

POWERCHECK ELECTRICAL SAFETY SERVICES

Major risk factor for electrical fire hazard is the age of home

Until quite recently homes would be rated as “high risk” when insurers – most of them, at least – had indication that knob-and-tube wiring, the early standardized method of wiring before 1950, was present.

Knob-and-tube consists of single-insulated copper conductors run within wall or ceiling cavities, passing through joist and stud drill-holes via protective porcelain insulator tubes and supported along their length on nailed-down porcelain knob insulators.

According to Brian Cook, a master electrician and president of Vancouver-based PowerCheck Electrical Safety Services, which consists of 32 master electricians throughout Western Canada specializing in old-home electrical risk identification, knob-and-tube does have electrical fire hazard concerns. However, the most common problem with it is usually not the knob-and-tube wiring itself, but lack of grounding.

“If the wiring is sound,” says Cook, “modern GFCI receptacles can be provided to these circuits, inexpensively providing the necessary ground protection without rewiring. The cost to *replace* knob-and-tube wiring is typically about \$10,000 per floor, whereas the cost of

providing GFCI protection to knob-and-tube wiring in a house is typically less than \$500. We find that replacing knob-and-tube is rarely required to make a house safe.”

In the past, insurers would also rate homes with a 60-amp service or with aluminum wiring as “high risk.” Homes built prior to the 1970s often still have a 60-amp service. Aluminum wiring was used in most houses constructed between 1966 and 1974.

“With an examination by PowerCheck, 60-amp services often do not need to be replaced. If replacement is required, the cost for a service upgrade from 60 to 100 amps is about \$3,500.”

Cook emphasizes that homes built before 1975 are usually found to have serious electrical fire hazards.

“We find that the age of a home is a better indicator of risk than knob-and-tube wiring. Older homes typically have a higher degree of handyman tinkering, which means a higher chance of electrical fire hazards being present. The concern with knob-and-tube wiring as the criteria for high risk is that it is seldom recognized as present by the homeowner, though it is nearly always there if the house was built pre-1950. A service upgrade or panel replacement does not replace knob-and-tube wiring.”

Commonly found hazards include lack of or incorrect grounding of branch circuits; oversized circuit breakers; un-

dersized electrical conductors; hazardous electrical connections; and electrical devices installed without boxes behind the devices, voiding protection from sparks.

“Once the fire hazards are correctly identified, the required repairs to bring homes to lower-risk ratings are usually *not* expensive,” says Cook. “In the vast majority of the homes we have examined, the repair cost to eliminate the electrical fire hazards is usually a day or less with an electrical contractor – typically less than \$1,000.”

PowerCheck is an impartial participant: it identifies the electrical problem areas in a home; it does *not* do the repairs. This standard is to provide customer confidence that the electrical examination is strictly to point out electrical fire hazards that may be present in the home.

“Today,” says Cook, “most of the leading insurers will accept the PowerCheck Electrical Safety Report as a method of determining the electrical risk of a home. Once a house reaches our low-risk rating, electrical impediments for the purchase of home insurance from most major companies will be removed. Several insurance companies have established special programs to encourage homeowners to undertake a PowerCheck examination.”

PowerCheck can be reached at 604-684-3630 or 1-800-517-3630. Its e-mail address is info@powercheck.ca and the website is www.powercheck.ca. **IW**



Cook

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