Front wheels of integrated tool carrier (IT) lifted off ground during boom emergency lowering

Mines safety alert no. 353

What happened?

A maintenance worker was operating a ground controlled after-market manual emergency lowering system, to lower the boom of the IT onto a stand, when the front wheels lifted off the ground and the whole machine tilted over towards the worker.

The stand then skidded sideways, allowing the IT to come back down onto it wheels.

The worker was not injured.

How did it happen?

The boom was being lowered so that the carriage for the work platform could be placed onto a stand during maintenance activities. Because the engine of the IT was running, the emergency lowering system could receive boom control hydraulic pressure, in effect powering down the boom instead of it being pumped down manually.

Comments

The consequences of lowering the boom onto the stand using the emergency lowering system with the engine running could have been serious. In this particular case the hazard was not identified. If the hazard had been identified, an engineering control should have been in place. In addition, the hazards relating to emergency lowering were more difficult to manage because the mine had a number of different emergency lowering systems.

Incidents involving other after-market additions have recently occurred, including installation of turbo timers: see *Safety alert 345 Truck driven from Go-line with turbo timer activated,* at https://www.dnrme.qld.gov.au/business/mining/safety-and-health/alerts-and-bulletins/mines-safety/truck-driven-turbo-timer-activated

Recommendations:

When after-market items of plant are added to a host machine, there must be a risk assessment undertaken to ensure that new hazards are identified, assessed and effectively controlled and that existing controls are re-evaluated. The risk assessment must be undertaken by persons who have the expertise to use the correct risk assessment technique and also have the technical knowledge to identify latent or less obvious hazards that could exist under abnormal circumstances.

All after-market emergency lowering systems should now be risk assessed to ensure that no unplanned movement can occur.

Whenever practical, installation of different subsystems within a fleet of otherwise identical plant should be avoided because it introduces greater complexity to the maintenance and training regimes.

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