

**§ 57.12008 Insulation and fittings for power wires and cables.**

Power wires and cables shall be insulated adequately where they pass into or out of electrical compartments. Cables shall enter metal frames of motors, splice boxes, and electrical compartments only through proper fittings. When insulated wires, other than cables, pass through metal frames, the holes shall be substantially bushed with insulated bushings.

**§ 57.12010 Isolation or insulation of communication conductors.**

Telephone and low-potential signal wire shall be protected, by isolation or suitable insulation, or both, from contacting energized power conductors or any other power source.

**§ 57.12011 High-potential electrical conductors.**

High-potential electrical conductors shall be covered, insulated, or placed to prevent contact with low potential conductors.

**§ 57.12012 Bare signal wires.**

The potential on bare signal wires accessible to contact by persons shall not exceed 48 volts.

**§ 57.12013 Splices and repairs of power cables.**

Permanent splices and repairs made in power cables, including the ground conductor where provided, shall be—

- (a) Mechanically strong with electrical conductivity as near as possible to that of the original;
- (b) Insulated to a degree at least equal to that of the original, and sealed to exclude moisture; and,
- (c) Provided with damage protection as near as possible to that of the original, including good bonding to the outer jacket.

**§ 57.12014 Handling energized power cables.**

Power cables energized to potentials in excess of 150 volts, phase-to-ground, shall not be moved with equipment unless sleds or slings, insulated from such equipment, are used. When such energized cables are moved manually, insulated hooks, tongs, ropes, or slings shall be used unless suitable protection

for persons is provided by other means. This does not prohibit pulling or dragging of cable by the equipment it powers when the cable is physically attached to the equipment by suitable mechanical devices, and the cable is insulated from the equipment in conformance with other standards in this part.

**§ 57.12016 Work on electrically-powered equipment.**

Electrically powered equipment shall be deenergized before mechanical work is done on such equipment. Power switches shall be locked out or other measures taken which shall prevent the equipment from being energized without the knowledge of the individuals working on it. Suitable warning notices shall be posted at the power switch and signed by the individuals who are to do the work. Such locks or preventive devices shall be removed only by the persons who installed them or by authorized personnel.

**§ 57.12017 Work on power circuits.**

Power circuits shall be deenergized before work is done on such circuits unless hot-line tools are used. Suitable warning signs shall be posted by the individuals who are to do the work. Switches shall be locked out or other measures taken which shall prevent the power circuits from being energized without the knowledge of the individuals working on them. Such locks, signs, or preventive devices shall be removed only by the person who installed them or by authorized personnel.

**§ 57.12018 Identification of power switches.**

Principal power switches shall be labeled to show which units they control, unless identification can be made readily by location.

**§ 57.12019 Access to stationary electrical equipment or switchgear.**

Where access is necessary, suitable clearance shall be provided at stationary electrical equipment or switchgear.