



Department of
Natural Resources and Mines

8 February 2016

To all Tyre Fitters, Supervisors, Maintenance and Production Managers, SSEs, and Contractors

The month of February marks the anniversary of two tyre related fatalities in the Queensland mining industry.

The Coroner's report summarises the events around the first fatality as follows:

On 9 February 2004, Peter Marshall was removing the outer, left, rear, dual wheel (Pos 3) from a giant dump truck (Komatsu 630E) at an open-cut zinc mine in far north western Queensland. Suddenly, without warning, the highly compressed air in the inner wheel was released, throwing the 3.5 ton outer wheel some 13 metres. Mr Marshall had been standing in the path of the wheel's flight and he was driven by it across the tyre bay concrete apron. When the wheel came to rest, Mr Marshall was pinned under it. He died shortly afterwards as a result of injuries sustained in the accident. A co-worker also sustained significant injuries.

The second fatality occurred a year ago on 16 February 2015 at a Queensland coal mine. Steve Cave and a co-worker were working on a Cat 777 Position 1 assembly when it suddenly disintegrated killing him, and seriously injuring his helper who lost one of his arms.

Following my recent December 2015 circular to you, I again want to alert you all to the very real dangers about working with tyres and rims, and ensure that the hard lessons learnt are not forgotten.

Higher tyre inflation pressures combined with the often considerable volume of the tyre chamber creates a large concentrated source of energy (and therefore hazard) that, if not effectively controlled, can cause serious injury or death.

There are many effective and known 'critical controls' to mitigate this key hazard and resultant risk. Some controls include:

- Make sure all personnel working on any tyre assembly are not just trained, but competent to do so and familiar with the task he or she is about to undertake. Appropriate well-written and communicated procedures will assist.
- Before removing any tyre, always thoroughly inspect the assembly and any adjacent dual assembly for damage or other hazardous tyre and rim conditions such as partially dislodged lockrings.
- Do not proceed unless safe to do so.
- Deflate the assembly, and where fitted, its dual to reduce the damaging energy contained in both tyres, and ensure you check that the air has been released from

the tyre(s). Once the air (= energy) has been removed, it cannot hurt you or your workmate!

- This deflation step is particularly important for 'cleat mounted' assemblies. Where 'cleat mounted' assemblies are used, the assembly and its dual MUST be deflated before loosening and removing the wheel fasteners. If not deflated there is a real (and known) risk that the air pressure will cause hidden cracks to open up and the rim base to come apart as the wheel fasteners and cleats are removed. The same violent disintegration can occur if the lockring is partially dislodged and peels out completely as wheel fasteners and cleats are removed.
- During inflation, never stand in front of a tyre; use a long inflation hose with remote pressure gauge and shutoff /dump valve to inflate the assembly, at a safe distance.

These simple steps will help you both identify the main hazards and unsafe conditions and reduce the risk of serious injury or fatal injury.

Please use this anniversary as a trigger to raise everyone's awareness and to review the effectiveness of your sites tyre and rim management system.

Particularly I would like you to identify those critical controls which must be in place to prevent a repeat of these two accidents.

Ensure they are captured in your site risk assessments, procedures, your training and assessment protocols, and are known and used without exception by everyone involved in tyre maintenance.

A full copy of the Coroners Recommendations relating to Peter Marshalls death can be downloaded from
http://www.courts.qld.gov.au/__data/assets/pdf_file/0006/86631/cif-marshall-pw-20060519.pdf

Please do not take your eye off the many tyres and rims you are working with.

Not now, not ever.

Yours sincerely



Dr Tilman Rasche
Senior Inspector of Mines
(for the Chief Mine Safety and Health Officer)