



MSHA's Accident Prevention Program Safety Idea

**SAFETY
IS A
VALUE!**

"Remote Controlled LHD Design Safety Recommendations"

Category : Haulage

Mine Type: Underground Metal and Nonmetal

In a recent non-fatal accident, a remote controlled diesel powered Load-Haul-Dump (LHD) operator was pinned against the rib by the rear of the machine while performing mucking operations on a grade. Possible contributing factors to the accident were certain design and operational features of the machine. The machine design permitted full articulation with the brakes applied. Also, once the parking brake was released and if the brakes were not applied by a separate thumb activated joystick switch, the machine could free-wheel and coast down a grade. Some safety recommendations to consider when purchasing new remote controlled LHD equipment and possibly for retrofitting your existing machine include:



- Specify guarding or a man-in-position switch on the remote control to help prevent any accidental activation of machine functions.
- If a man-in-position switch option is chosen, consult with your equipment operators for a preferred location to prevent this switch from being bypassed.
- To prevent coasting down a grade, have the remote control designed so that brakes are automatically applied until machine motion is initiated.
- Standardize the functions and control layout of all the remote control units used at your mine. If this is not possible, keep the same operators with the same remote controllers to avoid confusion when switching units.
- Consider specifying proportional controls for the functions that control machine speed and turning for smoother and more controllable operation than simple On/Off controls (This will also reduce wear and tear on the machine).
- Train operators on safe work practices related to remote controlled LHD's (See Miner's Tip "Remote Controlled Load Haul Dump Equipment").

Note: Some of these features may be retrofitted to many existing designs by the manufacturer.

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Remember – Safety is a Value that you can LIVE with!