

SAFETY ALERT

Sudden burst of truck tyre

INCIDENT

While reversing an electric drive haul truck to a parked position last month, the driver's off-side (position two) tyre suddenly failed and burst. Pressurised air was blast into the immediate vicinity where workers were intending to check oil levels on the truck.

Photo 1: Position two tyre after incident.



CIRCUMSTANCES

During a normal haul trip on 5 November 2015, the haul truck operator noted an engine oil light alarm. He contacted despatch, which instructed him to dump his load and park the machine for inspection.

After dumping the load, the operator drove to the nearest park-up area. The area was flat and was graded earlier.

The operator selected reverse gear and turned the steering wheel to the left to position for parking and inspection of the truck for an oil leak.

As the truck moved in reverse, the operator heard a loud noise that sounded like an explosion and moved the truck. The operator called emergency and lowered the truck's access ladder.

After exiting the truck, the operator approached the truck from the front and saw that the position two tyre was deflated. The engine bay sound attenuation door was severely damaged. A slit in the inside sidewall of the failed tyre was evident.

INVESTIGATION

The investigation found that:

- the tyre failure was caused by sidewall failure
- internal visual inspection found no inner tyre damage to explain failure of the tyre sidewall
- the tear of the sidewall was on the truck side of the tyre
- the position of the tear was consistent with contact being made with an open sound attenuation door in the engine bay
- this occurred while the truck was reversed into the designated parking area
- the driver's (or previous driver's) prestart check did not identify the sound attenuation door had been left open and unlatched, at previous truck maintenance
- the truck manufacturer provided an option for interlocking of the door, which was not installed on the truck.

Photo 2: Sidewall slit in the tyre



Photo 3: Open sound attenuation door



RECOMMENDATIONS

The integrity of tyres (and rims) is a critical control in preventing the uncontrolled blast of compressed gas from within the tyre. Mines should:

- Check trucks at their next service to see if it is possible for tyres to be damaged by engine bay doors (or similar) being left open during maintenance activities.
- Where there is a potential risk, install engineering control measures that do not rely on human behaviour, such as:
 - modifying doors so there is no physical contact with the tyre, or
 - installing interlocks that prohibit truck propulsion or provide a disconcerting alarm, in the event doors are inadvertently left open.
- Remind drivers to be diligent in carrying out prestart checks.

Manufacturers should provide safety controls (such as interlocks) as mandatory items when plant is supplied. Safety controls should not be optional extras with supply of plant.

NOTE: Please ensure all relevant people in your organisation receive a copy of this safety alert, and are informed of its content and recommendations. This safety alert should be processed in a systematic manner through the mine's information and communication process. It should also be placed on the mine's notice board.

Issued by

Gary Parker

Chief Inspector of Mines

Appointed pursuant to Work Health & Safety (Mines) Act 2013

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