Electrical Safety Work Practices

Reset Form

Self-Inspection Checklist

Optional Information

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

Guidelines:

This checklist covers the regulations issued by the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) under the general industry standards 29 CFR 1910.331, 1910.332, and 1910.333. This checklist applies to persons who are at risk of electrical shock. It does not apply to qualified persons working on generation, transmission, and distribution installations; communications installations; installations in vehicles; and railway installations. Definitions of terms in bold type are provided at the end of the checklist. Please review the Control of Hazardous Energy Sources checklist with this checklist. 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 and EPA standard, or with a non-regulatory recommendation.

This checklist does not address work on or near energized overhead lines or work in confined or enclosed work spaces with energized lines. For these conditions, please consult 29 CFR 1910.333(c)(3) and 1910.333(c)(5) respectively.

Training		
	1	Are students or employees who are at risk of electric shock trained in and familiar with the safety-related work practices required by OSHA regulations 29 CFR 1910.331 through 1910.335? [29 CFR 1910.332(b)(1)]
	2	Are qualified employees (those who are permitted to work on or near exposed energized parts) given the following training? 1. The skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment; 2. The skills and techniques necessary to determine the nominal voltage of exposed live parts; and 3. The clearance distances specified in Table 1 and the corresponding voltages to which the qualified person will be exposed. [29 CFR 1910.332(b)(3)]

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U.S. Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health

Safety Checklist Program for Schools
DHHS (NIOSH) Publication Number 2004-101
October 2003

Table 1: Minimum Distance for Voltage Ranges	
Voltage range* (phase to phase)	**Required minimum distance between workers and exposed, energized parts**
300V and less	**Avoid contact**
>300V ≤750V	1 ft. 0 in. (30.5 cm)
>750V ≤2kV	1 ft. 6 in. (46 cm)
>2kV ≤15kV	2 ft. 0 in. (61 cm)
>15kV ≤37kV	3 ft. 0 in. (91 cm)
>37kV ≤87.5kV	3 ft. 6 in. (107 cm)
>87.5kV ≤121kV	4 ft. 0 in. (122 cm)
>121kV ≤140kV	4 ft. 6 in. (137 cm)

*Note: > is "greater than;" ≤ is "less than or equal to"

	3	Is the degree of training provided determined by the risk to the person? [29 CFR 1910.332(c)]
Work Practices		
	4	Are all live parts deenergized before students or employees work on them, unless deenergizing increases hazards or is not possible because of equipment design or operational limitations? [29 CFR 1910.333(a)(1)] *Note: Live parts that operate at less than 50 volts to ground need not be deenergized if they do not cause increased exposure to electrical burns or explosion due to electrical arcs.*
	5	If live parts are not deenergized, are other practices used to protect persons who may be exposed to electrical hazards? [29 CFR 1910.333(a)(2)]
	6	Do these work practices protect the body against direct contact with energized parts and against indirect contact through a conductive object? [29 CFR 1910.333(a)(2)]
Working On Or Near Exposed Deenergized Parts		
	7	If an employee or student has contact with parts of fixed electrical equipment or circuits that have been deenergized, have the circuits energizing the parts been locked and/or tagged? [29 CFR 1910.333(b)(2)]
	8	Is a written copy of electrical safety procedures (including lockout and tagging) available for inspection? [29 CFR 1910.333(b)(2)(i)]
	9	Are safe procedures determined before circuits or equipment are deenergized? [29 CFR 1910.333(b)(2)(ii)(A)]
	10	Are the circuits and equipment to be worked on disconnected from all energy sources? [29 CFR 1910.333(b)(2)(ii)(B)] *Note: Control circuit devices, such as push buttons, selector switches, and interlocks may not be used as the sole means for deenergizing circuits or equipment. Interlocks for electric equipment may not be used as a substitute for lockout and tagging procedures.*
	11	Has stored, hazardous electric energy been released? [29 CFR 1910.333(b)(2)(ii)(C)] *Note: Capacitors shall be discharged. If the stored electric energy might endanger personnel, high capacitance elements shall be short-circuited and grounded.*
	12	Is stored nonelectrical energy in devices that could reenergize electric circuit parts blocked or relieved enough to prevent circuit parts from being accidentally energized by the device? [29 CFR 1910.333(b)(2)(ii)(D)]
	13	Is a lock and tag placed on each disconnecting means used to deenergize circuits and equipment? [29 CFR 1910.333(b)(2)(iii)(A)]
	14	Is the lock attached so no one can operate the disconnecting means? [29 CFR 1910.333(b)(2)(iii)(A)]
	15	Does each tag have a statement prohibiting unauthorized operation of the disconnecting means and removal of the tag? [29 CFR 1910.333(b)(2)(iii)(B)] *Note: If a lock cannot be applied, or if the tagging procedures will provide a level of safety equivalent to that of a lock, a tag may be used without a lock. [29 CFR 1910.333(b)(2)(iii)(C)]*

