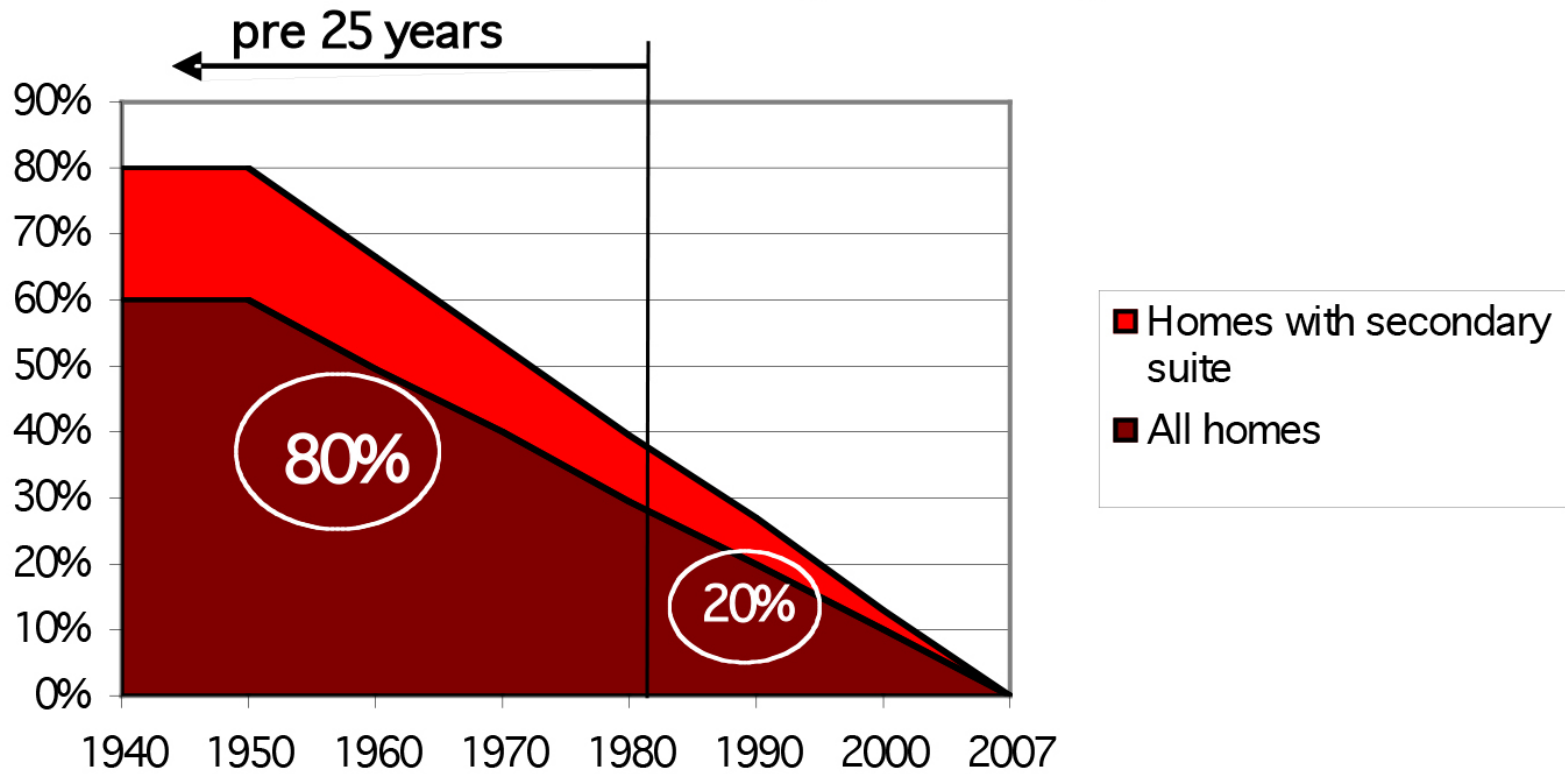


ELECTRICAL FIRE RISKS IN OLDER HOMES

Houses built 1960 to 1975



Homes with dangerous wiring



Key causes of electrical fires in houses built 1960 to 1975

- Lack of maintenance/deterioration
- DIY Work
- Occupant actions



Lack of Maintenance

1960s house
Debris build up in switch
box: Super common

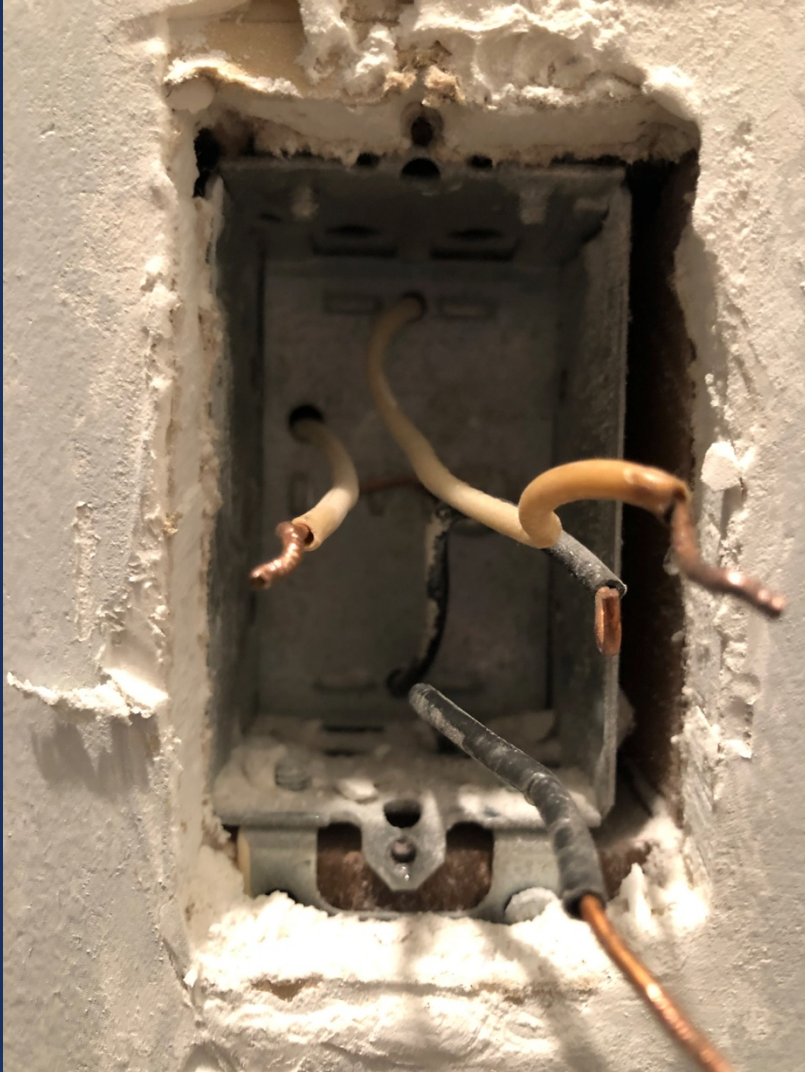
If there is a spark the debris
will ignite.



DIY Work

Dryer installation:
Loose connections results
in insulation melting.

DIY work is most common
in basements and
garages in 1960s houses
due to lack of lights &
outlets installed at time of
house construction.



DIY Work

Varies house to house.

Here, the conductors are not protected by a cable jacket. Insulation deterioration will result in sparks.

DIY work is common in basement suites.

We find about 80% of suites have electrical fire hazards.



Receptacle deterioration

In nearly all houses pre 1975 many of the original receptacles are worn-out. In some cases the receptacles are absolutely burnt out, due to loose connections combined with high loading.



Aluminum wiring: 1965 to 1975

Aluminum conductors terminating directly on devices not rated for aluminum. The result is overheating, and melting of the insulation.

In nearly 100% of houses that we have seen, the original outlets and switches have been swapped for modern style, that are NOT rated for aluminum.



Pigtailling is a solution

However it **MUST** be done correctly with the correct wire connectors.

Standard wire connectors are **NOT** acceptable for aluminum pig tailing.

The correct wire connectors are #63 (for two wires) & #65 (for 3 wires).



