Safety Alert

NSW RESOURCES REGULATOR

SA18-02 January 2018

Driver loses control of loader and crashes

This safety alert provides information on a serious incident and safety advice for the NSW mining industry.

Incident

An operator was driving a loader down the side of a tailings dam wall. When the loader travelled over a pile of rocks it lost braking and continued uncontrolled down the wall onto a decant wall. The operator jumped out of the machine, which continued along the rock wall, went over the edge and landed on its side at the base of the wall. The incident occurred in October 2017.

Circumstances

When the operator travelled over the rocks the drain valve fitting on the bottom of the air receiver (under the machine in front of the rear axle) was damaged, allowing air to escape from the receiver.

The service braking system on the loader was air over hydraulic. When the air dumped from the receiver the loader lost its brake functions.

The loader was fitted with a fail-to-safe air release and spring-applied external disc brake park brake.

When the loader came to rest at the bottom of the wall, the engine was running until it seized through hydraulic lock-up.

The operator suffered minor injuries.

Figure 1: The loader at the bottom of the wall. Photo supplied by the mine.

Investigation

An investigation was carried out by the mine. A Resources Regulator inspector attended the incident scene.

The incident investigation determined that:

- the loader had insufficient ground clearance to travel over the height of the rock pile
- the loss of brakes was the result of the loss of air in the air receiver when the drain valve fitting was damaged on the rocks
- the loader was not equipped with a dual circuit service brake system
- the application of the fail-to-safe park brake failed because it was not being adjusted correctly - the disc pads did not make contact with the brake disc when fully applied
- the operator failed to effectively test the park brake system during pre-start checks.

Recommendations

- Mine operators should only operate mobile plant and equipment within the original equipment manufacturer (OEM) design criteria.
- Mine operators should, as a minimum, conduct a risk assessment before undertaking non-routine tasks to identify any risks to health and safety from operations carried out and implement controls to lower the risk of injury to workers to as low as reasonably practical.
- Contractors who carry out mining operations at a mine that are required to operate, service and maintain their mobile plant must comply with the agreed safety management system at the mine.
- Mine operators should review their mechanical engineering control plan and procedures to ensure that inspection, servicing, repairs and maintenance of critical safety components of mobile plant are maintained and adjusted to OEM and site recommendations.
- Mine operators should ensure that all operators of mobile plant at the mine have been deemed competent to operate the mobile plant and that operators undergo refresher training on a regular basis.

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Disclaimer

The information contained in this publication is based on knowledge and understanding at the time of writing. However, because of advances in knowledge, users are reminded of the need to ensure that information on which they rely is up to date and to check the currency of the information with the appropriate officer of NSW Department of Planning and Environment or the user's independent advisor.

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