NZ Safety Alert

Tyre explosion from over-inflation

A worker was instructed to inflate a tyre to 140psi from its pre-inflated pressure of 30psi using nitrogen.

The digital gauge offered a choice between psi and bar (1 bar = 14.5psi) and was set to bar. The worker attempted to change the setting to psi and, believing he had done so, he fitted the gauge to the nitrogen bottle. He noticed the reading on the gauge was 2psi rather than 30psi, which he believed was the pre-inflated pressure of the tyre. He zeroed the gauge and started inflating the tyre. The worker called the leading hand after noticing that the gauge was only reading 15psi after some time. The worker was instructed to increase the pressure slowly and to keep checking the gauge.

The leading hand was walking away from the tyre when he heard a large bang. The tube had failed and a high-pressure air blast hit the worker.

This incident highlights the need to be vigilant with tyre maintenance, particularly inflation. We recommend that all sites review procedures, and practices, to ensure that:

- **Where possible, air pressure inflation systems are used instead of nitrogen for tyre inflation.**
- **Pressure gauges are not interchanged and/or offer multiple options for pressure gauge unit readings. Where possible install fixed analogue pressure gauges.**
- **Procedures for tyre inflation include a suitable separation distance between workers and the tyre while it is being inflated, barriers between the tyre and workers, and adequate checks on rims, setting of the tyre bead, prior to inflation.**
- **Workers are trained in, and regularly reminded of, the potential results of tyre and rim damage.**
- **Regular workplace inspections are conducted to ensure compliance with the procedures listed above.**

Let's work together to keep ourselves and our workers safe.

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