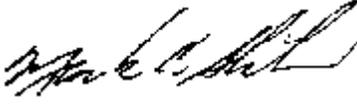


ISSUE DATE: 09/28/04

PROGRAM INFORMATION BULLETIN NO. P04-21

FROM: MARK E. SKILES   
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Coal Mine Safety and Health

SUBJECT: Design Features of Brookville Battery Powered, Rail Mounted  
Personnel Carriers and Locomotives

**Who needs this information?**

Mine Safety and Health Administration (MSHA) personnel, coal and metal and nonmetal mine operators, miners' representatives, and repair shops need this information.

**Why is MSHA issuing this bulletin?**

MSHA is issuing this bulletin to assist Brookville Equipment Corporation (Brookville) in notifying the mining industry of issues with Brookville battery powered, rail mounted personnel carriers and locomotives. Brookville has published Product Information Bulletins (Bulletins) 58 through 62 on the proper operation of units with gearbox driven axles (58), axle end cap security (59), installation of a braking module to improve electrical braking (60), warnings for engaging the E-Stop on personnel carriers (61), and warnings for engaging the E-Stop on locomotives (62). Please refer to these bulletins, which are attached to this PIB, for more information.

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

A Brookville model ULPC-13D personnel carrier was involved in a non-fatal accident in a West Virginia coal mine. The mantrip was traveling down a grade when the operator realized he had lost electric brake capability (regenerative braking). The vehicle operator broke off one of the two hydraulic service brake handles while attempting to gain control of the vehicle. The mantrip traveled over 3000 feet out of control.

The accident investigation revealed that an axle key was missing from one of the gearboxes. Without the key in place, the axle was free to turn even though the brake was applied. Brookville Bulletins 58 and 59 describe the proper operation of machines equipped with gearbox driven axles and the importance of periodically checking that the end cap and key steel are in place on each axle.

The service brake was unable to slow the mantrip because of the missing axle key. As the mantrip traveled down the grade, the internal impedance of the battery increased, which resulted in an overvoltage condition. Regenerative braking capabilities are lost in overvoltage conditions. Brookville and Saminco report that the overvoltage trip problem can be eliminated by the addition of the braking module, or brake chopper unit, described in Bulletin 60.

Activation of the E-Stop has different results on personnel carriers as opposed to locomotives. Bulletin 61 lists the features that are disabled upon activating the E-Stop on a personnel carrier, while 62 lists those disabled on a locomotive. Engaging the E-Stop on both types of units disconnects all electrical power, which disables tramming, regen braking, lights, sanders, the horn, etc. However, engaging the E-Stop on a personnel carrier will cause the emergency/parking brake to engage. Locomotives are equipped with air over hydraulic brakes; engaging the E-Stop **does not** cause the emergency/park brake to engage on a locomotive. Bulletins 61 and 62 also offer a warning label to attach near the E-Stop button warning machine operators of this situation.

### **What machines are affected?**

The following chart indicates which Brookville equipment models are affected by each production bulletin.

Model Number	Brookville Production Bulletins				
	58	59	60	61	62
SUL	X	x	x	x	
SULB	X	x			
ULPC	X	x	x	x	
10M65D	X	x			
4M30BT	X	x			
7M30BT	X	x			
15M30BT	X	x			
1260B			x		x
15100B			x		x
B15100T			x		x
5M305			x	x	
1842B			x	x	

**What steps should be taken?**

Brookville recommends the following:

- Units with malfunctioning regenerative or service brakes are to be removed from service IMMEDIATELY.
- All units should be upgraded with a braking module to ensure the safe operation of the regenerative braking system.
- Units should be serviced according to recommended maintenance procedures and schedules to ensure that the axle keys are in place so that the mechanical brakes function properly.
- A regular battery inspection should be added to the maintenance schedule because faulty and/or poorly maintained batteries can contribute to an overvoltage condition.
- Customers should take advantage of operator training services offered by Brookville.

Please contact Brookville for the braking module kit required for a particular machine and for operator training materials.

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

The authority for this bulletin is Title 30 Code of Federal Regulations Part 75.512.

**Whom can I contact at Brookville Equipment Corporation?**

Brookville Equipment Corporation

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**Is this information bulletin available on the internet?**

This Program Information Bulletin may be viewed on the World Wide Web by accessing the MSHA home page (<http://www.msha.gov>) and choosing "Compliance Info," and "Program Information Bulletins."

**Who will receive this bulletin?**

MSHA Enforcement Personnel  
Program Policy Manual Holders  
Miners' Representatives  
Underground Mine Operators  
Repair Shop Facilities

Attachments