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Dryer Fire Investigations

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The function of gas or electric dryers is to heat air that is then blown through a rotating drum. The heated air absorbs moisture, drying the wet items in the drum. What do you do if a dryer is suspected of causing a fire? What do you look for? Do you know what components are in a dryer? This article will contribute to your basic knowledge of dryers and what to look for during an investigation.

The major components of a dryer are a timer motor that operates a timer, a motor that operates both the dryer drum and a small fan, a number of contacts, and the heat source, whether gas or electric. There may be between two and six thermostats or high limit controls in the dryer. Excluding the heat source for an electric dryer, these components all function on a 110-volt power supply. A 220-volt power supply powers the heating element of an electric dryer.

Dryer fires start for a variety of reasons. Sometimes it can be as simple as heat igniting combustible materials inside the dryer drum (most commonly lint or vegetable oil soaked rags). More complicated factors include failure of the power cords, gas leaks in the system, or failure of the thermostats or high limit controls allowing the dryer to overheat.

The examination of a dryer begins with how it is installed. Examination or reconstruction of the dryer vent system should be undertaken. Examine, document, and identify the electrical power supply, the outlet, the gas piping system, and gas pressure.

Heat patterns on the exterior may prompt closer examination of the dryer drum, electrical controls, or the motor. The venting door, electrical power supply, or gas connections at the rear of the unit should also be scrutinized. The control panel should be examined, but preserved for further laboratory testing.

Evidence of burning on the top of the dryer or external heat or flame patterns should be examined. Identify any materials inside the dryer drum to determine if they are consumed, burned, smoked, or unburned. Is there more damage to the bottom of the drum or the top?

When examining the interior of the dryer cabinet consider what material(s) can fuel a fire. Where is the greatest degree of fire damage? Are there areas of lint build-up? Components removed or missing? Inspect the terminals at electrical connections and preserve the high limit and thermostat controls for possible further testing. If the dryer is powered by gas, determine the type of gas burner.

Interview statements with the dryer user can help determine if a machine has poor or improper maintenance, prior mechanical or electrical problems, the age of the unit, how the machine operates, and any additional information that could determine the cause of the fire.

Information and excerpts taken from Fire Findings Laboratories, LLC - Jack L. Sanderson, "Residential Clothes Dryers"



Merry Christmas and Happy New Year
from
All of Us at Phoenix!

Robert

Valerie

Connie

Holly

S

Lem

Prayer

Robert



Don Tom

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