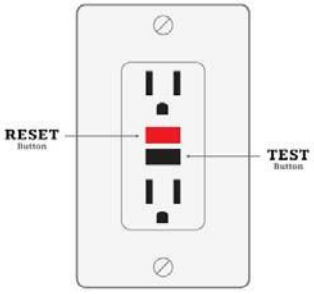
What's the Risk?

GERMANIA MUTUAL INSURANCE SINCE 1878
A helping hand when you need it most

Ground Fault Circuit Interrupter (GFCI)

Introduction



A ground fault circuit interrupter is an electrical safety device providing protection against hazardous electrical shocks due to ground faults from defective circuits and equipment. A GFCI can be installed at the point of use or as a protected circuit breaker in the electrical panel. A GFCI protected circuit is more sensitive to ground faults and acts faster than a circuit breaker or fuse to disconnect the flow of electricity.

GFCI's compare the amount of current going into electrical equipment with the amount of current returning from it through the conductors, and if the difference is greater than 5 milliamps the device automatically shuts off the power to the device. On sensing a ground fault, the GFCI interrupts the flow of electricity within as little as 1/40th of a second to prevent serious injury.

What's the Risk?

A ground fault occurs when electricity travels outside its intended path and goes to ground. If you come in contact with electricity while you are grounded (touching the ground or something resting on the ground, like a ladder), your body becomes electricity's path to ground. You could also become part of electricity's path to ground if you touch water that is in contact with electricity.

Dry skin has a high resistance to electrical current flow. The risk of serious electrical shock or electrocution increases when we come in contact with electricity while in a damp or wet environment or are covered in sweat. The body's resistance to current flow decreases dramatically, and any shock under "low resistance" conditions, could be fatal. The severity of an electrical shock depends on the amount of current flowing through the body, the path it takes and length of time the body remains as part of the circuit.

What can be done?

GFCI's are required by the National Electrical Code of Canada to be used in wet or damp locations throughout the home as they are more likely to protect you from a deadly shock. Some areas include, receptacles within 1.5 meters of a sink, outdoor receptacles, receptacles in bathrooms, and wiring associated with swimming pools and hot tubs.

GFCI's should be tested monthly to ensure proper operation of the GFCI. A qualified electrician should be consulted to repair or replace any defective electrical equipment.