

What did you say about the...



Electrical system

Electrical panel safety discussion:

When you first approach a panel always listen to it, if it's making any sound: popping; cracking; or buzzing, walk away and call for help. Next, not standing in a puddle of water or touching another metal object, touch the panel with the back of your hand. If the panel is charged, and you complete the circuit, your muscles will contract and your hand will come off the panel. Yes, you will have received a nasty, little jolt, but you are now free to go call for help. If you grasp the door and it is live, you could lock up and not be able to let go until someone either turns off the power or hits you really hard.

AFCI breaker:

AFCI or arc-fault circuit interrupt breakers have been required in new construction since 2002. These are on the bedroom circuits, primarily to protect you when you are sleeping. If you have an old lamp cord, or a pet chews through a cord, the electricity always wants to complete the circuit, potentially causing an arc, potentially causing a fire. The arc fault is supposed to sense this and shut off. It is a good idea to periodically test these. When it is in the tripped position it will not just turn back on, you have to turn it all the way off then turn it back on. If you ever find one of these tripped, first check to see if there was a fault before turning it back on. If the breaker ever doesn't trip off, have a licensed electrician or licensed, professional handy-man service replace it.

GFCI breaker:

The ground fault breaker works very much like a GFCI outlet. In an older home this breaker can be connected to various outlets through the home. In newer installations, these are typically attached to a whirlpool or air tub. Test periodically, replace by licensed electrician or licensed, professional handy-man service if it ever fails to trip off.

What did you say about the...

Neutral/ground separation in a sub-panel:

This is a very common item for me to write up as a safety hazard. If an electrical panel is controlled by a circuit breaker or disconnect outside that panel, then it is subordinate to that panel or disconnect, making it a sub panel. The neutral, all the white or gray wires, is always separate and isolated from the ground/cabinet. The only place the neutral and ground are bonded is at the main. The reason for this is that in the unlikely event of that an electrical short is coming down the neutral, the only place we want that to go is back to the main and out to ground. If the neutral/ground are not separate in a sub panel, the short might go to the main and to ground where we want it to, or it could energize all the metal conduits. This is a very easy fix, the bonding strap or screw needs to be removed by a licensed electrician or licensed, professional handy-man service.