ORANGE YELLOW BLUE BLACK
#30 series

For Copper only

Rated for 105°C

Internal spring: Steel



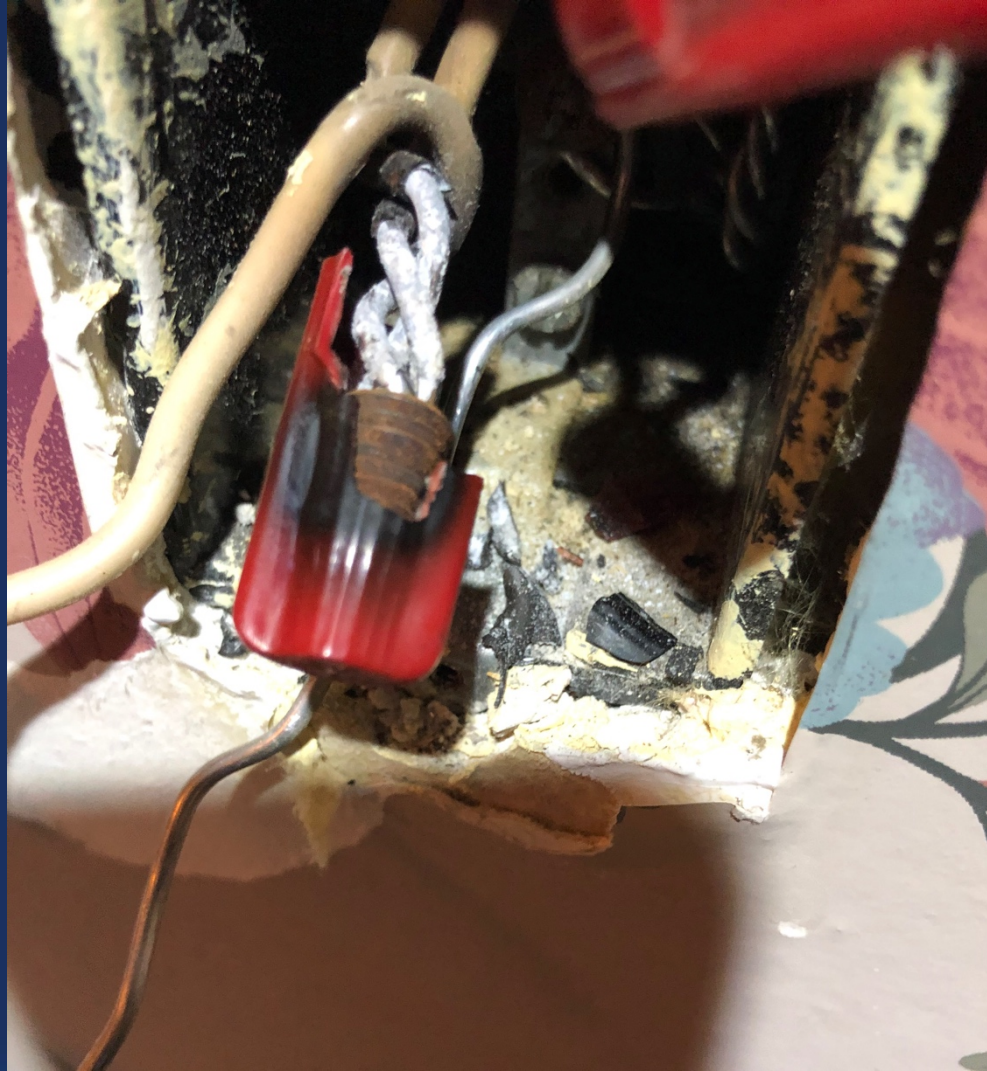
BROWN
#60 series

For Aluminum/Copper

Rated for 125°C

Internal spring: BRONZE

Source: Thomas & Betts, "Marette"





Voltage drop test

A fast and simple test to determine the quality of the connections and splices upstream on the circuit.



Voltage drop test

Excessive voltage drop indicates that there are loose connections or poor splices on the circuit.

SUMMARY

Key causes of electrical fires:

1. Lack of maintenance/ deterioration
2. DIY Work
3. Occupant actions

What is the main indicator for HIGH Risk homes?

Age of house

