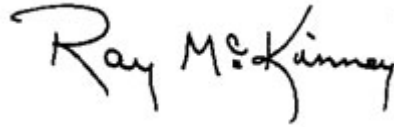
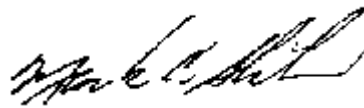


ISSUE DATE: 5/12/06

PROGRAM INFORMATION BULLETIN NO. P06-09



FROM: Ray McKinney  
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SUBJECT: Lever Lock Systems Used as Parking Brakes

**Who needs this information?**

Mine Safety and Health Administration (MSHA) personnel, underground coal mine operators, miners' representatives, diesel and electric-powered machine manufacturers, and repair shop facilities should have this information.

**Why is MSHA issuing this bulletin?**

This Program Information Bulletin (PIB) emphasizes the potential hazards that can be created through the use of lever lock devices that trap a column of fluid in the service brake system to act as a "parking brake." Factors such as leakage and contraction of fluid as hot brake components cool down, after the equipment is parked, have led to accidents when a lever lock device was relied upon as the sole means to hold parked equipment. Coal Mine Safety and Health recommends that lever lock devices presently used on underground electric haulage equipment be removed from the service brake systems and that equipment operators rely on the emergency-parking brake to prevent movement when equipment is parked.

**What hazard is created by using a lever lock device as a parking brake?**

MSHA studies of underground coal mine fatalities indicate lever lock devices may have been a factor in 14 accidents in the past five years. In previous years lever lock devices have been a factor in fatal accidents. The presence of lever lock devices on mining equipment may encourage equipment operators to use the lever lock device to hold equipment stationary instead of relying on the emergency-parking brake. As a result, these lever lock devices may set the stage for future accidents.

**What equipment does this hazard affect?**

With the exception of personnel carriers, all rubber-tired, self-propelled electric haulage equipment taken underground in coal mines must meet the requirements of Title 30 Code of Federal Regulations (30 CFR) §75.523-3. Under this requirement, automatic emergency-parking brakes must hold the mining equipment stationary on the maximum grade where it is operated, despite any contraction of the brake parts, exhaustion of any non-mechanical source of energy, or leakage of any kind. A lever lock device installed in the service brake system is not designed to be used as a parking brake and does not meet the 30 CFR §75.523-3 requirements for an emergency-parking brake.

For comparison, §75.1909(b)(8) specifically prohibits lever lock devices on all self-propelled diesel-powered equipment used in underground coal mines, with the exception of ambulances and fire fighting equipment. Section 75.1909(b)(8) states “No device that traps a column of fluid to hold the brake in the applied position shall be installed in any brake system, unless the trapped column of fluid is released when the equipment operator is no longer in contact with the brake activation device.”

The MSHA Program Policy Manual in Volume II, page 11 (§ 18.20), specifies that MSHA will not approve equipment with parking brake systems that depend upon locking a column of fluid within the braking system to maintain contact between the friction material and the braking surface.

**What is the background of this PIB?**

A review of government and industry standards for the mining and construction industries shows that lever lock devices fail to meet any of the MSHA, Occupational Safety and Health Administration, Society of Automotive Engineers, or Department of Transportation parking brake standards. This PIB replaces and updates a previous PIB (P96-24).

**What is the authority for this PIB?**

The authority for this PIB is 30 CFR §§ 75.523-3 and 75.1909(b)(8).

**Who are the MSHA contact persons for this PIB?**

Coal Mine Safety and Health, Safety Division

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**Is this PIB available on the internet?**

This PIB may be viewed on the World Wide Web by accessing the MSHA Home Page [www.msha.gov](http://www.msha.gov) and then choosing "Compliance Info," and "Program Information Bulletins."

**Who will receive this PIB?**

Program Policy Manual Holders

Miners Representatives

Underground Coal Mine Operators

Manufacturers of self-propelled diesel or electric-powered equipment

Owners of self-propelled diesel or electric-powered equipment

Special Interest Groups