2 was that the vent pipe was pitched DOWN! Hot air, and exhaust, rises. It does not go down. By design, the exhaust flue must be sloped upward. Doesn't everyone know that? Doesn't everyone know that hot air rises? That's a fact of life. If you have an exhaust flue that's pitched down, the warm air will not travel down. Remembering an old TV favorite, "Hill Street Blues", there was an episode where a character said (in regard to a cow on a high floor in an apartment), "The cow don't have any down genes" meaning the cow doesn't know how to walk down steps. Hot air, don't have any down genes either. It only goes UP. So the exhaust has to be designed to work in a way that accommodates the genes of the hot air/exhaust.

Anyway, the problem was identified. It was classified as a material defect in accordance with NJ home inspection standards of practice. To the definition of a, "Material defect", this effected the "safety" of the occupants.



Figure 1 - There's a large gap where exhaust will leak into the living space.



*Figure 2- The horizontal flue seen in this photo is pitched down. It's lower on the right than it is on the left.*