

Greetings all. Pneumatic Tyres come in many sizes and due to their large amounts of stored energy in the form of compressed air - they can cause a lot of damage if not used or maintained properly. Bulletin 235 touched on this but focused more on the combustion hazard (pyrolysis). In this safety bulletin I'll be discussing split rims or multi-piece rims.

Due to the demand from road managers for bigger heavier 525/80R25 tyres on all-terrain cranes in conjunction with lower axle weights, the 2-piece aluminium rim has grown in popularity particularly outside Europe where operating conditions are strictest.



The *split rims* are different from regular single piece wheels found on cars and heavy vehicles because unlike regular rims, they are held together by bolts and/or a lock ring. This means that there is an extra interface where something can go wrong. Incidents involving split rims are still very common with 2 recent cases reported by Worksafe Victoria.

*If you have split rims, it's very important you deflate the tyre before removing it from the vehicle and take care when inflating, otherwise they can explode causing serious injury or death.*

Often the nuts retaining the rim to the hub are in close proximity to the nuts holding the 2 pieces of the rim together. Obviously removing the nuts holding and inflated rim together will (and does) end in disaster. But if we follow the manufactures guidelines and the Worksafe guides of working with split rims and of course, compressed air, we can prevent future incidents with these multi piece rims. As I've often stated, it's not the equipment that is dangerous it's the miss use and complacency that is dangerous. A good way to remind your workers about the dangers of split rims is to use warning stickers which are available [here](#) at the Safe Work NSW online Shop.

**FULLY DEFLATE THE TYRES  
 BEFORE LOOSENING WHEEL  
 NUTS OR THE WHEEL  
 ASSEMBLY COULD EXPLODE**

Deflate **both** tyres of  
 dual wheel assemblies.



SafeWork NSW



The Safe Work Australia [Split Rims and Compressed Air Information Sheet](#) provides more information for workers who fit, maintain or service multi-piece rims or work with large or small scale air compressors and receivers.

#### The main Take away Points are:

- Always deflate the tyre before removing wheel.
- Before disassembly ensure you have the proper procedure and information to reassemble.
- Once disassembled, check rim components for fit, corrosion or damage, if in doubt don't re assemble.
- Check the tyre for rim-compatibility, delamination, deterioration or any damage.
- Where available, use a protective cage to reinflate. See photo below
- Look/listen for warning signs while reinflating.
- Move well clear of the tyre once pressure reaches 35kpa or 5psi
- Use a clip-on valve connector and remote gauge
- Use an emergency dump valve in your air-line.
- Do not over inflate the Tyre.



There is plenty of information out there on this subject and it's important to note that many other vehicles including trucks, trailers, boom dollies, forklifts and construction machines use split rims. You can also watch the a split rims [video](#) here as well as access the Safe Work Australia [compressed air and air receiver information sheet](#), which provides more guidance and information. *Stay Safe -CICA*