

Within NSPIRE, heating is a system consisting of a heat source and method of distribution designed to heat the surrounding air and area. This job aid reviews the proper NSPIRE inspection flow for the different types of heating systems inspectors encounter, which may be fuel-burning (gas, oil, or kerosene) or electric.

To properly inspect heating systems, first determine if it is electric or fuel-burning by looking for an exhaust pipe (such as a flue) and/or a gas shutoff valve.



If **NOT PRESENT**, the system is **ELECTRIC**.

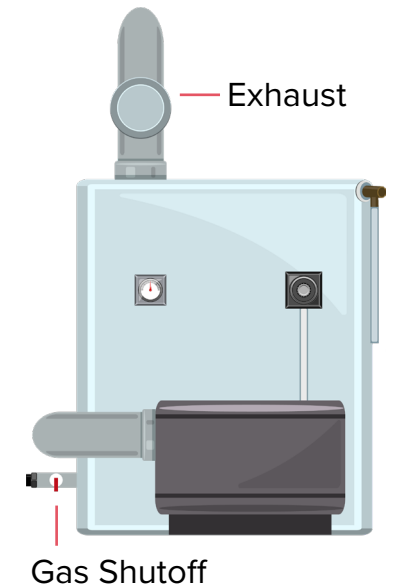
- Ask the owner or participant to turn on the system, if not already running.
- Using a portable ambient temperature gauge, measure the interior air temperature 3 feet above the floor and 2 feet from an exterior wall.



If **PRESENT**, the system is **FUEL-BURNING**.

- Look and smell for fuel leaks.
- Locate fuel lines around the system and verify they are securely attached (i.e., not on the floor or ground).
- Examine the exhaust pipe and other vents and determine if they are misaligned, blocked, disconnected, improperly connected, damaged, or missing.
- Ensure the combustion cover and gas shutoff valve are in place and not damaged.
- Verify carbon monoxide alarms are installed where required, according to the NSPIRE standards.

If the system uses water or steam, ensure there is a pressure relief valve and that water is not present on the floor (leak). Also, examine the system's wiring, such as an electric ignition system, and ensure wires or conductors are properly insulated and not exposed or sitting in water. Finally, ensure there are no flammable or combustible items located near the system or sharp edges due to broken elements.



Fuel-Burning Boiler

Heating systems vary greatly by building type, as demonstrated below. Regardless of the type, inspect the system according to the NSPIRE standards, ensuring it works as designed, the interior temperature is appropriate (dependent on the time of year), and that all other requirements are met, including carbon monoxide alarms, as applicable. Be familiar with the most recent NSPIRE standards, and immediately record any observed deficiencies.



Multi-Family

Low-, mid-, or high-rise building with more than 2 residential units

Fossil-Fuel System Types

Forced Air	In-Floor Radiant
Boiler	Baseboard Heater
Heat Pump	Vented Fuel-Fired
Hybrid Heating	Space Heater
Gravity Air	

Electric System Types

Forced Air	In-Floor Radiant
Boiler	In-Ceiling Radiant
Heat Pump	Resistance Heater
Gravity Air	Baseboard Heater
Vented Space Heater	

Other System Types

Active Solar Heating



Duplex

Structure containing 2 separate units surrounded by permanent open spaces

Fossil-Fuel System Types

Forced Air	In-Floor Radiant
Small Boiler	Baseboard Heater
Heat Pump	Vented Fuel-Fired
Hybrid Heating	Space Heater
Fireplace	Gravity Forced Air

Electric System Types

Forced Air	In-Floor Radiant
Small Boiler	In-Ceiling Radiant
Heat Pump	Resistance Heater
Fireplace	Baseboard Heater
Vented Space Heater	

Other System Types

Active Solar Heating



Single-Family

Single living unit and surrounded by permanent open spaces

Fossil-Fuel System Types

Forced Air	In-Floor Radiant
Small Boiler	Baseboard Heater
Heat Pump	Vented Fuel-Fired
Hybrid Heating	Space Heater
Fireplace	Gravity Forced Air

