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Fall Maintenance Important for Heating Equipment Safety

Before the heating season starts, it is important to have heating systems inspected and serviced.

Trained professionals can inspect the system for safety, operating efficiency, combustion and combustion gases, venting, electrical wiring and more depending on the type of heating system.

The system should be inspected to be sure it is appropriately sized and installed according to manufacturer's directions, the characteristics of the home and its systems.

In addition, if the home has a central heating or cooling system that uses a duct system, the ducts carry the conditioned air from the home's furnace or cooling unit to each room. The ducts should also be inspected.

Many heating and cooling air duct systems are not properly sealed or insulated and lose a lot of energy from leakage and poor insulation. Leaks at seams and joints mean the conditioned air is going someplace other than where it should be. Ducts that leak heated or cooled air into unconditioned spaces such as crawlspaces or attics and unused and unfinished basements can add hundreds of dollars a year to heating and cooling bills.

Ducts are made of sheet metal, fiberglass or other materials. Ducts made out of thin metal materials easily conduct heat. The home's duct system, a branching network of tubes in the walls, floors and ceilings, carries the air from the home's furnace and central air conditioner to each room.

Uninsulated or poorly insulated ducts in unconditioned spaces can lose 10 to 30 percent of the energy used to heat and cool the home through conduction, according to the U.S. Department of Energy.

The heating equipment then has to make up for the heat loss by conditioning more air using even

more energy. When the ducts lose heat through conduction, rooms served by long duct runs or further way from the heat source can experience “cold air or cold blow” during the winter because they may have lower heating-supply temperatures.

A qualified professional can help to insulate and repair ducts. Although minor duct repairs are easy to accomplish, ducts in difficult to reach areas should be sealed and insulated by qualified professionals using appropriate sealing materials. Some heating and cooling and weatherization professionals conduct duct testing to determine the extent of leaks in the duct system.

To tell if the system is leaking, look for separated duct sections, leaks at seams and obvious holes. Inspect the ducts from the heating unit or furnace through to each end of the duct run. Use duct mastic or foil-based tape with the Underwriters Laboratories logo to repair these duct leaks. Mastic is a paste that can be brushed onto the seams. These materials may be available at hardware and home stores, lumberyards or heating and cooling equipment and service businesses.

Regular duct tape can degrade, crack and lose its bond with age and with the stress of the heating and cooling cycles and is not recommended.

Avoid cloth-backed, rubber adhesive duct tape, which tends to fail quickly. Researchers recommend other products to seal ducts: mastic for duct seams, butyl tape, foil tape or other heat-approved tapes.

For information on saving energy in the home, visit the U.S. Department of Energy site at <http://www.energysavers.gov/> or visit the UNL Extension Publications Web site at <http://extension.unl.edu/publications> and search for energy.