



P.O. Box 129
Rensselaer, IN 47978
219-866-4601
Toll Free 888-866-7362
Fax 219-866-2199
www.jasperremc.com

ELECTRICAL SAFETY FACT SHEET

WHAT IS A GFCI?

One of the most important safety devices in your home is a simple electrical device called a **Ground Fault Circuit Interrupter (GFCI)**. It is estimated by experts that in the three decades since the more than 400 million of these devices have been installed in residences and other buildings, hundreds of lives have likely been saved and thousands of injuries probably prevented in the U.S. alone.

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.

If GFCIs were installed in every U.S. home, according to the Electrical Safety Foundation International, it is estimated that nearly 70 percent of the 330 electrocutions occurring each year in the home could be prevented.

GFCIs, however, are subject to wear and possible damage (as from a strong power surge during an electrical storm) and thus should be tested regularly by consumers -- 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 nightlight into the GFCI and turn it on. The light should now be ON.
- Push the "Test" button of the GFCI. The nightlight should go OFF.
- Push the "Reset" button again. The nightlight should now go ON again.

The nightlight 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. If the "Reset" button pops out during the test but the light does not go out, the GFCI has probably been improperly wired and does not offer shock protection, or it has been damaged. Immediately contact a qualified electrician to check the GFCI and correct the problem.

A recent survey sponsored by the Electrical Safety Foundation International (ESFI) found that about one-quarter of Americans don't understand the purpose of their GFCIs, nearly one-half of American families never test the GFCIs in their homes, and more than one-quarter did not know that GFCIs can help prevent electrocution. Even among those that said they routinely tested their GFCIs, none said that they tested their units as recommended - at least once a month.

GFCIs are generally installed where electrical circuits within appliances may inadvertently come into contact with water. They are most often found in kitchens, bath and laundry rooms, or even out-of-doors or in the garage where there might be heating radiators, water pipes or electric heaters.

In a normal 120-volt outlet in the United States, there are two vertical slots and then a round hole centered below them. The left slot, which is slightly larger than the right, is called "Neutral," while the smaller right hole is "Hot." The hole beneath is called "Ground." If an appliance is working properly, there will not be any imbalance in the amount of current flowing from Hot to Neutral. If there is an imbalance in the current - either through faulty wiring damaged cords, faulty or mishandled appliances or poorly insulated wires - the GFCI monitoring the current will detect the mismatch. The GFCI will "sense" the difference in the amount of electricity flowing into the circuit to that flowing out - even in amounts of current as small as 4 or 5 milliamps - and, if working properly, will react quickly to trip or break off the circuit or flow of electricity.

Among the estimated 400 million GFCIs installed nationwide since the 1970s, many are the standard wall or receptacle-type GFCIs. There is also the circuit breaker GFCI (which serves a dual purpose: shutting off electricity in case of a ground fault, and also tripping when a short circuit or electrical overload occurs). To test this type of GFCI, push the "test" button. This should cause the circuit-breaker to snap. Check an appliance or light on the circuit to see if it is truly "shut off." Then switch the circuit back on by flipping the toggle switch(s) on the circuit breaker GFCI. The power should now go back on.

In addition, a portable GFCI can be plugged into a normal outlet and then electrical products plugged into the GFCI. Portable GFCIs are not intended to replace the other two types, but can be used in situations where you must bring power from an unprotected outlet into a potentially hazardous situation.