

The Shocking Story of John Davies...

John rented an electric drain cleaning machine to clear the drain in front of his home. An electrical fault developed in the motor and John found himself frozen to the handle of the machine. The force of the shock knocked John completely out of his shoes. They were found, still tied, next to his body. The cut off ground pin helped seal his fate.

John Davies would be alive today, as would thousands of others, if the products they were using had been equipped with Ground Fault Interrupters.

What is a Ground Fault Interrupter?

A Ground Fault Interrupter is a device which protects people and equipment against line to ground faults. It does so by limiting the duration of any excessive fault current.

Which type of equipment cause the most problems?

As might be expected, equipment used near or in contact with water is the main cause of electrical accidents. Equipment power cords used as extension cords, or power supply cords, are the source for the largest number of these accidents. The most common cord related hazard is the failure of the strain relief. Stress results in the insulation around the individual conductors being pulled back and exposing the bare leads. The exposed wires contact the metal case, thereby electrifying the entire machine and exposing the operator to the full 120V potential. Even equipment that was grounded can pose a hazard when the grounding conductor is damaged by stress.

Is the ground wire still needed when using a GFI?

The Ground Fault Interrupter will function with or without the tool being grounded. The ground system is an important safety feature however, and should always be maintained and retested on a regular basis. Further, if a ground fault should occur, the leakage current will pass down the ground wire and trip the GFI without the operator receiving any shock at all. So, yes, please retain the ground system.

How can we be sure a GFI is working?

There are two simple methods for testing GFI's. All GFI's sold in this country are provided with a test and reset button. The GFI protected equipment should turn off when the test button is pressed. This test is adequate for most applications.

To measure the actual trip current of a GFI requires a GFI tester. The tester allows you to read the actual GFI trip current on a meter, identifying the GFI's that do or do not operate within the required four to six milliamp range.

One test that should not be performed on GFIs is a high voltage test. The Ground Fault Interrupter contains small electronic parts that are damaged if high voltages are applied to them. Do not test any GFI on a Hi-Pot or Dielectric tester.

Where should Ground Fault Interrupters be installed?

GFI's should be used when portable electrical equipment is used around moisture.

The following items should receive serious consideration because of the large number of electrical accidents and electrocutions that have occurred.

- Electrical Drain Cleaning Machines
 - Power Tools
 - Electric Pumps
 - Rug Cleaning Machines
 - Hedge Trimmers
 - Pressure Washers
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