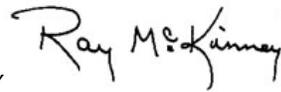


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PROGRAM INFORMATION BULLETIN NO. P05-17

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SUBJECT: Overcurrent Protection for Electrical Systems on Nonpermissible Outby Diesel-Powered Equipment; Compliance with Title 30 Code of Federal Regulations, Sections 75.1910(a), (b), (c), (d), (e), and (f)

Scope

Underground coal mine operators, miner's representatives, manufacturers of outby electric start diesel-powered equipment used in underground coal mines, mine equipment rebuild and repair facilities, Mine Safety and Health Administration (MSHA) enforcement personnel and other interested parties should have this information.

Purpose

The purpose of this bulletin is to assist the mining community in complying with Title 30 Code of Federal Regulations (30 CFR) Sections 75.1910(a), (b), (c), (d), (e), and (f). These sections provide the requirements for overcurrent protection of electrical circuits on nonpermissible outby diesel-powered equipment directly using storage batteries and integral charging systems.

How does MSHA determine overcurrent protection under Section 75.1910(a), (b), (c), (d), (e) and (f)?

Title 30 CFR Section 75.1910(a) refers to Sections 75.518 and 75.518-1 to the adequate overload and short circuit protections of electrical circuits and components on nonpermissible outby diesel-powered equipment using storage batteries and integral charging systems. Sections 75.518 and 75.518-1, in turn, refer to the National Electric Code (NEC), 1968, for adequate sizing of short circuit and overload protections. Short circuit and overload protections of electrical circuits and components on outby diesel powered equipment are adequate when they meet or exceed the safety requirements in the 1968 NEC.

To assist the mining industry using current technology, MSHA developed a list (a guide) of short-circuit and overload protection devices, engine models, and battery systems which were tested by MSHA and found to comply with 30 CFR Section 75.1910. This guide is on MSHA's web page at <http://www.msha.gov/S&HINFO/TECHRPT/DIESEL/FUSE.PDF>.

The methods provided in the guide are not the only methods that an operator may use to comply with Section 75.1910.

Short circuit and overload protective devices that exceed the minimum requirements of the 1968 NEC or other issues regarding the installation of short circuit protective devices for this type of equipment should be addressed to the district electrical supervisor.

The mine operator should make and keep a record of any tests performed that provide compliance with the NEC 1968 requirements. For compliance purposes, a record should be kept of each outby piece of diesel-powered equipment. This list should include the engine starter motor size rated in kilowatts, the starter motor manufacturer name, the length and size of battery cables, the type fuse(s) or circuit breaker(s) with their ratings and settings and the available battery short circuit current during fault conditions. When equipment batteries need to be replaced, they must always be replaced with batteries that have equal to or better than the cold cranking capabilities of the battery installed by the original equipment manufacturer.

Background

MSHA developed the compliance guide on the web page based on requests from mining industry personnel for assistance in complying with 30 CFR Section 75.1910(a), (b), (c), (d), (e), and (f). Questions were raised regarding MSHA's web page guide and whether the list specified on the web page contains the only components that can be used by industry to comply with the short-circuit and overload protection required under 75.1910(a), (b), (c), (d), (e), and (f). Stated above, this guide is provided to assist operators in complying with Section 75.1910. The guide does not represent all methods available to comply with Section 75.1910.

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Internet Availability

This information bulletin may be viewed on the Internet by accessing MSHA's home page at www.msha.gov and then choosing "Compliance Info", and "Program Information Bulletins."

Authority

The Federal Mine Safety and Health Act of 1977; 30 CFR Section 75.1910(a), (b), (c), (d), (e), and (f).

Distribution

MSHA Program Policy Manual Holders

MSHA Special Interest Groups

Underground Coal Mine Operators

Miner's Representatives

Manufacturers of Outby Electric Start Diesel Equipment

Mine Equipment Rebuild Facilities