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Working On Or Near Exposed Deenergized Parts		
	16	When a tag is used without a lock, is at least one additional safety measure used that provides a level of safety equivalent to that obtained from a lock? [29 CFR 1910.333(b)(2)(iii)(D)] *Note: Examples of additional safety measures include removing an isolating circuit element, blocking a controlling switch, or opening an extra disconnecting switch.*
	17	Is a lock placed without a tag only under all the following conditions? [29 CFR 1910.333(b)(2)(iii)(E)] 1. Only one circuit or piece of equipment is deenergized. 2. The lockout period does not extend beyond the school day. 3. Students or employees exposed to the hazards associated with reenergizing the circuit or equipment are familiar with this procedure.
	18	Are the requirements below met before any circuit or equipment can be considered deenergized? [29 CFR 1910.333(b)(2)(iv)] 1. A qualified person verifies that the equipment cannot be restarted. 2. A qualified person verifies that the circuit elements and electric parts of equipment to which students or employees will be exposed are deenergized. The qualified person must also determine whether any energized conditions exist as a result of inadvertently induced voltage or unrelated voltage feedback (even though parts of the circuit have been deenergized and presumed to be safe).
	19	Are all of the following requirements met (in the order given) before circuits or equipment are reenergized, even temporarily? [29 CFR 1910.333(b)(2)(v)] 1. A qualified person verifies that all tools, electrical jumpers, shorts, grounds, and other such devices have been removed so that the circuits and equipment can be safely energized. 2. Persons exposed to the hazards associated with reenergizing the circuit or equipment are warned to stay clear of circuits and equipment. 3. Each lock and tag is removed by the person who applied it or under his or her direct supervision. However, if the person who applied the lock or tag is absent from the workplace, the lock or tag may be removed by a qualified person designated to perform this task provided that: a. The person who applied the lock or tag is not available at the school. b. The person who applied the lock or tag is aware that the lock or tag has been removed before he or she resumes work.

Working On Or Near Exposed Energized Parts		
	20	Are only qualified persons permitted to work on electric circuit parts or equipment that have not been deenergized? [29 CFR 1910.333(c)(2)] *Note: This paragraph applies to work performed on exposed live parts (involving either direct contact or contact by means of tools or material) or near enough to them for persons to be exposed to hazards they present. [29 CFR 1910.333(c)(1)]*
	21	Are students and employees restricted from entering spaces containing exposed energized parts, unless illumination is provided that enables them to perform the work safely? [29 CFR 1910.333(c)(4)(i)]
	22	Are students and employees prevented from handling conductive materials and equipment that are in contact with the person's body that may contact exposed energized conductors or circuit parts? [29 CFR 1910.333(c)(6)]
	23	If students or employees must handle long-dimensional conductive objects (such as ducts and pipes) in areas with exposed live parts, have work practices been instituted (such as the use of insulation, guarding, and material handling techniques) that will minimize the hazard? [29 CFR 1910.333(c)(6)]
	24	Do portable ladders have nonconducting siderails when they could contact exposed, energized parts? [29 CFR 1910.333(c)(7)]
	25	Is the use of conductive articles of jewelry, clothing (such as watchbands, bracelets, rings, keychains, necklaces, metalized aprons, cloth with conductive threads, or metal head gear) prohibited for persons working with electricity? [29 CFR 1910.333(c)(8)]

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Working On Or Near Exposed Energized Parts		
	26	Are students and employees prohibited from performing housekeeping duties where live parts present an electrical contact hazard due to housekeeping duties that must be performed near such parts? [29 CFR 1910.333(c)(9)]
	27	If students or employees do conduct housekeeping duties near live electrical circuits, are adequate safeguards (such as insulating equipment or barriers) used? [29 CFR 1910.333(c)(9)]