



**DEPARTMENT OF MINES  
WESTERN AUSTRALIA**

**SIGNIFICANT INCIDENT REPORT NO. 5**

**SPLIT RING TYRE ASSEMBLY EXPLOSION**

**INCIDENT**

A split ring tyre assembly exploded whilst being fitted to the rear axle of a drilling rig. The tyre was inflated to 675 kPa (98 psi) at the time of fitting. The force of the explosion propelled the tyre and rim striking the person fitting the tyre and causing serious leg injuries.

**CAUSE**

The split ring tyre was not assembled correctly. Either the tyre bead was not in full contact with the split ring or the split ring was incorrectly fitted on the rim.

**COMMENTS AND PREVENTATIVE ACTION**

Care must be exercised when assembling rims and tyres provided with a split lock ring. Particular attention must be given to:

- i) The removal of rust and other foreign matter from the rim and the split lock ring before assembly.
- ii) The application of recommended lubricant on the rim or tyre bead to reduce friction between tyre and rim.
- iii) Partial inflation of tyre and inspection of the degree of fit between tyre and locking ring.
- iv) Full inflation of tyre to manufacturer's specification, in a tyre cage, and further inspection of degree of fit between tyre and split locking ring before removal from cage.

J M Torlach  
STATE MINING ENGINEER

12 October 1989

**SAFETY AWARENESS SAVES LIVES**