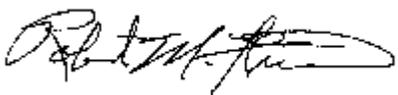


ISSUE DATE: JANUARY 23, 2004

PROGRAM INFORMATION BULLETIN NO. P04-04

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SUBJECT: Continuous Mining Machine Safety Features (Main Machine  
Circuit-Interrupting Device, Remote Traction Motor Circuit Breaker  
Reset, E-stop Override, Methane Monitor Failure Override)

**Who needs this information?**

Operators of underground coal or metal and nonmetal mines, independent contractors, miner's representatives, Mine Safety and Health Administration (MSHA) enforcement personnel, state mining agencies, mine equipment manufacturers, and other interested parties need this information.

**What is the purpose of this bulletin?**

This bulletin is intended to inform the mining industry of certain features that provide safe measures when operating certain continuous mining machines with hand-held remote controls during extended cut operations. Some continuous mining machines have been designed with safety design features that could help

reduce the number of accidents from the use of the equipment during extended cut operations. This bulletin informs the industry of the following features:

- (1) Main Machine Circuit-Interrupting Device
- (2) Remote Traction Motor Circuit Breaker Reset
- (3) Emergency Stop Override
- (4) Methane Monitor Failure Override

**What is the capability of these features?**

The Main Machine Circuit-Interrupting Disconnect Device is approved for certain models of continuous mining machines. The purpose of this switching device is to reduce the hazards associated with main machine breaker trips on the continuous miner when the machine is under unsupported roof. This feature will allow the breaker to be reset at the power center and negate the need for the continuous miner operator to manually reset the main breaker on the machine itself.

The Remote Traction Circuit Breaker Reset is also approved for certain models of continuous mining machines. The purpose of the remote traction reset feature is to provide a safe method of resetting a tripped traction circuit breaker when the machine is under unsupported roof. The breaker handle is operated mechanically by a hydraulic cylinder located in the enclosure on the machine. The cylinder is activated by energizing solenoids from the portable hand carried remote control. Once reenergized, the machine can then be trammed to supported roof areas.

The Emergency Stop Override feature is approved on certain models of continuous mining machines. When the emergency stop switch located onboard the machine has been accidentally engaged by the action of the machine against the rib, this feature allows the operator to move the machine to a supported roof area to manually reset the emergency stop switch.

The Methane Monitor Failure Override is approved on certain models of continuous mining machines. When the machine's circuitry detects a methane monitor system malfunction, the machine will automatically shutdown and the operator will be informed of the malfunction. The continuous mining machine operator then has the option of tramping the machine back to supported roof for repair. When engaged, the override feature automatically disables certain machine functions (*i.e.* cutting or conveying). The override feature will not work when the machine deenergizes due to high methane concentrations and the machine's circuitry will not allow the machine to be trammed back to supported roof until the methane concentrations are reduced.

It should be noted that, if the override feature is used to tram the machine back to supported roof, methane testing using other methods must continue in underground coal mines in order to detect hazardous concentrations of methane while tramping as prescribed by Title 30 Code of Federal Regulations (CFR) 75.362(d)(1)(ii) and (iii) for underground coal mines. With respect to I-A, II-A,

III, and V-A metal/nonmetal mines, in order to avoid a citation for not having an operable methane monitor system, it is recommended that methane monitoring using other methods continue while tramming. If high methane concentrations are detected, the machine will shut down as required by 30 CFR 75.342, 57.22306, 57.22307, 57.22308, and 57.22309.

**What is the background for this bulletin?**

Continuous mining machines operated by hand-held remote controls are being used to make extended face cuts. The machine, at times, is completely under unsupported roof. If the tram breaker trips or the methane monitor malfunctions, the machine is disabled and resetting the breaker or repairs to the monitor system must be made at the machine location. If the machine is beyond supported roof, temporary roof supports are required in the unsupported areas in order for workers to access the machine and reset the breaker or repair the monitor.

At least one manufacturer has these features available for certain continuous mining machines. The features are engineered such that the disabled machine can be safely trammed from unsupported roof areas so the methane monitor system can be repaired and other functions such as cutting or conveying circuits can be re-energized.

**What is MSHA's authority for this Program Information Bulletin?**

The Federal Mine Safety and Health Act of 1977; 30 CFR Parts 57.22306, 57.22307, 57.22309, and 75.342.

**Is this Program Information Bulletin on the Internet?**

This Program Information Bulletin may be viewed on the World Wide Web by accessing the MSHA's home page (<http://www.msha.gov>) and then by choosing "Rules & Regs" and "Compliance Assistance Information" and "Program Information Bulletins."

**Who is the MSHA contact person for this bulletin?**

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**Who will receive this bulletin?**

MSHA Program Policy Manual Holders  
Underground Mine Operators  
Mine Equipment Manufacturers  
Miners' Representatives  
Special Interest Groups