

Electrical Safety on Construction Sites

GENERAL DISCUSSION

Assured Grounding Programs and Ground Fault Circuit Interrupters:

Electric shock, and too often fatalities, occurs on construction jobsites when temporary power systems are in use. All construction workers who operate power tools should receive training in the systems, which 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 two-color coding system identify?

The first color (usually colored tape applied to the cord) identifies the quarter in which the equipment was last tested; the second color identifies the month within the quarter when the last test took place.

7. What equipment is accepted from Assured Grounding tests?

'Double insulated' tools, which are clearly marked and identifiable as a double insulated tool. Workers, before each use, should nevertheless inspect these tools for cord damage or case damage and may also be taped for inclusion in the overall program.

8. What kind of records is kept on an Assured Equipment Grounding Program and who keeps them?

The color-coding system must be maintained as part of the company's written safety 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.

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.'

GENERAL SAFETY REVIEW

This is a time to review all safety concerns, not just today's topic. Keep your notes on this page before, during and after the safety meeting.

Are you aware of any safety hazards from any other crews? Point out any hazards other crews are creating that this crew should know about. Tell the crew what you intend to do about those hazards.

Do we have any other safety business? Discuss any past issues or problems. Report any progress of investigations and action taken.

Have there been any accidents, near misses or complaints? Discuss any accidents, near misses, and complaints that have happened since the last safety meeting. Also recognize the safety contributions made by members of the crew.

Please remember, we want to hear from you about any health and safety issues that come up. If we don't know about problems, we can't take action to fix them.

ENDING THE MEETING REVIEW

Circulate Sign-Off Form.

Assign one or more crew member(s) to help with next safety meeting.

Refer action items for follow-up.

Do you have any Safety Recommendations?

Do you have any Job Specific Topics you would like us to discuss?

Have you reviewed the M.S.D.S Sheet for this safety topic? Yes____ No____
N/A____

Comments:
