



Significant Incident Report No. 281

Subject: Underground mine workers tipped out of work basket used with integrated tool carrier

Date: 07 May 2020

Summary of incident

On 11 February 2020, a service crew were relocating a “jumbo box” and hanging an attached high voltage electrical supply cable. They were using an integrated tool carrier (ITC) with a work basket.

While hanging the electrical cable for the jumbo box from the backs (i.e. ceiling) of the drive, there was a catastrophic failure of the dog bone linkage on the boom of the ITC resulting in the work basket suddenly and unexpectedly rotating forward. The two workers in the work basket were thrown onto the ground. They received serious, but non-fatal injuries.

Both workers were using a fall protection system at the time, consisting of full body harnesses and fall restraint lanyards connected to anchor points on the work basket. However, the work basket was only a short distance above the ground and the lanyards were too long to restrain the fall.



View of work basket from wheel 1 position with incident scene undisturbed.

Direct causes

The dog bone linkage failed suddenly and catastrophically allowing the quick hitch to pivot freely under gravity. The cantilevered mass of the work basket and contents (gross mass in excess of 1500 kg) resulted in a very sudden and energetic rotation of the work basket which threw the two workers out onto the ground.

Contributory causes

The fall protection system that the workers were using was designed to control the consequences of a much greater fall from height. Shorter lanyards or the additional use of fall arrest devices may have prevented the workers from impacting the ground.

Actions required

- Fall protection systems used when working from underground work baskets should be reviewed in line with the guidance in AS/NZS 1891 Series Industrial fall-arrest systems and devices.
- An appropriate combination of height safety equipment, including fall restraint and/or fall arrest devices, should be considered in each particular case to ensure the greatest possible security against workers impacting the ground.
- ITCs and work baskets used for working at height need to be designed, manufactured, tested, periodically inspected and maintained, all by competent persons to ensure that the risk of ejection from the work basket through any component failure is reduced so far as is reasonably practicable.

Further information

- Australian Standard AS/NZS 1891.4 Industrial fall arrest systems and devices – Selection, use and maintenance
- Australian Standard AS 2550.10 Cranes, hoists and winches – Safe use – Mobile elevating work platforms
- Department of Mines, Industry Regulation and Safety

Mines Safety Bulletin No. 114, Compliance requirements for multi-purpose plant

www.dmp.wa.gov.au/Documents/Safety/SRS-Publications-Mining_and_Explorations-Safety_Bulletin_114.pdf

This Significant Incident Report was approved for release by the State Mining Engineer on 07 May 2020