

Heads Up



BACKGROUND

Kitchen appliance garages have been a popular addition to household kitchens allowing electrical appliances such as toasters, cake mixers, kettles, electric can openers and other items to be easily accessible for instant use then pushed back into the cupboard space and the roller door lowered to present a tidy kitchen.

The appliance garages are usually fitted with a number of electric sockets or electrical multi-boards to allow for multiple appliances to be left plugged into the power supply for ready use.



THE HAZARD

A significant fire danger exists when the roller doors are lowered as they can catch the carriage lever (off/on switch) of toasters. The roller door depresses the lever activating the toaster and holds it in the "on" position preventing it from "popping up" as the temperature increases. Intense heat quickly builds up in the cupboard space leading to ignition of the cupboard and nearby combustibles. Frequently occupants have closed the cupboard and left the house thinking all was well, however with the door closed the initial fire may go unnoticed even when occupants are in the house.



Right: A toaster with it's on/off lever trapped by the door of an kitchen appliance garage.

INCIDENT DETAILS

Case study #1

A woman returned home to find her kitchen burnt out and thick smoke throughout her house. Earlier in the day she had tidied her kitchen and lowered the roller door of the kitchen appliance garage. The door had caught the toaster lever activating the toaster which led to the fire. The fire caused significant damage in the kitchen before burning through a water pipe that suppressed the fire preventing the flames from spreading until the fire service arrived. Smoke damage was extensive.



Right: The "Smoking Gun" The remains of the roller door is visible still resting on the toaster switch.

Case Study #2

A home owner lost most of her home after an accidentally activated toaster set fire to her house. The woman had tidied her kitchen pulling down the roller door of the kitchen appliance garage before leaving her home. She was later rung by a neighbour telling her that her house was ablaze. The Fire Service arrived within 6 minutes of being called but found the house to be well involved in fire and was unable to prevent the significant fire damage to the house. Almost all contents in the house were damaged by heat or smoke.



Right: the charred remains of the kitchen appliance garage is indicated by the arrow.

Case Study #3



Left: Another kitchen appliance garage fire was fortunately extinguished early by the occupant before too much damage occurred.

Right: A photo of an identical kitchen appliance garage from the neighbouring apartment showing the door completely shut.



LESSONS LEARNED/RECOMMENDATIONS

The simplest design method to prevent these fires is to ensure the power supply is turned off to each appliance before shutting the door.

This can be achieved by either:

- manufacturers or installers fitting a simple switch to the roller door that isolates the power supply to the cupboard's electrical sockets and appliances when the door is pulled forward to be closed.
- home occupants turning off the power sockets at the wall or multi box (switches may be difficult to reach if located at the rear of the appliance garage).

Encouraging behavioural change by positioning toasters and electric jugs side-on when putting them away will help but is a less reliable solution.

All households should ensure smoke alarms are fitted and are working to provide early warning of fire if the house is occupied at the time of the fire. The New Zealand Fire Service recommends 10 year photoelectric smoke alarms.

INFORMATION SOURCE

New Zealand Fire Service fire investigation reports F1102851 and F1105072



For more information, or to contribute to 'Heads Up'
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