



## **GFCI, This Device May Save Your Life**

**Every year approximately 300 deaths are caused, in or around the home, by electrocution. Approximately two-thirds of those deaths could be prevented by a properly installed Ground Fault Circuit Interrupter or GFCI. Just what is a GFCI? Where should GFCI's be installed? Moreover, how does a GFCI protect a person from electrocution?**

**A GFCI is different from the overcurrent protection devices, breakers or fuses, in our home electrical system. Breakers and Fuses are designed to protect the wiring system and the structure from possible damage and fire that might result from an electrical short. A GFCI, whether installed as an outlet, as a breaker in the electrical panel, or on an extension cord, is designed to save a life.**

**Enclosed within a GFCI is a tiny device that actually monitors the amount of current flowing from the panel to the device, and the amount of current that returns to the panel via the neutral wire. If even a small amount of current, six milliamps, leaks out through a fault to ground, the imbalance will trip a properly installed GFCI. If that current leaks to ground through a human body, the action of the GFCI is rapid enough to prevent electrocution in most cases.**

**Most of us can identify a GFCI as the outlet that contains a test button and an indicator light. However, a GFCI may also be installed in the electrical panel, or incorporated into an extension cord. Permanently installed GFCI's should be tested once a month for proper function, and GFCI's in extension cords should be tested before every use.**

**To test a GFCI, first determine that current is present in the protected outlet by plugging in a nightlight or lamp. Next, push the test button on the GFCI, and make sure that the nightlight or lamp goes out. Finally, push the reset button, and insure that current has been restored. If the GFCI fails to trip or interrupt the flow of current to the lamp, or if the GFCI fails to restore power after the test, the unit is either improperly installed or faulty. Faulty or improperly installed GFCI's should be replaced by a qualified technician. A simple plug-in device that applies a test load to an outlet, and tests for proper wiring, is available at most home improvement stores as well.**

**The GFCI was invented in 1961, and has been a requirement in the National Electrical Code (NEC) since 1973. Originally introduced for outdoor outlets only, the NEC included bathroom outlets in 1975, garage wall outlets in 1978, kitchen receptacles in 1987, and crawlspace and unfinished basement outlets in 1990. Outlets that are adjacent to pools or spas should also be protected by a GFCI. If**

**you have an older home, with only some, or perhaps none of these location protected by GFCI's, a retrofit will greatly enhance the safety of your home.**

**If working outdoors with electrical devices and the outlet that supplies current to your device is not protected, then a GFCI protected extension cord or plug in GFCI protector should be used. Both of these devices are readily available at most home improvement stores.**

**Check your home for GFCI protection, and test the GFCI's regularly. The protection afforded by these relatively inexpensive devices, is priceless.**

**R. Scott Devers is President of On The Level, Professional Home Inspections of Bakerton. He will answer questions on this or other related topics via email at [levelinspections@juno.com](mailto:levelinspections@juno.com)**