



SAFETY ALERT

Queensland Fatality - Prime Mover Rim Assembly Failure

INCIDENT

A person suffered fatal injuries while changing a dual tyre and rim assembly on a drive axle bogey of a road train prime mover.

The Queensland Department of Natural Resources and Mines have issued the following information regarding the accident.

- A Newsflash issued on the 8 August 2005.
- A Safety Alert No 136 issued on the 22 August 2005.

CIRCUMSTANCES

The tyre rims were typical 5 piece earthmover assemblies.

The inner tyre was pressurized. Upon removal of the outer tyre and rim assembly retaining clamps, the inner rim assembly failed.

The rim assembly failure released the potential energy of the tyre with explosive force, propelling the outer tyre and rim assembly and failed components of the inner rim assembly off the hub.

INVESTIGATION

The Queensland Natural Resources and Mines are conducting the investigation.

RECOMMENDATIONS

1. The current Australian Standard (AS 4457:1997) Earth-moving machinery – Off-Highway Rims and Wheels-Maintenance and Repair is very specific for the demounting of this type of tyre and rim assembly:-

“prior to loosening any wheel nuts, any tyre fitted to a demountable rim to be changed shall be carefully deflated to a maximum pressure of 35 kPa. The tyre and rim assembly shall be removed in accordance with the

vehicle manufacturer's or the site's written procedures. Where dual wheels are used, and the wheel is retained at the hub by other than a wheel disc, any tyre remaining on the same hub shall also be deflated to a maximum pressure of 35 kPa prior to loosening any wheel nuts".

"Note: It is recommended that any tyre fitted to a demountable rim be fully deflated".

2. The standard also details the requirements for inspection and non destructive testing of all rims and components.

This is essential preventative maintenance in the life cycle of all rim components.

3. The Occupational Health and Safety Act 2000 is also specific for employers, designers, manufacturers and suppliers of plant.

Part 2 Duties relating to health, safety and welfare at work

Division 1 General duties

8 Duties of employers

(1) Employees

An employer must ensure the health, safety and welfare at work of all the employees of the employer.

That duty extends (without limitation) to the following:

(a) ensuring that any premises controlled by the employer where the employees work (and the means of access to or exit from the premises) are safe and without risks to health,

(b) ensuring that any plant or substance provided for use by the employees at work is safe and without risks to health when properly used,

(c) ensuring that systems of work and the working environment of the employees are safe and without risks to health,

(d) providing such information, instruction, training and supervision as may be necessary to ensure the employees' health and safety at work,

(e) providing adequate facilities for the welfare of the employees at work.

(2) Others at workplace

An employer must ensure that people (other than the employees of the employer) are not exposed to risks to their health or safety arising from the conduct of the employer's undertaking while they are at the employer's place of work.

11 Duties of designers, manufacturers and suppliers of plant and substances for use at work

(1) A person who designs, manufactures or supplies any plant or substance for use by people at work must:

(a) ensure that the plant or substance is safe and without risks to health when properly used, and

(b) provide, or arrange for the provision of, adequate information about the plant or substance to the persons to whom it is supplied to ensure its safe use.

Signed

A handwritten signature in black ink, appearing to be 'R. Regan', written in a cursive style.

**Rob Regan
DIRECTOR
MINE SAFETY OPERATIONS BRANCH
NSW DEPARTMENT OF PRIMARY INDUSTRIES**

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