

PowerCheck Electrical Safety Services

4064 West 20th Avenue
Vancouver
British Columbia
V6S 1G5
Canada

Tel: 604 684-3630
Email: info@powercheck.ca

Maintaining Electrical Safety in the Home

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There are a number of electrical safety areas beyond the scope of the electrical contractor, in the hands of the occupants. To ensure your home is electrically safe from accidental electrical fire, verify that the following items are regularly inspected and maintained.

1. Electrical equipment:

- a. Make sure all electrical equipment is CSA, or ULC approved
- b. Make sure all electrical equipment is maintained properly. When electrical equipment shows signs of being faulty and/or begins to overheat, have it checked and repaired immediately.

2. Lighting:

- a. A leading cause of electrical fire is using light bulbs of higher wattage than the fixture is designed for. Check that the wattage of all bulbs in light fixtures do not exceed the rated maximum wattage of the fixture. If unsure, check with lamp manufacturer. Older residential lamps, prior to the 1970s were rated for maximum of 60-watt bulbs. If higher illumination is required than the fixture is rated for, replace the bulb with a lower-wattage bulb or a compact fluorescent lamps (CFL). CFLs typically use ¼ the power for equivalent light output. Alternatively, have the fixture replaced.
- b. Make sure all bulbs are screwed in securely; loose bulbs may overheat, creating a potential for arcing and fire.

3. Extension cords:

- a. Extension cords should never be used for permanent wiring. The main reason people rely on extension cords is because they do not have enough wall outlets. If more outlets for permanent power are required do not rely on extension cords. Instead have a licensed electrical contractor install wall-mounted receptacles to meet the required demand.
- b. Undersized cords, 16-gauge or smaller, can overheat and cause a fire. These cords are designed for low-wattage applications only (e.g., 16 gauge cord: up to 7 amp max; 18 gauge up to 5 amp max). Use an extension cord sized sufficiently for the demand. They should periodically be inspected to make sure they are not warm, overheating, brittle or cracked.
- c. Extension cords must never be installed under rugs or covered. Excess cord should never be bundled or rolled up, as both of these actions causes overheating.
- d. For computer systems requiring multiple plugs, never use "octopus plugs" plugged into a receptacle, as these can overheat resulting in arcing and fire. Instead use a CSA approved Power Bar. CSA approved Power Bars may also contain surge protection and internal fusing to protect equipment and the service from excessive currents.

4. Smoke alarms

- a. All houses should have working smoke alarms, one on each floor, located outside the bedrooms.
- b. Ensure that batteries are replaced annually on all battery-operated smoke alarms. Set aside one day per year, e.g., the day the clocks go forward one hour, to replace batteries in all smoke alarms. If they are battery operated or hard-wired, check operation annually.
- c. Installation of hard-wired smoke alarms with interconnect between alarms is recommended, and now required by the Canadian Electrical Code for new homes. This feature alerts occupants on all floors, should one of the alarms go off.