Assured Grounding Programs and Ground Fault Circuit Interrupters

Electric shock, and too often fatalities, occur on construction jobsites when temporary power systems are in use. All construction workers who operate power tools should receive training in the systems that safeguard them from electrical hazards.

1.What is the difference between an "Assured Equipment Grounding Program" and GFCI? *An Assured Equipment Grounding Program is a scheduled system for testing construction site electrical tools and extension cords to assure their proper grounding, polarity and resistance. A Ground Fault Circuit Interrupter (GFCI) is equipment that serves as a circuit breaker if continuous ground continuity in an electrical tool is not present.*

2. Under what conditions must Ground Fault Circuit Interrupters (GFCI) be used on a worksite? *When electrical tools and extension cords are used in connection with the process of construction or alteration – and when 120-volt, single-phase, 15-20 ampere receptacle outlets are being used, which are not a part of the permanent wiring of buildings or structures.*

3. Under what conditions are GFCI's not required? *When the company has an established, implemented Assured Grounding Conductor Program that systematically tests for continuous circuitry on electrical tools being used on the worksite. When employees are instructed NOT to use any equipment that does not meet the requirements of the Assured Grounding Program.*

4. When must electrical tools and extension cords be tested for grounding and continuity of the circuitry? *Before first use, when returned to service following repairs, at least every three months on a scheduled basis*.

5. What types of defects should workers continually look for? *Deformed or missing pins, insulation damage and indications of possible internal damage.*

6. What does the Assured Grounding color coding system identify? *The color (usually colored tape applied to the cord) identifies the time period (quarter/month) in which the equipment was last tested or the last test took place.*

7. What equipment is exempted from Assured Grounding tests? *"Double insulated" tools, which are clearly marked and identifiable as a double insulated tool. However, these tools should be inspected by workers, before each use, for cord damage or case damage and may also be taped for inclusion in the overall program.*

8. What kind of records are kept on an Assured Equipment Grounding Program and who keeps them? *The company's Assured Equipment Grounding Program must be a written program. A log of the items inspected and date of the test must be kept by an authorized person who is competent to recognize electrical hazards; or the color coding system itself serves as the documentation of the completed testing.*

9. When there are general and subcontractors on a job site, who is responsible for the assured grounding or GFCI program? *Each subcontractor on a job may use his own individual program, but general and sub-contractors alike are responsible for having a program in place -- preferably coordinated. (Good generals insist on a coordinated program to avoid mishaps, cross color-coding and to help maintain enforcement. The code colors within a "test period" are often displayed in a visible location by the inspector, for all workers to see.)*

Unless the general provides GFCIs for central power and all portable power stations at jobsite locations, subcontractors must provide their own GFCIs or Assured Equipment Grounding Program for all temporary power use.

10. When should Assured Grounding or GFCI training be provided to construction workers and what should be included in the training?

All new employees to the jobsite, who use electrical tools, should receive training or a review of this electrical safety program.

Training should at least include:
- The purpose of these electrical safety measures;
- The color code system in operation;
- How to identify electrical hazards;
- Procedures for reporting electrical hazards;
- GFCI uses and limitations;
- How to troubleshoot a GFCI "trip."