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PROGRAM INFORMATION BULLETIN NO. P11-15

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SUBJECT: Reissue of P09-32 - Safe Design or Retrofit for Safely Resetting
the Main Disconnect on Battery-Powered Scoops in
Underground Mines

Who needs this information?

This Program Information Bulletin (PIB) applies to underground coal mine operators, equipment manufacturers, miners' representatives, and Coal Mine Safety and Health (CMS&H) enforcement personnel.

What is the purpose of this PIB?

This PIB informs the mining industry and CMS&H enforcement personnel of the potential hazard that exists when resetting the circuit breaker of a battery-powered scoop. It also discusses methods to eliminate this hazard.

Information

Prior to 1981, most battery-powered scoops were not provided with an interlock system to prevent the pump motor from restarting when the circuit breaker was reset. The interlock system required a modification to the design of the electrical circuits and required an investigation and approval by MSHA. This system could be adapted to the scoop and would require the pump motor switch to be "reset" in the operator's deck before the pump motor would start.

On January 13, 2004, MSHA issued PIB No. P04-01 recommending that all applicants for MSHA approval of battery-powered scoops include a separate start switch for the pump motor as part of their design, that a separate start switch for the pump motor be installed and maintained on all battery-powered scoops currently in use, and that

equipment operator training be provided when upgrading or modifying a battery-powered scoop.

Another means to reset the circuit breaker in a battery-powered scoop without placing the scoop operator in a hazardous position is the installation of a mechanical device similar to the gas feed cable on a lawn mower. This device can be mounted to the battery-powered scoop with a connector which is attached to the circuit breaker handle and operated by a "T" handle in the operator's compartment. Hence, this device allows for the resetting of the circuit breaker without having to leave the operator's compartment. Many battery-powered scoops are now manufactured with such a device. If a battery-powered scoop is not so equipped, this mechanical device can be purchased from a parts distributor and installed on a scoop without acquiring MSHA approval of this modification.

Mine operators should immediately inspect the battery-powered scoops being utilized at their mines. The scoops should be provided with a device whereby the scoop operator can reset the circuit breaker from a safe position in the scoop. Scoops should thus be equipped with an electrical (interlock) and/or mechanical device (cable) which prevents the scoop operator from being in a hazardous area while resetting the circuit breaker.

Battery-powered scoops are an essential part of mining. For example, this equipment is used for the haulage of coal from the working face, for the transportation of supplies to the mining sections, and for the transportation of miners into and out of the mine. Hence, since a battery-powered scoop is in constant use, it is important that this electrical equipment be maintained in a safe operating condition.

What is the background for this PIB?

During an inspection of an underground coal mine, an MSHA inspector observed a hazardous condition involving a battery-powered scoop. A scoop operator had dismounted his scoop and positioned himself in the swivel portion of the scoop while resetting the circuit breaker. Upon the scoop operator's resetting of the circuit breaker, the scoop's hydraulic pump motor started thereby posing a potential crushing injury to such operator.

In addition, in September 2001, in Walker County, Alabama, a battery-powered scoop operator suffered a dislocated hip when he was pinned between the scoop and the roof while resetting the circuit breaker. The scoop operator had leaned across the frame of the scoop to reset the circuit breaker and had inadvertently pressed the bucket's "lower" lever. When he reset the circuit breaker, the hydraulic pump motor started, the bucket lowered, and the frame of the scoop arched at the center section thereby pinning the operator into the roof.

What is MSHA's authority for this PIB?

The Federal Mine Safety and Health Act of 1977, as amended, 30 U.S.C. § 801 et seq., and 30 C.F.R. § 75.512.

Where is this PIB on the Internet?

This information may be viewed on the World Wide Web by accessing [MSHA's home page](#) then choosing "Compliance Info" and "Program Information Bulletins."

Who are the MSHA contact persons for this PIB?

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Who will receive this PIB?

MSHA Program Policy Manual Holders

Miners' Representatives

Coal Mine Operators

Mine Equipment Manufacturers

Repair and Rebuild Facilities

Special Interest Groups