Electrical Safety (3 Pages)

Be Safe to a Fault

One of the most important safety devices in your home could very well be a simple electrical device called a Ground Fault Circuit Interrupter (GFCI). They should be installed in all rooms where water is commonly used in your home, such as the kitchen, bathrooms and laundry room, as a protection against electrical shock.

GFCIs are designed to provide protection against electrical shock from ground faults, which occur when the electrical current in the appliance strays outside the path where it should normally flow. This "ground fault," or unintentional electric path between a source of current and a grounded surface, occurs when current is "leaking" somewhere -- in effect, electricity is escaping to the ground. If your body provides a path to the ground for this leakage, you could be burned, severely shocked or electrocuted.

GFCIs, however, are subject to wear and possible damage (as from a strong power surge during an electrical storm) and should be tested regularly. Once a month, in fact.

To test your GFCIs, follow this simple procedure:

- Push the "Reset" button of the GFCI receptacle to prepare the unit for testing.
- Plug in an ordinary night light into the GFCI and turn it on. The light should now be ON.
- Push the "Test" button of the GFCI. The night light should go OFF.
- Push the "Reset" button again. The night light should now go ON again.

The night light should always go out when the test button is pushed. If the light does not go out, then the GFCI either is not working or has been installed incorrectly. Contact a qualified electrician to check the GFCI and correct the problem.

Always Avoid Overload

The electrical systems in our homes are designed to carry electricity safely. During the cold, dark winter months we tend to place a higher demand on our electrical systems as we cook more, use more lights and, in some cases use electricity to heat our homes. The load is particularly heavy during the holidays as we add lights to our homes inside and out to decorate in the spirit of the season.

Overloading an electrical circuit causes more electricity to be drawn through the wires than they were designed to safely carry. This overload normally causes the fuse to blow or the circuit to be tripped cutting the power. However if for some reason, the circuit isn't cut, electricity continues to flow which overheats the wires and can cause a dangerous electrical fire.

Always respect the limitations and safety features of the electrical system in your home.

- Always use the proper size and type of fuse for the circuit and never overfuse or use a coin to create an uninterrupted supply.
- Don't try to plug too many lights together in a continuous string and run them off a single circuit.
- Don't use multi-outlet extension cords or "octopus" outlets in receptacles. Too many plugs at one spot can cause a short or an overload situation.

- If you blow a fuse or trip a circuit, find the cause of the overload and correct it before changing the fuse or resetting the breaker.
- Use space heaters sparingly. If you must, try to use one that doesn't draw the maximum power or has lower settings to reduce the load.

Don't Confuse Your Fuses

All fuses and circuit breakers serve the same purpose. They protect electrical wiring from overheating and catching fire. They do this by breaking the flow of electricity if too much power passes through the circuit. This occurs if too many appliances are on a single circuit or a single appliance draws too much power.

Next time a fuse blows or a circuit is tripped don't be angry, be thankful you were protected from a potentially dangerous electrical fire. Find the overload and correct it. Then change the fuse or reset the breaker.

Safety Tips for Changing Fuses

- Only change the fuses with a screw type base yourself. Cartridge-style fuses should only be changed by a qualified electrician.
- Only use fuses that carry the CSA mark.
- Always use a flashlight to change a fuse. Never use a candle.
- Before changing the fuse unplug all appliances on the overloaded circuit and turn off the main switch.
- Stand on a dry rug, rubber mat, heavy cardboard or other nonconductive surface. Never change a fuse while standing on a wet floor.
- Always use the proper size and type of fuse for a circuit.
- Never substitute a higher amp fuse or replace a fuse with a coin or other metal object. You may restore power but you will eliminate the protection a fuse is designed to provide.
- Screw the fuse tightly in place by hand. Check to ensure all other fuses are screwed tightly in place as well.
- Discard all fuses or circuit breakers that have been exposed to water.
- When resetting a breaker, push the handle all the way to OFF and then ON.

Easy on Extension Cords

When it comes to extension cords, never overuse them, always remember they are for temporary use and always keep them well maintained.

Safety Tips to Remember When Using Extension Cords

- Use only extension cords that carry the CSA mark to ensure the cord complies with Canadian safety standards.
- Check cords regularly and replace them if they are worn or damaged. Look for worn insulation, splices on the cord and loose or exposed plug parts.
- Use an extension cord as a temporary connection only.
- Make sure the extension cord is capable of carrying for the intended amperage. When stringing lights together the load adds up quickly.
- If the cord or plug becomes hot unplug it immediately. It may be overloaded so replace it with a suitable cord.
- Use a single cord that is the proper length rather than connecting cords together.

- Avoid using a cord that is too long because a coiled or tangled cord can overheat and is a tripping hazard.
- Never run a cord through a doorway as it could be pinched and damaged if the door is closed on it.
- Never run a cord under a rug or carpet because people walking over the rug may cause friction that could damage the cord and increase the risk of fire or shock.
- Never force a three-pronged plug into a two-pronged outlet or cord.
- Only use extension cords in dry locations.
- Outdoors, use only extension cords marked for outdoor use.
- Store extension cords indoors at temperatures above freezing.
- Always unplug an extension cord when it is not in use.
- Never unplug an extension cord by pulling on the cord. Always tug the plug.