



Steps in the Home Energy Series

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Gas appliances

Many Missouri homes have furnaces, water heaters, clothes dryers and cook ranges or ovens fueled by propane or natural gas. Although these appliances are safe, consumers must take certain precautionary steps to ensure they remain that way:

- Operate appliances how they were designed and intended to be used (do not alter equipment).
- Keep appliances clean.
- Do not use appliances as a source of home heating.
- Never use unvented gas or kerosene heaters.
- Routinely inspect and conduct preventive maintenance.

These simple items are generally overlooked by consumers and can create potentially dangerous situations such as:

- Incomplete gas combustion, which also wastes energy.
- Spillage of combustion gas byproducts into the home (i.e., carbon monoxide, nitrogen dioxide, sulfur dioxide and respirable particles).
- Backdrafting harmful exhaust gases down the chimney and into the home.

A trained technician can check these items for safety.

Guidelines for using combustion appliances

- Properly operate appliances.
- Never alter a combustion appliance, its exhaust flue or gas piping from its original installation.
- If a combustion appliance and connections must be relocated or replaced, seek the services of the gas fuel provider or a professional technician.
- Never block fresh-air intake vents.
- Never enclose a combustion appliance without ensuring adequate combustion air is available.
- Never use a gas range or oven as a heater.
- When a naturally vented gas appliance, such as a water heater or furnace, is operating, do not run a powered exhaust fan, such as a countertop down-draft exhaust fan, in the same room — this may result in exhaust gas backdrafting.

Inspection and preventive maintenance

Inspect gas appliances for:

- Blocked or clogged chimney opening.
- Blocked crawl space where fresh air is supplied for the gas appliance.
- Leaks and obstructions in furnace supply and return duct work.
- Cracked or separating exhaust flues.
- Corroded or disconnected vent pipe.
- Dirty filters.
- Pilot light failures.
- Odors of exhaust gas or burning.
- Malfunctioning kitchen range or cooktop vent.
- Irregular or abnormally short or long cycling of the furnace.

Technician maintenance checklist

- Test all combustion appliances for carbon monoxide.
- Check for gas leaks.
- Check fresh-air supply for all combustion appliances.
- Ensure proper exhaust draft to prevent backdrafting.
- Examine heat exchanger.
- Clean blower.
- Examine flue and vent systems.
- Check for proper operation of fan and limit switches.

Keep appliances clean

A dirty furnace filter, clogged oven and range gas orifices, restricted duct work and clogged dryer air intake vents can all affect the performance of gas appliances. Every effort should be made to keep combustion appliances clear of lint, dust, oil and grease.

Gas and kerosene heaters

Unvented combustion heating systems should never be used indoors without proper outside fresh air and exhaust systems. Infiltration reduction measures (caulking,

weatherstripping, etc.) should not be installed if any unvented combustion heater is present in the home. Although unvented heaters are approved for use in some situations, they must be equipped with an oxygen depletion sensor and they must never be used as the primary source of heat nor may they be used in a bedroom.

Carbon monoxide

Among the most serious results of combustion is the production of carbon monoxide, an odorless, colorless and deadly gas. Install a carbon monoxide detector near sleeping areas. These devices may be available at a building supply or hardware store.

Air-tightening precaution

Air-tightening measures, such as caulking and weatherstripping, should never be done without first correcting problems associated with combustion appliances.

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