

*What You Should Know About:*  
**GROUND FAULT INTERRUPTERS**

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A ground fault is a failure in an electric circuit which permits electric current to flow from a hot wire to a ground. The source of this fault or current leakage can be worn insulation, moisture, faulty construction in a tool or a failure in the circuit wiring. Anyone using a faulty tool can become part of a lethal electrical circuit when coming in contact with the ground or any electrical conductor in contact with the earth such as heating or plumbing pipes.

High voltage can kill a person. So can low voltage. It takes only three tenths of an ampere of current at 110 V to electrocute an adult. You might be long gone by the time the 15 or 20 amp fuse or circuit breaker tripped. These are intended to protect motors and circuit wiring against overloads and short circuits, not you.

The ground fault interrupter (GFI) is the newest development in electrical safety. It is a device that senses an electrical fault and immediately breaks the affected circuit. It is designed to trip at a level of 5 milliamperes ( $5/1000$  of an ampere), about 60 times less than the electrocution level. It does this within  $25/1000$  of a second after the current reaches the 5 milliamperes level, much faster than the fuse or circuit breaker.

The National Electric Code now requires GFI's on all new 15 or 20 ampere residential outdoor recepticals and all electrical equipment and outlets associated with outdoor swimming pools. It is

recommended that GFI's be installed on outlet circuits in workshops, garages and headhouses and other areas where portable electrical equipment is used. Ground fault protection is not required where only double insulated tools are used. GFI's are available as a standard circuit-breaker replacement, a standard double outlet replacement and as a protected extension cord. All units contain a test button that simulates a ground fault within the GFI. This test should be conducted once a month to ensure that the GFI is operating properly.

Ground faults are serious shock hazards and cause many deaths each year. Installation and use of GFI's could save YOUR life.