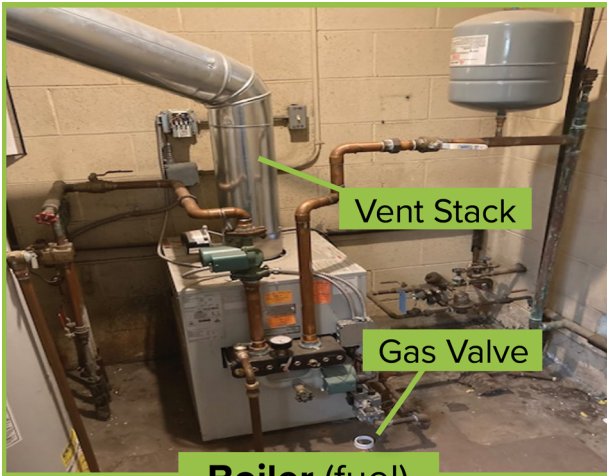
Electric System Types

Forced Air	In-Floor Radiant
Small Boiler	In-Ceiling Radiant
Heat Pump	Resistance Heater
Fireplace	
Vented Space Heater	

Other System Types

Active Solar Heating

On this page, view different electric and fuel-burning heating systems.



Boiler (fuel)



Boiler (electric)



Boiler (fuel)



Baseboard Heater (electric*)



