

DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES LICENSING AND REGULATORY AFFAIRS

BUREAU OF SAFETY AND REGULATION DIRECTOR'S OFFICE

CONSTRUCTION SAFETY STANDARDS COMMISSION

Filed with the Secretary of State on January 9, 2013

~~These rules take effect 7 days after filing with the Secretary of State~~

These rules become effective immediately upon filing with the Secretary of State unless adopted under section 33, 44, or 45a(6) of 1969 PA 306. Rules adopted under these sections become effective 7 days after filing with the Secretary of State.

(By authority conferred on the **director of the department of licensing and regulatory affairs** ~~construction safety standards commission~~ by sections 19 and 21 of **1974 PA Act No. 154 and Executive Reorganization Order Nos. 1996-2, 2003-1, 2008-4, and 2011-4, MCL 445.2001, 445.2011, 445.2025, and 445.2030**) of the Public Acts of 1974, as amended, being ~~SS408.1019 and 408.1021 of the Michigan Compiled Laws~~

R 408.41719, R 408.41725, and R 408.41728 of the Michigan Administrative Code are amended as follows:

PART 17. ELECTRICAL INSTALLATIONS

R 408.41719. Adoption by reference.

Rule 1719. (1) Electrical wiring, apparatus, and equipment shall be manufactured, installed, and maintained as prescribed in the **National Fire Protection Association (NFPA) standard, No. 70, 1975 edition, "National Electrical Code"**, which is **adopted** incorporated herein by reference. ~~and which is available for inspection at the Lansing office of the Michigan Department of Consumer and Industry Services. This standard code may be purchased at a cost of \$5.50 from the National Fire Protection Association, NFPA, 1 Batterymarch Park, Quincy, 470 Atlantic Avenue, Boston, Massachusetts, USA, 02169-7471, telephone number: 1-617-770-3000 or via the internet at website: www.nfpa.org; at a cost as of the time of adoption of these rules of \$27.00.02140, or from the Michigan Department of Consumer and Industry Services, 7150 Harris Drive, Box 30643, Lansing, Michigan 48909.~~

(2) Section 210-8 of the code **adopted** incorporated by reference in subrule (1) **of this rule** is excepted. In lieu of this section, the employer shall conform to 1 of the following:

- (a) Install ground-fault circuit interrupters as prescribed in rule 1721.
- (b) Establish and implement an assured equipment grounding conductor program as prescribed in rule 1722.

(3) The standard adopted in subrule (1) of this rule is also available for inspection at the Department of Licensing and Regulatory Affairs, MIOSHA Standards Section, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan, 48909-8143.

(4) Copies of the standard adopted in subrule (1) of this rule may be obtained from the publisher or may also be obtained from the Department of Licensing and Regulatory Affairs, MIOSHA Standards Section, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan, 48909-8143, at the cost charged in this rule, plus \$20.00 for shipping and handling.

R 408.41725. Wiring; attachment plug receptacles; extension and trailing cords; handlamps; portable electric tools used in wet environment; convertor supplying equipment at more than 300 volts.

Rule 1725. (1) When electrical wiring is used in a tank or other confined space, a properly identified disconnect switch shall be provided at the entrance.

(2) A receptacle for an attachment plug shall meet all of the following requirements:

- (a) Be of the concealed contact type.
- (b) Have a contact for extending ground continuity.
- (c) Be designed and constructed so that the plug may be removed without leaving any live parts exposed to contact.
- (d) Not be capable of receiving attachment plugs for a voltage, frequency, or type of current different from that for which the receptacle is intended, nor shall a plug of a different style be forced into a receptacle.

(3) An extension cord used with a portable electric tool or appliance shall be a 3-wire type.

~~(4) Extension cords and trailing cords shall be equipped with a plug cap which is either molded to the cord or equipped with a cord clamp to prevent strain on the terminal screws.~~

~~(5) Conductors supplying temporary wiring shall be the minimum protective qualities of type NM wire for use indoors, or type UF wire for use outdoors.~~

~~(6) A brass shell, paper lined lamp holder and a pintype lampholder which damages the insulation shall not be used.~~

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~~(6)(7)~~ Wiring for temporary lighting in excess of 12 volts used on barricades, fences, and sidewalk coverings shall be protected against abrasion of accidental damage to the insulation.

~~(7)(8)~~ Trailing cords and extension cords shall **meet all of the following**:

(a) Be protected against damage.

(b) Hung in a manner which does not damage the covering.

(c) Retain their insulating value and dielectric and physical strength when spliced.

(d) Be insulated to prevent shock or shorts.

(e) Have a plug body or receptacle which is either molded to the cord or is equipped with a cord clamp to prevent strain on the terminal screws, or a receptacle installed in a steel box with a cover and cord clamp.

~~(8)(9)~~ A portable handlamp shall be made of molded composition or other approved material and shall have a molded handle with bulb guard attached to it.

~~(9)(10)~~ A portable light used in moist or other hazardous areas, such a drum, tank, or vessel, shall be operated at a maximum of 12 volts, or shall be protected by an approved ground-fault interrupter.

~~(10)(11)~~ A portable electric tool used in a wet atmosphere or environment shall be protected by an approved ground-fault interrupter.

~~(11)(12)~~ An attachment plug or other connector supplying equipment at more than 300 volts shall be of the skirted type or shall be otherwise designed to confine any arcs.

R 408.41728. Grounding and bonding.

Rule 1728. (1) ~~Except when an approved ground fault interrupter is provided, exposed noncurrent carrying conductive parts of portable and fixed electrical equipment including, but not limited to, motors, frames, and tracks of electrically operated cranes and electrically driven machinery shall be grounded.~~ A grounding circuit shall be continuous, be capable of carrying the current imposed on it, and have a resistance low enough to permit sufficient current to flow to cause the fuse or circuit breaker to interrupt the current.

(2) Non-electrical equipment. The metal parts of the following non-electrical equipment shall be grounded:

(a) Frames and tracks of electrically operated cranes.

(b) Frames of non-electrically driven elevator cars to which electric conductors are attached.

(c) Hand-operated metal shifting ropes or cables of electric elevators.

(d) Metal partitions, grill work, and similar metal enclosures around equipment of over 1kV between conductors.

~~(3)(2)~~ Driven rod electrodes, either singly or connected, shall have a resistance to ground of not more than 25 ohms.

~~(4)(3)~~ Conductors used for bonding shall be capable of carrying the imposed current. The bonding clamps shall have a secure and positive metal-to-metal contact.

~~(4) When it is necessary to protect an employee from ground potential while he is working in proximity to energized primary equipment, such as is encountered in sub-stations and power plants, the employee shall be isolated or insulated from the hazard.~~