

“KEEPING PACE” - #80

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MOTORIZED PLUMBING ROTARY SNAKE

ELECTROCUTION CAUSED BY **TWO** FAILED GFCI'S:

This was a motorized power snake used by plumbers and others to clean out drainage pipes. The snake is inserted into the pipe as it is rotated by its electric motor, to more effectively dislodge debris in the pipe. In this case, my insured hardware store had mis-wired the power snake, interchanging the green ground wire with the hot wire in its power cord. This placed 120 volts, A.C., on the frame of the power snake, and thus on the snake itself. The deceased had rented this power snake, and he was using it at the rear of his mobile home when he was fatally electrocuted. Somehow his body became grounded to the earth, while he held the rotating snake in his hands.

This was the third fatal electrocution I have investigated involving a power snake. But the bizarre thing about this case was that there were two ground fault circuit interrupters (GFCI's) in this circuit, one in the mobile home, and one on the power snake. Either one of these GFCI's should have protected the homeowner, but extensive testing revealed that both were defective.

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VENTING PROPANE TANK IS A FLAME THROWER:

The side of a gas grill, located on the client's rear porch, is shown in the lower right hand corner of this photograph. About 5 or 10 minutes after lighting this grill, the client was in her kitchen when she heard a whoosing sound "like a helicopter." When she went out to the porch to investigate, an eruption of flame threw her backward 30 feet, and burned her legs severely.

I determined that a fire had occurred in the gas grill, and the heat of the ensuing fire had heated the propane in the portable tank on the grill. When liquid propane is heated, it expands. However, in a closed tank, there is no room for the expansion, and without a pressure relief valve on the tank, the expanding forces would burst the tank. The released propane would then explode and have enough force to blow a house apart.

To prevent such a disaster, the pressure relief valve opens momentarily to allow enough propane to escape the tank to reduce the forces inside the tank to a safe level. Since the propane is escaping from the relief valve at a pressure of 275 psi, it acts like a flame thrower, and shoots out fire 15 feet. In this case, this flame thrower action melted the aluminum porch railing in two locations, as you can see in the photograph.

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