

# SAFETY ALERT

## Fire destroys water truck

### INCIDENT

A fire destroyed a Caterpillar 777F water truck at an open cut coal mine on 15 October 2015. The machine operator managed to get clear of the machine without injury.

Investigations into the cause of the incident are continuing.



### CIRCUMSTANCES

The truck was on hire to the mine since mid-2014. It is one of three similar units in service at the operation.

The truck was watering a ramp leading to a production area when the operator noticed smoke in the rear-view mirror.

He began the mine emergency procedure via the two-way radio and continued to drive the vehicle down the ramp aiming to drive the machine to an isolated location. During this time the power steering system failed.

The operator stopped the truck well clear of the ramp, got off the machine and used an emergency stop to shut down the engine when he reached ground level. By this time, thick smoke surrounded the machine and the operator saw a significant fire in the engine bay.

In accordance with site procedures, an exclusion zone was established around the machine to manage the risks associated with a tyre fire. As the fire intensified, the front right-hand tyre exploded, resulting in the wheel rim coming to rest approximately 100 metres from the truck.

## INVESTIGATION

Issues being examined include:

1. the possibility the fire was initiated as a result of damage to 24V wiring on the machine
2. whether the automatic fire suppression system activated during the fire
3. the machine's maintenance history and breakdown records for any indication as to other potential causes.

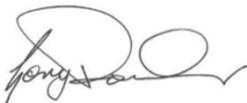
The mine has engaged an independent forensic engineer with specialised skills in investigating machinery fires to assist in the investigation.

## RECOMMENDATIONS

1. Mine operators should review their engineering control plans with regard to a requirement for the installation of extra-low voltage electrical systems on heavy mining equipment to be undertaken in accordance with *AS/NZS4871.6. Electrical equipment for mines and quarries - Diesel powered machinery and ancillary equipment.*
2. Mine operators should review their electrical maintenance inspection procedures for heavy mining equipment. Scheduled maintenance inspections should provide clear direction with regard to checks to be undertaken on wiring and cable looms; identifying the types of areas where damage is likely to occur; checking the integrity of any mechanical protection that may be installed and the actions required in the event that mechanical damage to cabling is identified.
3. Mine operators should review their equipment pre-use inspections with regard to the inclusion of visual checks for damage to cabling and wiring looms.
4. Mine operators should review the management of maintenance and inspection practices for fire suppression systems on plant with regard to verifying that commissioning, maintenance and inspection tasks on these systems are being performed in accordance with *AS5062 Fire protection for mobile and transportable equipment.*
5. In the event of serious fires involving plant, mine operators should engage suitably qualified and competent forensic experts, with appropriate experience in the investigation of equipment fires to assist in the investigation of the incident.

**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 and Safety (Mines) Act 2013**

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