

Use of Electrical Equipment

Self-Inspection Checklist



Optional Information

Name of School:
Date of Inspection:
Career-Technical program/course/room:
Signature of inspector:

Guidelines:

This checklist covers regulations issued by the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) under 29 CFR 1910.334. It applies to all electrical use systems. This checklist does not apply to qualified persons working on installations in vehicles and generation, transmission, distribution, communications, and railway installations. The regulations cited apply only to private employers and their employees, unless adopted by a State agency and applied to other groups such as public employees. A yes answer to a question indicates that this portion of the inspection complies with the OSHA or EPA standard, or with a nonregulatory recommendation. Definitions of terms in bold type are provided at the end of the checklist.

Portable Electric Equipment

1	Is portable equipment handled in a manner that will not cause damage? [29 CFR 1910.334(a)(1)]
2	Is the use of flexible cords connected to equipment for raising or lowering that equipment prohibited? [29 CFR 1910.334(a)(1)]
3	Is it prohibited to fasten flexible cords with staples or hang them in a manner that could damage the outer jacket or insulation? [29 CFR 1910.334(a)(1)]
4	Are portable cord and plug-connected equipment and flexible cord sets (extension cords) visually inspected before use every day? [29 CFR 1910.334(a)(2)(i)] <i>Note: Cord and plug-connected equipment and flexible cord sets that remain connected (once they are put in place) and are not exposed to damage need not be visually inspected until they are relocated.</i>
5	If a defect might expose students to injury, is the defective or damaged item removed from service and are students and teachers prohibited from using it until repairs and tests have been made? [29 CFR 1910.334(a)(2)(ii)]

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Portable Electric Equipment

6	Do flexible cords used with grounding-type equipment contain an equipment grounding conductor? [29 CFR 1910.334(a)(3)(i)]
7	Is it prohibited to connect or alter attachment plugs or receptacles in any way that would prevent proper continuity of the equipment grounding conductor at the point where the plugs are attached to the receptacles? [29 CFR 1910.334(a)(3)(ii)]
8	Is it prohibited to alter these devices to allow the grounding pole of the plug to be inserted into slots intended for connections to the current-carrying conductors? [29 CFR 1910.334(a)(3)(ii)]
9	Are adapters that interrupt the continuity of the equipment grounding connection prohibited? [29 CFR 1910.334(a)(3)(iii)]
10	Are only approved portable electric equipment and flexible cords used in highly conductive work locations (such as those wet with water or other conductive liquids), or in job locations where students are likely to contact water or conductive liquids? [29 CFR 1910.334(a)(4)] <i>Note: Ground-fault circuit interrupters are recommended in these situations.</i>
11	Are students and teachers required to dry their hands when plugging and unplugging flexible cords and plug-connected equipment if energized equipment is involved? [29 CFR 1910.334(a)(5)(i)]
12	Are energized plug and receptacle connections handled only with insulating protective equipment if the connection could provide a conducting path to the student's hand (if, for example, a cord connector is wet from being immersed in water)? [29 CFR 1910.334(a)(5)(ii)]
13	Are locking-type connectors properly secured after connection? [29 CFR 1910.334(a)(5)(iii)]

Electric Power and Lighting Circuits

14	Are load-rated switches, circuit breakers, or other devices designed to be a disconnecting means used for opening, reversing, or closing of circuits under load conditions? [29 CFR 1910.334(b)(1)] <i>Note: Only cable connectors of the load-break type, fuses, terminal lugs, and cable splice connections may be used for such purposes, except in emergency.</i>
15	After a circuit is deenergized by a circuit protective device, is manually reenergizing the circuit prohibited until it is determined that the equipment and circuit can be safely energized? [29 CFR 1910.334(b)(2)]
16	Is repetitive manual reclosing of circuit breakers or reenergizing circuits through replaced fuses prohibited? [29 CFR 1910.334(b)(2)]
17	Is modifying overcurrent protection of circuits and conductors prohibited? [29 CFR 1910.334(b)(3)]

Test Instruments and Equipment

18	Are only qualified persons permitted to perform testing work on electric circuits or equipment? [29 CFR 1910.334(c)(1)]
19	Have all test instruments, equipment, and all associated test leads, cables, power cords, probes, and connectors been visually inspected for external defects and damage before the equipment is used? [29 CFR 1910.334(c)(2)]
20	If a defect may expose a student to injury, is the defective or damaged item removed so that no student or teacher can use it until the necessary repairs and tests have rendered the equipment safe? [29 CFR 1910.334(c)(2)]
21	Are test instruments, equipment, and their accessories rated for the circuits and equipment to which they will be connected? Are they designed for the environment in which they will be used? [29 CFR 1910.334(c)(3)]
22	When flammable materials are present only occasionally, is electrical equipment capable of igniting them prohibited? [29 CFR 1910.334(d)]

Definitions

Ground-fault circuit-interrupter: a device whose function is to interrupt the electric circuit to the load when a fault current to the ground exceeds a predetermined value that is less than that required to operate the overcurrent protective device of the supply circuit.

Qualified person: one familiar with the construction and operation of the equipment and the hazards involved. Whether a teacher or student is considered a qualified person depends on various circumstances in the workplace. A person may be considered qualified with regard to certain equipment in the workplace, but unqualified as to other equipment. A person who, in the course of on-the-job training, demonstrates an ability to perform duties safely at his or her level of training and who is under the direct supervision of a qualified person is considered to be qualified for the performance of those duties.