

# Safety Alert

Mines Inspectorate

All mines

Safety Alert No. 275  
20 September 2011

## Tyre air-blast catches three maintenance personnel

### What happened?

A Bowen Basin open cut coal mine maintenance crew were preparing to conduct chassis repairs on a Cat 773 water cart. It had been out of service for some days, and the repair area was next to the position 5, 24.00R35 radial tyre.

In preparation, the bulk water tank was removed from the truck and the three crew conducted a walk around pre-task job safety analysis (JSA).

They noticed a small bulge, about the size of a fist, on the outer sidewall of the position 5 tyre facing the position 6 tyre, and recorded this on the JSA form. This was to be raised with the tyre fitters who were en-route to remove the position 5 & 6 tyres so the maintenance crew had access for the chassis repairs.

Two maintenance personnel, standing directly behind the position 5 tyre, completed the JSA as the third worker walked towards them past the position 5 & 6 tyres.

A blast suddenly engulfed the workers in a cloud of dust and loose gravel as the tyre sidewall failed catastrophically. The two workers at the rear were showered with hard-stand gravel and fine dust while the third worker was hit with the air blast.

The first responders to the incident treated it as a tyre fire, which required experienced tyre fitters to assess the situation before an examination of the tyre was performed.

### Why did it happen?

A latent defect in the earthmoving truck tyre resulted in the sidewall failure and the uncontrolled release of compressed air. The initial investigation found

- The tyre was not hot and was at operating temperature when the sidewall failed.
- It was not under any structural load as the bulk water tank and spray bar had been removed before the sidewall failed.
- There was nothing visible to indicate the tyre had been run flat or with dangerously low air pressure.

### Recommendations

Those who noticed the bulge on the sidewall did not recognise it as the start of a potentially catastrophic sidewall failure.

This incident reinforces the need for mine sites to assess the adequacy of their processes for managing tyre defects, in particular sidewall bulges and deformation, and for effectively controlling workers' exposure to such hazards.

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