

Circuit voltage	Type of glove required
Greater than 120 volts (nominal) (not intrinsically safe) .....	Rubber insulating gloves with leather protectors.
40 volts to 120 volts (nominal) (both intrinsically safe and non-intrinsically safe) .....	Either rubber insulating gloves with leather protectors or dry work gloves.
Greater than 120 volts (nominal) (intrinsically safe) .....	Either rubber insulating gloves with leather protectors or dry work gloves.

(4) Rubber insulating gloves must be rated at least for the nominal voltage of the circuit when the voltage of the circuit exceeds 120 volts nominal and is not intrinsically safe.

(e) Before troubleshooting and testing a low- or medium-voltage circuit contained in a compartment with a high-voltage circuit, the high-voltage circuit must be deenergized, disconnected, grounded, locked out and tagged in accordance with paragraph (b) of this section.

(f) Prior to the installation or removal of conveyor belt structure, high-voltage cables extending from the section power center to longwall equipment and located in the belt entries must be:

- (1) Deenergized; or
- (2) Guarded in accordance with §75.816 of this part, at the location where the belt structure is being installed or removed; or
- (3) Located at least 6.5 feet above the mine floor.

#### **§75.821 Testing, examination and maintenance.**

(a) At least once every 7 days, a person qualified in accordance with §75.153 to perform electrical work on all circuits and equipment must test and examine each unit of high-voltage longwall equipment and circuits to determine that electrical protection, equipment grounding, permissibility, cable insulation, and control devices are being properly maintained to prevent fire, electrical shock, ignition, or operational hazards from existing on the equipment. Tests must include activating the ground-fault test circuit as required by §75.814(c).

(b) Each ground-wire monitor and associated circuits must be examined and tested at least once each 30 days to verify proper operation and that it will cause the corresponding circuit-interrupting device to open.

(c) When examinations or tests of equipment reveal a fire, electrical shock, ignition, or operational hazard, the equipment must be removed from service immediately or repaired immediately.

(d) At the completion of examinations and tests required by this section, the person who makes the examinations and tests must certify by signature and date that they have been conducted. A record must be made of any unsafe condition found and any corrective action taken. Certifications and records must be kept for at least one year and must be made available for inspection by authorized representatives of the Secretary and representatives of miners.

#### **§75.822 Underground high-voltage longwall cables.**

In addition to the high-voltage cable design specifications in §75.804 of this part, high-voltage cables for use on longwalls may be a type SHD cable with a center ground-check conductor no smaller than a No. 16 AWG stranded conductor. The cables must be MSHA accepted as flame-resistant under part 18 or approved under subpart K of part 7.

#### **§75.823 Scope.**

Sections 75.823 through 75.834 of this part are electrical safety standards applicable to 2,400 volt continuous mining machines and circuits. A "qualified person" as used in these sections means a person meeting the requirements of §75.153. Other standards in 30 CFR apply to these circuits and equipment where appropriate.

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#### **§75.824 Electrical protection.**

(a) *Trailing cable protection.* The trailing cable extending to the high-voltage continuous mining machine must be