

## **Tyre Inflation Safety Cage**

There is no Australian or International Standard for the design, manufacture or testing of Tyre Inflation Safety Cages for any size of tyre. In Australia, Tyre Inflation Safety Cages are available for tyres with rim diameters up to 24 inches and these Cages are engineer-designed, third-party tested and certified to manufacturer's standards.

To avoid the risk of a tyre burst and the effects of the release of large amounts of energy as a percussive shock wave and the projectiles generated, follow the below recommendations.

### **Recommendations for the use of Tyre Inflation Safety Cages**

For those personnel who rely on tyre Inflation Safety Cages as part of their safe system of work should consider their duty of care obligation as per legislation.

- Only use fit-for-purpose and engineer-certified Tyre Inflation Safety Cages. The Tyre Inflation Safety Cages used on site must have a compliance plate (refer to photos 1 & 2) from the manufacturer that states the following:
  - Maximum tyre size permitted in cage
  - Maximum pressure permitted in cage
- Ensure competent persons install, operate, inspect, and maintain tyre inflation cages in accordance with the designer or manufacturer's instructions as well as mining operation procedures.
- Depending on the recommendations from the manufacturer of the Tyre Inflation Safety Cage, the Cage may or may not require bolting to the ground. If the Cage does require bolting down, ensure that you consult with the manufacturers to obtain advice on the type of bolts and nuts required. This is important due to the fact that the bolts and nuts that could be used may not be designed to withstand the forces generated during a tyre burst and may generate projectiles. Over-restraining the Cage structure can reduce the capacity of the Cage to defect or deform and absorb the energy of the tyre burst.
- Tyre Inflation Safety Cages must be located on a flat and solid surface such as concrete.
- Tyre assembly / fitting and inflation must only be carried out by competent persons and use approved procedures.
- Read carefully the operating and safety instructions of the Tyre Inflation Safety Cage. (Refer to photos 3 & 4 for an example of Tyre Inflation Safety Cage operating & safety instructions).
- Do not leave a tyre inflation process unattended.
- Discard cage if bent, cracked or showing signs of damage, including rust (Refer to photo 5).

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## Photos 1 & 2 - Examples of Compliance Plates

The Tyre Inflation Safety Cages used on site **must** have a compliance plate from the manufacturer that states the maximum tyre size permitted in cage and the maximum pressure permitted in cage.



Photo 1

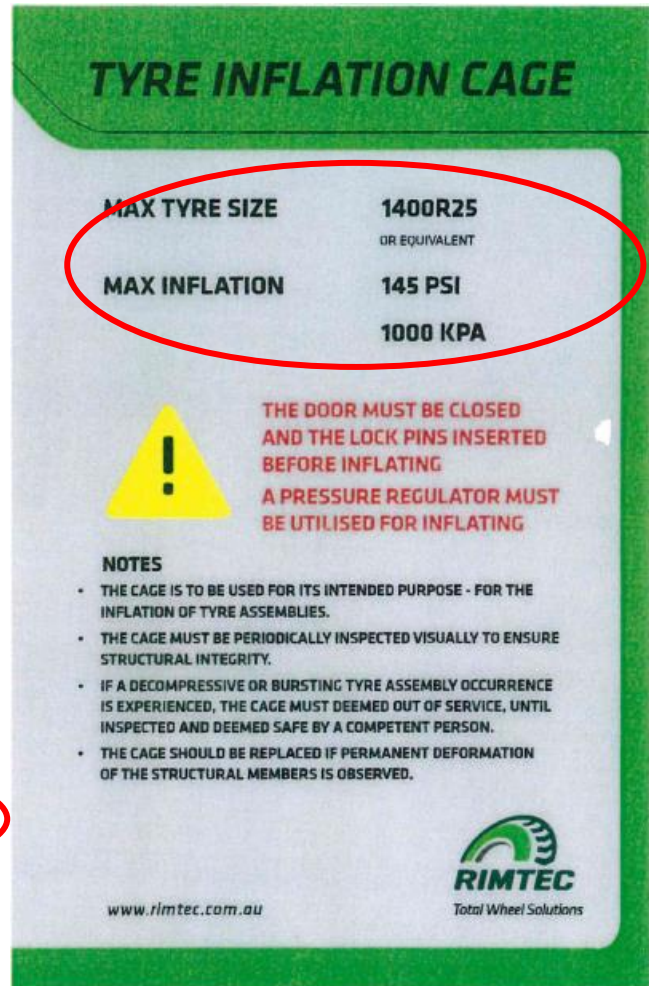


Photo 2

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## Photos 3 & 4 - Examples of Operating & Safety Instructions

