



## Significant Incident Report No. 231

**Subject:** Falling rock damages tele-handler leading to serious injuries

**Date:** 24 November 2015

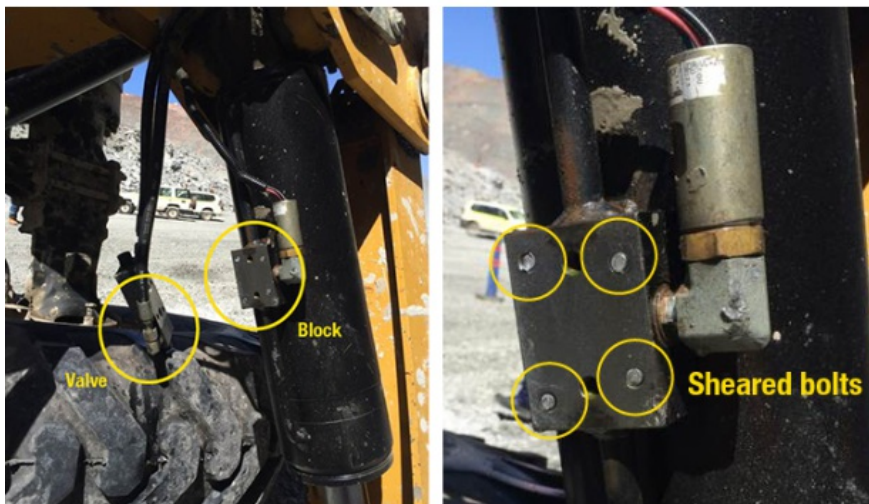
### Summary of incident

A worker in a pit was conducting ground support activities from a work basket attached to a tele-handler elevated about 12 metres above the ground. The worker was manually removing a rock from the face when it fell, striking the hydraulic check valve block on the right-hand front jack of the tele-handler.

The impact dislodged the check valve block, releasing hydraulic fluid. The affected jack retracted, destabilising the tele-handler, which then tipped on to its side. The work basket became wedged against the wall, 6 metres above the pit floor, trapping the worker's legs. The mine's rescue team extricated the worker, who had a fractured lower right leg and crush injuries to his left foot.



Incident scene showing position of tele-handler and attached work basket.



Damaged check valve block. Left: Check valve separated from block. Right: Sheared bolts on check valve block.

## Direct causes

- A rock struck and damaged the check valve block causing hydraulic fluid release and retraction of the jack.

## Contributory causes

- The original equipment manufacturer's (OEM's) check valve covers were inadequate to prevent damage from impact by large or heavy objects.
- Work planning did not consider the potential for equipment to be struck by falling rocks outside the demarcation zone.
- The design of the work basket did not prevent the extension of body parts past the basket's edge protection during uncontrolled movement.

## Actions required

The following actions are recommended so the potential for objects to strike critical components, causing failure, can be addressed.

- Conduct a review of equipment fitted with check valves to determine if a risk of impact exists for the check valve and block.
- For tasks involving working at height, identify scenarios where objects could fall and strike critical equipment and people below.
- For work baskets used to conduct work at height, determine the adequacy of the basket's design to prevent body parts extending past edge protection if there is uncontrolled movement.

## Further information

- Standards Australia, [www.standards.org.au](http://www.standards.org.au)

AS 1418.19 *Cranes, hoist and winches – Telescopic handlers*

Note: Refer to Section 2.7.3.3 Failure of energy supply or hydraulic circuit

*“...in the event of a failure in the hydraulic circuit of the load lifting, tilting, telescoping, stabilising or lateral levelling system(s) or in the event of failure of the driving power supply, means shall be provided to maintain the load or tele-handler in its position.”*

This Significant Incident Report was approved for release by the State Mining Engineer on 24 November 2015