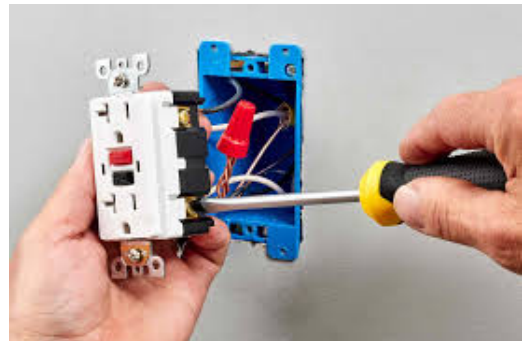# GROUND FAULT CIRCUIT INTERRUPTERS

To reduce or eliminate electrical fault current which might be generated in any electrical system or tool during use. A Ground Fault Circuit Interrupter (GFCI) continuously monitors the amount of current going to an electrical tool or piece of equipment, comparing it to the amount of current returning along the "grounded neutral." If the variance between the two is more than five milliamps, the GFCI will trip the circuit in about 1/40 of a second.

REQUIREMENTS

All equipment (saws, drills, extension cords, etc.) that is capable of being plugged into a 110-volt receptacle shall have a GFCI device attached before the tool and/or extension cord. This is done to comply with OSHA Standard 1926.400 (h) and to eliminate the possibility of death or injury to the user.

GFCI protection also must be provided at any location having receptacles capable of being used for plug-in equipment, such as change shacks; exceptions would include office trailers and shops permanently wired in accordance with N.F.P.A. 70, National Electrical Code.

Portable or vehicle- mounted generators having receptacles for 2-wire single-phase power need not be GFCI-protected as long as the generator is rated at no more than 5 kW and the circuit conductors at the generator are insulated from the generator frame and all other grounded surfaces.)

NUISANCE TRIPPING OF GFCI DEVICES

The following items usually will cause tripping of GFCIs:

1. Water leaking into cord connection. (Note: This can usually be remedied by using a twist lock cord and cap. Raising connections out of wet locations will also correct this problem.)
2. Faulty or defective equipment plugged into a GFCI circuit. (Note: By plugging a tool into an entirely different spider or receptacle, you can determine if that tool is defective. The tool must be tagged "out of service" and sent for repairs when tripping occurs again.)
3. Very long runs of conductor cords will create a voltage drop, which may trip the GFCI.