Jobsite: _____ Date: _____
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SMOHIT Safety Sense
Toolbox Talks for the Sheet Metal Industry

Ground Fault Circuit Interrupters

- Ground Fault Circuit Interrupters, or GFCIs, help to protect workers from electrical hazards. They are the most important electrical protection you can have on a jobsite
- GFCIs prevent many electrocutions by detecting a difference in the amount of current flowing between the source of electricity and the electrical tool in use. If there is even a slight difference detected, the GFCI shuts off the circuit and power to the tool.
- GFCIs will trip in a fraction of a second at currents well below those that are considered dangerous. For example, if a difference in current of 5 milliamps or more is detected, the GFCI trips the circuit in as little as 1/40th of a second.
- There are three types of GFCIs:
  - A GFCI receptacle that can be used in place of a standard receptacle. It protects against ground faults whenever an electrical product is plugged into that receptacle. On a job site, other receptacles may be wired into the GFCI protected circuit.
  - A portable GFCI plugs into a standard receptacle. Portable GFCIs provide protection only to the outlet the GFCI is plugged into, not the whole receptacle.
  - A GFCI circuit breaker combines leakage current detection with the function of a circuit breaker. It is installed in the panel box, and it covers all wiring, outlets, lighting fixtures, etc. in the facility. It shuts off electricity in the event of a ground fault, but will also trip when a short circuit or overload occurs.
- Use GFCIs in conjunction with an assured equipment-grounding program because GFCIs won't detect line-to-line faults.
- GFCIs are NOT a substitution for a fuse or circuit breaker, as these devices are still required to protect equipment and property from overloads or short circuits that can result in fires or other damages

Instructor Tips

- **Show examples of typical GFCIs used on the job.**
- **Demonstrate the proper way to test a GFCI.**
- **Emphasize that GFCIs should be inspected and tested regularly.**
- **Point out that workers should not automatically assume that circuits are GFCI protected.**

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OSHA Regulations: 1926.404