Ensure that the operating and safety instructions of the tyre inflation cage are carefully read.

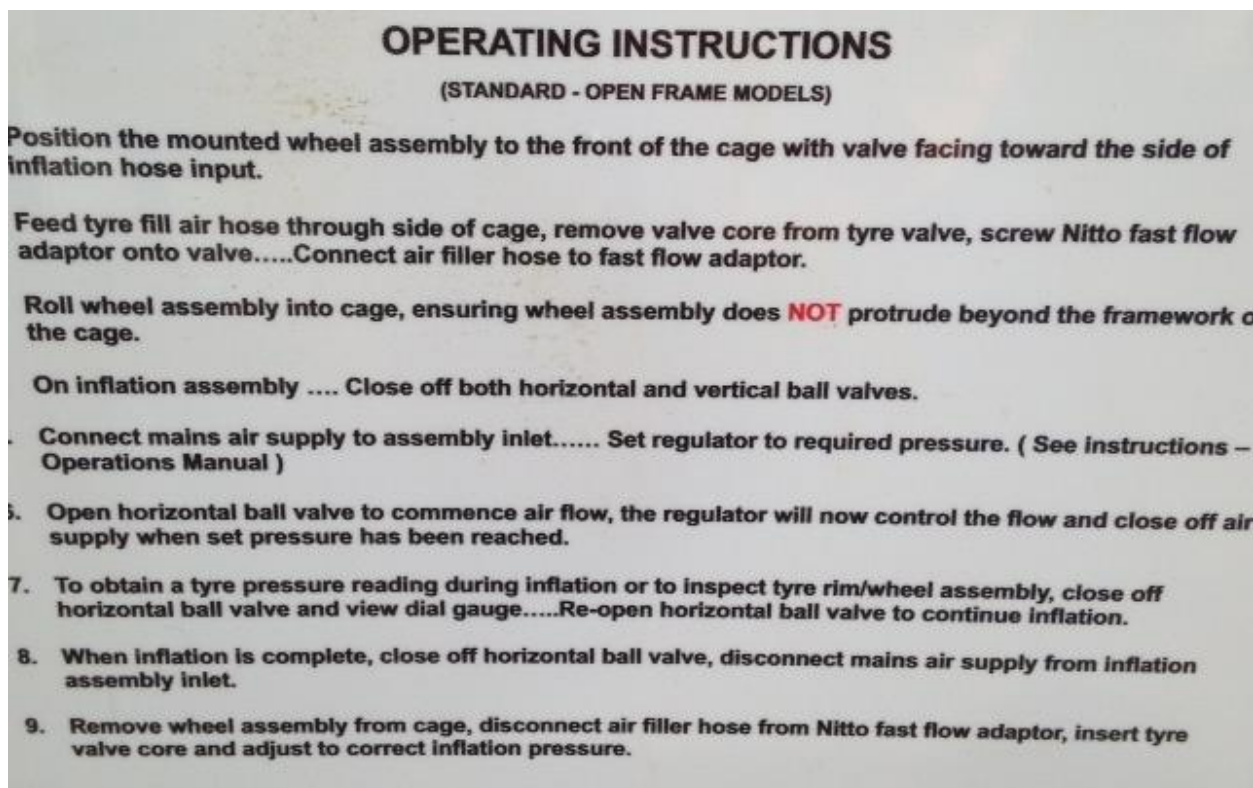


Photo 3 – Operating Instructions

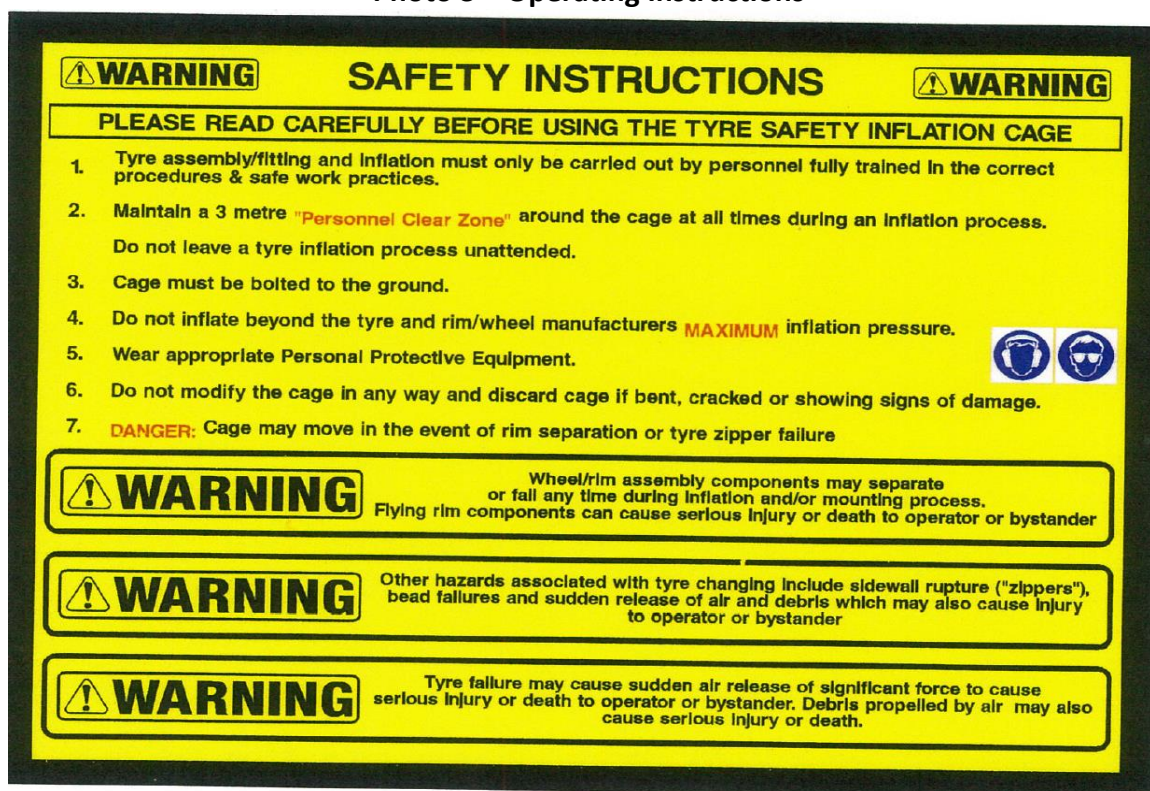


Photo 4 – Safety Instructions

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## Photo 5 - Structural Integrity

Ensure that the cage is discarded if bent, cracked or showing signs of damage, including rust as per the photo below.



## Requirements for Cage Set Up

- Minimum of 500mm from a fixed wall structure.
- Minimum of 500mm clearance around the cage.
- 3m exclusion zone when inflating in the tyre cage with barricading and signage.
- Minimum of 3m distance from cage to TSP controlling the inflation.



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**Photo of barriers with signage to inform personnel and visitors of clearance zone for tyre safety inflation cage.**



**Example of Safety Information Sign**

#### References:

1. Government of Western Australia, Department of Mines and Petroleum Resources Safety – [www.dmp.wa.gov.au](http://www.dmp.wa.gov.au) - Mines Safety Bulletin No. 122
2. RIMTEC - [www.rimtec.com.au](http://www.rimtec.com.au)
3. RLM Distributing - [www.rlmdistributing.com.au](http://www.rlmdistributing.com.au)

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