(B) Lighting Circuits. Lighting circuits shall comply with the requirements of Article 410.

(C) Heating and Air-Conditioning Circuits. Branch circuits for heating and air-conditioning equipment located on the elevator car shall not have a circuit voltage in excess of 1000 volts.

620.4 Live Parts Enclosed. All live parts of electrical apparatus in the hoistways, at the landings, in or on the cars of elevators and dumbwaiters, in the wellways or the landings of escalators or moving walks, or in the runways and machinery spaces of platform lifts and stairway chairlifts shall be enclosed to protect against accidental contact.

Informational Note: See 110.27 for guarding of live parts (1000 volts, nominal, or less).

620.5 Working Clearances. Working space shall be provided about controllers, disconnecting means, and other electrical equipment in accordance with 110.26(A).

Where conditions of maintenance and supervision ensure that only qualified persons examine, adjust, service, and maintain the equipment, the clearance requirements of 110.26(A) shall not be required where any of the conditions in 620.5(A) through (D) are met.

(A) Flexible Connections to Equipment. Electrical equipment in the following is provided with flexible leads to all external connections so that it can be repositioned to meet the clear working space requirements of 110.26:

(1) Controllers and disconnecting means for dumbwaiters, escalators, moving walks, platform lifts, and stairway chairlifts installed in the same space with the driving machine
(2) Controllers and disconnecting means for elevators installed in the hoistway or on the car
(3) Controllers for door operators
(4) Other electrical equipment installed in the hoistway or on the car

Due to the physical constraints of the locations where this equipment typically is installed and the necessity of performing diagnostic work on it while it is energized, 620.5(A) permits flexible leads on equipment so it can be moved to a location that meets the working clearance requirements of 110.26(A).

(B) Guards. Live parts of the electrical equipment are suitably guarded, isolated, or insulated to reduce the likelihood of inadvertent contact with live parts operating at voltages greater than 30 volts ac rms, 42 volts ac peak, or 60 volts dc, and the equipment can be examined, adjusted, serviced, or maintained while energized without removal of this protection.

(C) Examination, Adjusting, and Servicing. Electrical equipment is not required to be examined, adjusted, serviced, or maintained while energized.

(D) Low Voltage. Uninsulated parts are at a voltage not greater than 30 volts rms, 42 volts peak, or 60 volts dc.

Δ **620.6 Ground-Fault Circuit-Interrupter Protection for Personnel.**

N **(A) Pits, Hoistways, and on Cars.** Each 125-volt, single-phase, 15- and 20-ampere receptacle installed in pits, in hoistways, on the cars of elevators and dumbwaiters associated with wind turbine tower elevators, on the platforms or in the runways and machinery spaces of platform lifts and stairway chairlifts, and in escalator and moving walk wellways shall be a listed Class A ground-fault circuit-interrupter type.

N **(B) Machine Rooms, Control Spaces, Machinery Spaces, Control Rooms, and Truss Interiors.** All 125-volt, single-phase, 15- and 20-ampere receptacles installed in machine rooms, control spaces, machinery spaces, control rooms, and truss interiors shall have listed Class A ground-fault circuit-interrupter protection for personnel.

N **(C) Sump Pumps.** A permanently installed sump pump shall be permanently wired or shall be supplied by a receptacle that is protected by a listed Class A ground-fault circuit-interrupter.

These GFCI requirements are intended to reduce the shock hazard to maintenance personnel who service elevator equipment using portable hand tools and temporary lighting.

Section 620.6(A) requires GFCI-type receptacles based on the premise that the reset pushbutton for a tripped GFCI receptacle should be within easy reach of an elevator mechanic working in a confined space.

Section 620.6(B) requires that all 15- and 20-ampere receptacles installed in machine rooms and machinery spaces have GFCI protection. This protection can be afforded by either a GFCI-type circuit breaker or a GFCI-type receptacle because machine spaces usually do not cause access hazards for service personnel.

Section 620.6(C) requires that sump pumps for equipment installed under the scope of Article 620 have GFCI protection, which aligns with other areas of the *NEC*® that require GFCI protection of sump pumps, such as 210.8(D) and 422.5(A).

Part II. Conductors

Δ **620.11 Insulation of Conductors.** The insulation of conductors shall comply with 620.11(A) through (D).

Informational Note: See UL 2556-2015, *Wire and Cable Test Methods*, for one method of determining that the insulation of conductors is flame retardant by testing the conductors or cables to the FV-2/VW-1 Test.

(A) Hoistway Door Interlock Wiring. The conductors to the hoistway door interlocks from the hoistway riser shall be one of the following:

(1) Flame retardant and suitable for a temperature of not less than 200°C (392°F). Conductors shall be Type SF or equivalent.