

# SAFETY ALERT

## DANGERS WITH SPLIT RIM TYRE ASSEMBLIES

This safety alert is published following the recent death of a person who was struck by the blown split rim on an inflated tyre assembly during tyre replacement on a forklift truck in Sydney.

Similar incidents have occurred in the past, where split rims blew apart during inflation or as the inflated tyre was being removed from the vehicle. The escaping air pressure is enough to hurl the tyre and rim with great force into the air.

The alert provides practical guidance to prevent serious injuries from working with inflated tyre assemblies with split rims.

### Occupational health and safety requirements

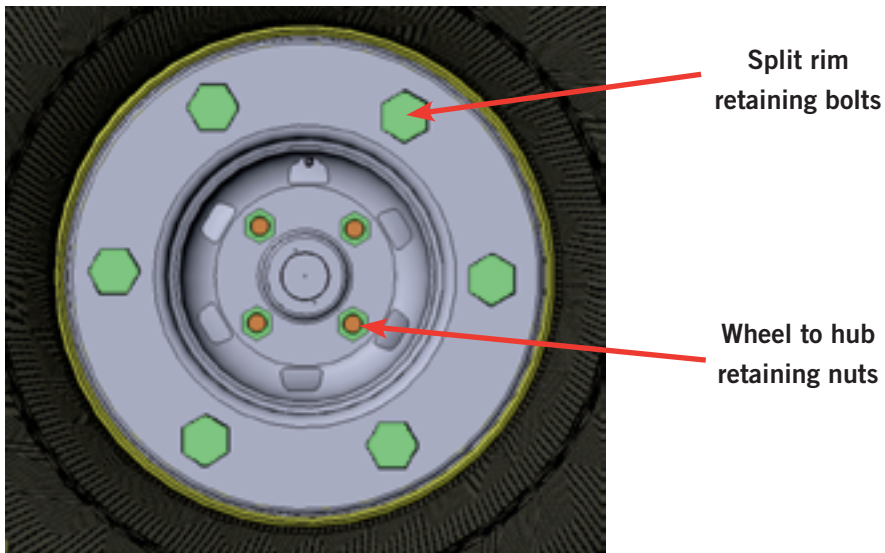
Employers must undertake risk management in the workplace by identifying hazards, assessing risks and then eliminating or controlling the risks. In this case, the hazards included working with inflated tyre assemblies.

### Risk control measures

- Only work on or remove a split rim tyre that is fully deflated or is of the type that can be removed when inflated.
- Only remove the nuts that secure the rim to the vehicle. There may be other bolts that hold the rim together – do not remove these whilst there is pressure in the tyre. See figures 1 and 2.



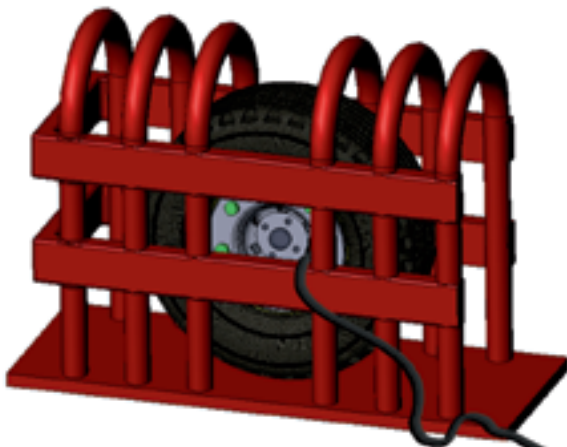
Figure 1 – Multi-piece rim with split ring (locking ring)



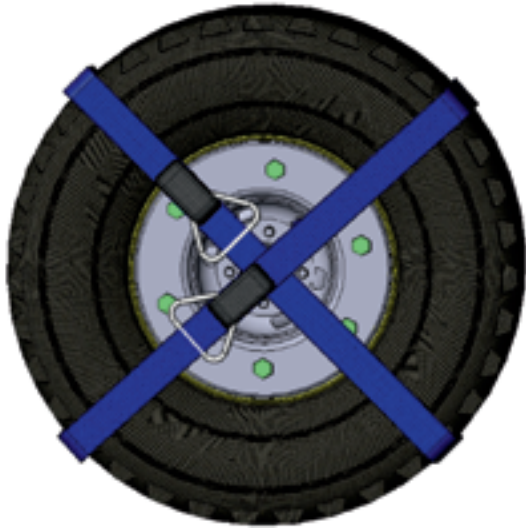
**Figure 2 – Bolted rim with correct bolt assembly**

Split rim retaining bolts with bolt head facing outwards (the nuts are hidden) to prevent inadvertent removal of rim retaining bolts when removing rim from the vehicle.

- Use a guard or safety cage to prevent injury to the operator if a blow out does occur. There are a number of guards commercially available that are inexpensive, portable, and adaptable to a range of tyre sizes. See figures 3 and 4.



**Figure 3 – Wheel guard: restraining cage**



**Figure 4 – Wheel guard: restraining belts**

- Make sure all the split rim assembly parts are compatible and any damaged parts repaired or replaced before reassembling.
- Use a pressure-limiting device, such as a preset air gauge, on air hoses to monitor pressures to prevent over-inflation. Use a special low-pressure air-water gauge for testing tractor tyre pressures.
- Use a remote control airline with pressure gauge and clip-on chuck so the operator can stand away from the guard or safety cage during the inflation procedure. Don't use a clip-on chuck on hoses connected directly to a compressed air line, ie without a pressure gauge and trigger or other control.
- Make sure that the tyre is inflated to its correct tyre pressure. DON'T over-inflate. Correct tyre pressure can be obtained from the tyre fitment placard, which is mounted in the glove box or on the door or door pillar of the vehicle, or from the recommended inflation pressure stamped on the side of the tyre.
- Develop safe work procedures for tyre assembling and servicing, based on the risk assessment. These procedures should include all the types of rim assemblies you are likely to encounter. Detailed methods and instructions for safe tyre assembling and servicing are available from the manufacturers of tyres and wheels.
- Fully train the operator on safe work procedures before undertaking any work.

#### **Further information**

To obtain safety equipment, check the Yellow Pages of your telephone directory under 'Safety equipment – automotive, and road or traffic'.

For further information on tyre fitting and inflation, contact tyre and wheel manufacturers listed in the Yellow Pages of your telephone directory under 'Tyres wholesale'.

For general advice about safe work practices, contact WorkCover NSW on 13 10 50 or visit [www.workcover.nsw.gov.au](http://www.workcover.nsw.gov.au)

### **Disclaimer**

This publication may contain occupational health and safety and workers compensation information. It may include some of your obligations under the various legislations that WorkCover NSW administers. To ensure you comply with your legal obligations you must refer to the appropriate legislation.

Information on the latest laws can be checked by visiting the NSW legislation website ([www.legislation.nsw.gov.au](http://www.legislation.nsw.gov.au)) or by contacting the free hotline service on 02 9321 3333.

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