Safety Trainer

Ground-Fault Circuit Interrupters (GFCIs)

Handout

Protect Yourself with a GFCI

Don’t become the path of least resistance:

- Electricity is carried by conductive materials—usually metals—along a closed circuit. These conductors have a low resistance to electrical current.
- Human tissue is a conductive material—but as long as there is a nonconductive insulator forming a solid barrier between you and the conductive circuit, you won’t get a shock.
- When there’s a ground fault in the insulating barrier—a way for the electricity to follow an abnormal path to ground or earth—you might become the path of least resistance, which can be a real shock!

Beware of ground-fault risks:

- Wet areas, like bathrooms and kitchens, and locations close to water, like some outdoor environments, are at increased risk of ground faults.
- Temporary wiring installations, like those that are used during building repair and maintenance, or electrical installation repair are also high risk.

How a GFCI works:

- A GFCI is a circuit breaker that detects ground faults and shuts down the circuit.
- It works by measuring the amount of current going to and returning from electrical equipment. Under normal conditions, the flow back and forth should be equal. If there is a difference of 5 milliamps, the GFCI interrupts the circuit within a fraction of a second—fast enough to prevent an electrical shock.
- It can be:
  —A permanently installed receptacle, similar to a standard wall outlet;
  —A circuit breaker-type, replacing a standard circuit breaker; or
  —A plug-in type, incorporated into a flexible cord-and-plug assembly.

Test your GFCI regularly:

- All GFCIs are testable.
  —Test receptacle-type and circuit breaker-type GFCIs monthly.
  —Test plug-in GFCIs before each use.
- To test a GFCI:
  —Press the TEST button.
  —Test equipment to make sure that the circuit is disabled.
  —Press the RESET button.
- If the GFCI does not disable the circuit, have it replaced by a qualified electrician.