

Grounding Conductor Program

OSHA requires that employers shall use either ground-fault circuit interrupters or an assured equipment grounding conductor program to protect employees on construction sites.

1. Ground-Fault Circuit Interrupters

All 120-volt, single-phase 15- and 20-ampere receptacle outlets on construction sites, which are not part of the permanent wiring of the building or structure and which are in use by employees, shall have approved ground-fault circuit interrupters for personnel protection.

Receptacles on a two-wire, single-phase portable or vehicle-mounted generator rated not more than 5kV, where the circuit conductors of the generator are insulated from the generator frame and all other grounded surfaces, need not be protected with ground-fault circuit interrupters.

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2. Assured Equipment

3. The employer shall establish and implement an assured equipment grounding conductor program on construction sites covering all cord sets, receptacles which are not a part of the building or structure, and equipment connected by cord and plug which are available for use or used by employees. An assured equipment grounding conductor program shall comply with the following minimum requirements:

- A written description of the program, including the specific procedures adopted by the employer. The description and procedures shall be available at the jobsite for inspection and copying by OSHA and any affected employee.
- The employer shall designate one or more competent persons to implement the program.
- Each cord set, attachment cap, plug and receptacle of cord sets, and any equipment connected by cord and plug, except cord sets and receptacles which are fixed and not exposed to damage, shall be visually inspected before each day's use for external defects, such as deformed or missing pins or insulation damage, and for indications of possible internal damage. Equipment found damaged or defective shall not be used until repaired.
- The following tests shall be performed on all cord set, receptacles which are not a part of the permanent wiring of the building or

structure, and cord-and plug-connected equipment required to be grounded.

All equipment grounding conductors shall be tested for continuity and shall be electrically continuous.

Each receptacle and attachment cap or plug shall be tested for correct attachment of the equipment grounding conductor. The equipment grounding conductor shall be connected to its proper terminal.

All required tests shall be performed:

- Before first use.
- Before equipment is returned to service following any repairs.
- Before equipment is used after any incident which can be reasonably suspected to have caused damage (for example, when a cord set is run over).
- At intervals not to exceed 3 months, except that cord sets and receptacles which are fixed and not exposed to damage shall be tested at intervals not exceeding 6 months.

The employer shall not make available or permit the use by employees of any equipment which has not met these four requirements.

Tests performed as required in the preceding paragraph shall be recorded. This test record shall identify each receptacle, cord set, and cord- and plug-connected equipment that passed the test and shall indicate the last date it was tested or the interval for which it was tested. This record shall be kept by means of logs, color coding, or other effective means and shall be maintained until replaced by a more current record. The record shall be made available on the jobsite for inspection by OSHA and any affected employee.

One of the methods listed by OSHA as part of acceptable record keeping is to establish a color code for marking cord sets and cord- and plug-connected equipment. The table below lists a color code that is in wide use by electricians and contractors. Colored plastic or vinyl electrical tape is placed on one or both ends of cords and cord- and plug-connected equipment to denote the month that the tests were performed.

Assured Equipment Grounding Conductor Program Color Code		
Month #	Month Tested	Color of tape(s) to apply to cord
1	January	White
2	February	White + Yellow
3	March	White + Blue
4	April	Green
5	May	Green + Yellow
6	June	Green + Blue
7	July	Red
8	August	Red + Yellow
9	September	Red + Blue
10	October	Orange
11	November	Orange + Yellow
12	December	Orange + Blue

As an easy reminder of the color of the tape to place on the newly tested cord, remember the color for the start of each calendar quarter by the season:

White in January for Winter
 Green in April for Spring
 Red in July for Summer, or the 4th of July

Orange in October for Fall, or
pumpkins.

Then add:

Yellow for the second month in each
quarter,

Blue for the third month of each quarter.

OSHA Definition

"Competent person" means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.