

INFORMATION NOTE

INFLATION OF QUARRY VEHICLE TYRES

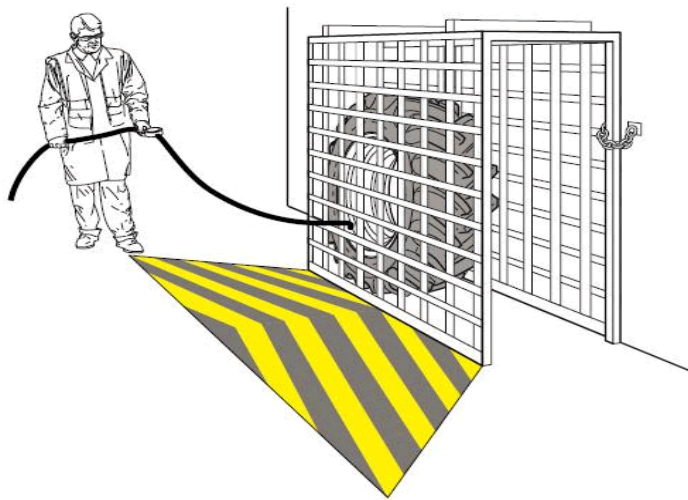
A recent tyre explosion at a farm in Co. Donegal in 2014 resulting in a double fatality has highlighted the need for quarry operatives to ensure they use safe procedures during the inflation of vehicle tyres. Inflated tyres contain a large amount of stored energy. On typical quarry vehicles the pressure on the tyre sidewall is often in excess of 30 tonnes. Tyres are designed to withstand this but if they are damaged or have been used while flat, or significantly underinflated they may fail. If a tyre fails during inflation the explosive force can be released resulting in a destructive air blast and the ejection of high-speed particles. If the wheel is not restrained, it can fly metres through the air. Similarly, failure of multi-piece (split rim) wheels can result in the explosive ejection of component parts. The rapid release of this explosive force from a ruptured tyre or violent separation of the component parts of the wheel can result in serious injuries, including fatalities.

SAFE TYRE INFLATION

- **DO** use a clip-on chuck to connect the airline with a quick release coupling at the operator's end (this allows tyre deflation from a safe distance if problems occur)
- **DO** ensure the airline hose is long enough to allow the operator to stay outside the likely explosion trajectory during inflation
- **DO** use enough bead lubricant when seating the tyre
- **DON'T** use valve connectors that require the operator to hold them in place
- **DON'T** exceed the manufacturer's recommended tyre pressure for the size and rating of the tyre
- **DON'T** use airlines not fitted with either a pressure gauge or pressure control device
- **DON'T** allow the control valve to be jammed open (which would allow the operator to leave the inflating tyre unattended)

Inform, train and supervise staff in safe personal positioning and safe procedures during tyre inflation including actions when a potential tyre failure is identified

When inflating tyres not mounted on the vehicle always use a restraining device such as a strong, firmly secured tyre inflation cage or a bag type restraint. For very large tyres restraint during tyre inflation will be achieved by mounting the tyre on the wheel hub of the vehicle. Use a protective barrier such as a wall, embankment or the side of another vehicle, to restrain flying objects ejected during failure and ensure that the operator inflates the tyre from a safe position.



Always stand outside the trajectory of any potential explosion

Need to know more?

For more information on Quarry Health and Safety visit

- The HSA Website at http://www.hsa.ie/eng/Your_Industry/Quarrying/ or call 1890 289 389 (ROI) or +353 1 614 7000 (Outside of ROI) or Email: wcu@hsa.ie
- The HSENI website at <http://www.hse ni.gov.uk/..guidance/industries/mining-and-quarrying.htm> or call 0800 0320 121 or e-mail mail@hse ni.gov.uk

For Further Tyre Safety Information visit

- <http://tinyurl.com/HSEtyresafety>
- <http://tinyurl.com/HSAquarrytyresafety>
- <http://tinyurl.com/Tyrecageexplosion> (YouTube Video)