



Mines Safety Significant Incident Report No. 183

Loss of brakes on dump truck

Summary of incident

A dump truck experienced a brake failure on a slight slope. The operator attempted to use the retarder to decrease the speed of the truck but the retarder failed to apply. The operator then applied the foot brake, initially with no response. After about ten seconds, with continuous foot brake application, the truck brakes applied heavily and the operator was able to bring the truck to a controlled stop.

A subsequent investigation by the site-based original equipment manufacturer (OEM) support staff and site fitter identified a leaking brake relay valve.

Probable causes

Direct:

- The brake relay valve failed.

Contributory:

- The brake relay valve had exceeded the OEM's recommended change-out interval of either every 6,000 hours in service or yearly.
- The site fitter was unaware of the change-out recommendation so this part had not been changed out in line with the OEM's recommendation.
- The change-out information was not in the OEM operation and maintenance manual, although it had been published in the OEM's service magazine in November 2005.
- The OEM recommendation was not captured in the site's maintenance planning system.

Actions required

- Changes to OEM or supplier operation and maintenance manuals, and other instructions, should be identified by OEM staff and communicated clearly to all customers.
- Refer to OEM or supplier instructions, specifications and guidance materials for information on component life, change-out periods and maintenance inspections relating to safety-critical areas of mobile plant such as steering and braking systems.
- Ensure site maintenance staff are aware of OEM support structures, service magazines, service bulletins and customer alerts for machine component updates.
- Regularly review the site's compliance to OEM specifications, maintenance instructions and guidelines, safety alerts, and other material providing advice on the safe use and care of mobile equipment onsite.

Further information

Visit the publication section of the Resources Safety website at www.dmp.wa.gov.au/ResourcesSafety for the following safety alerts.

Mines Safety Bulletin No. 73 *Loss of control on highway-type vehicles*

Mines Safety Bulletin No. 72 *Loss of control LME on gradients*

Mines Safety Bulletin No. 52 *Operation of water trucks in open pit mines (quarries)*

Significant Incident Report No. 178 *Water cart loss of control at portal – inadvertent access to underground*

Significant Incident Report No. 139 *Loss of control of service vehicles*

Significant Incident Report No. 84 *Loss of control of water cart – fatal accident*

A handwritten signature in black ink, appearing to read 'A. B. Chaplyn', enclosed within a thin black rectangular border.

Andrew Chaplyn

As delegate for STATE MINING ENGINEER

14 May 2013