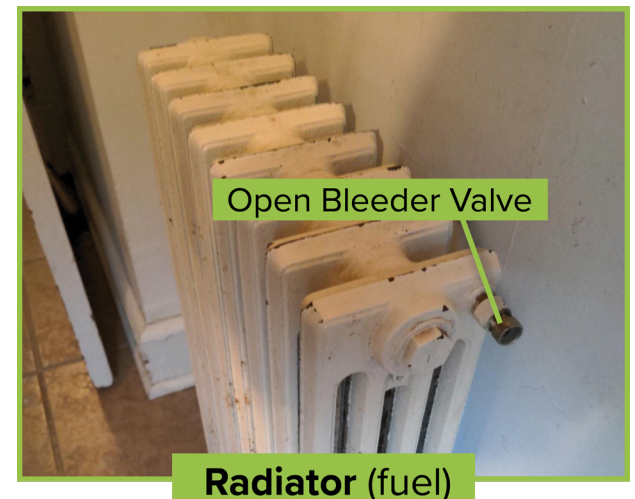
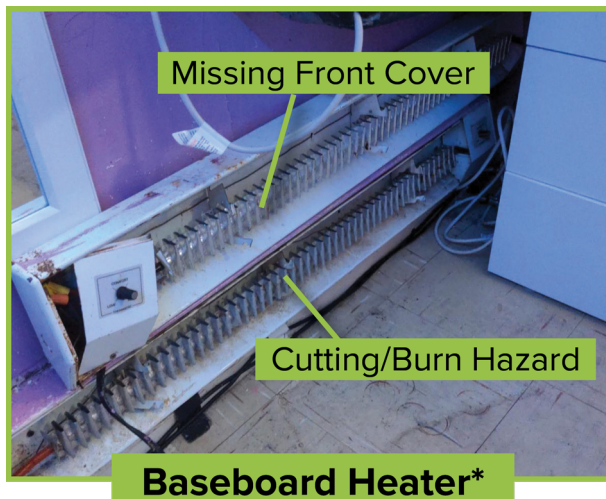
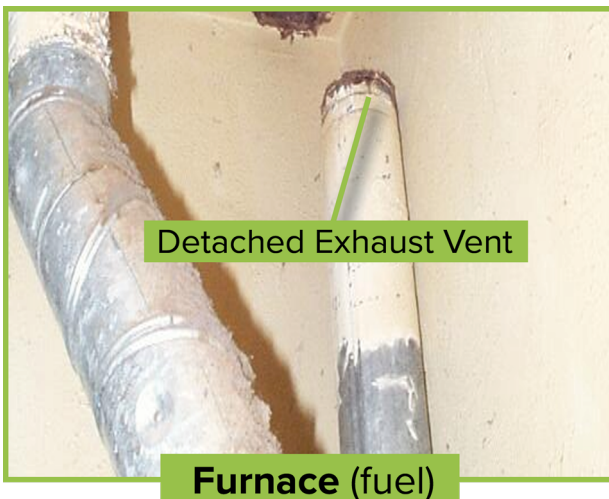
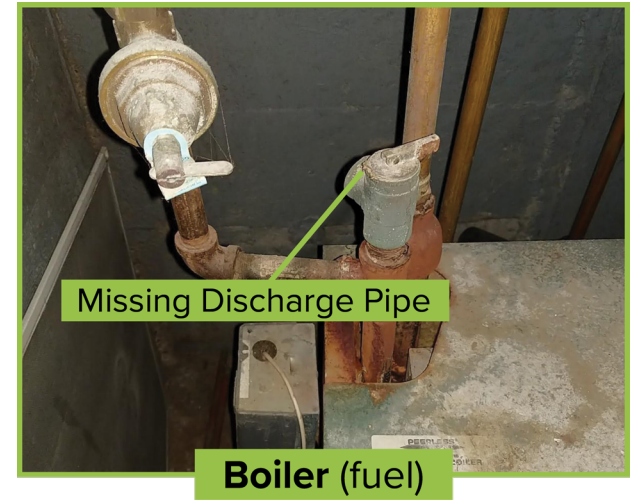
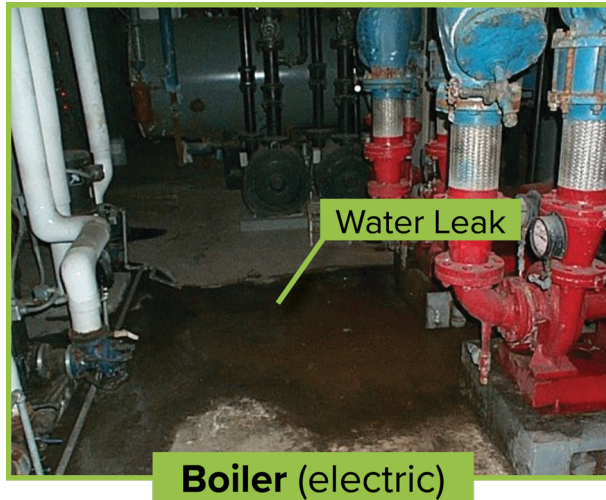
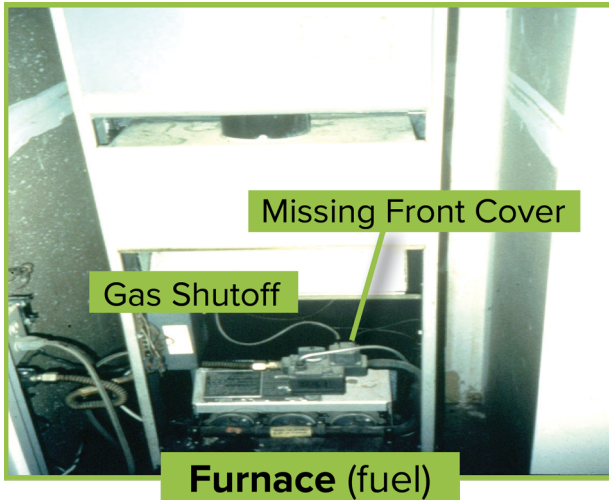
Radiator (fuel*)



Furnace (electric)

*Radiators and baseboard heaters are heated through steam or hot water from either fuel or electric heating sources.

On this page, view deficiencies within various heating systems.



*This baseboard heater is part of a hot-water system driven most commonly by gas boilers.