

GLOBAL SAFETY ALERT

CONTRACTOR FATALLY INJURED

INCIDENT DETAILS

A contractor, who was a tyre replacement technician, was attempting to remove the tyre on a loading shovel wheel to replace it. During this task, the metal tyre retaining ring was suddenly ejected and it struck him on the head. Despite wearing his safety helmet, the force was significant, and sadly, it caused fatal injuries.



The retaining ring landed near another vehicle 26 feet away



Damaged helmet

KEY FINDINGS

- The contractor, who was working alone on the task, decided to keep the wheel on the loading shovel because it was heavy to remove.
- He removed the core of the inflation valve on the old tyre to release the air and when he could hear no more air escaping, it may have been assumed all the air had gone.
- The tyre was still under pressure because some rust on the lower section of the tyre valve at the rim was preventing all the air from being released. As he tried to remove the retaining ring, with a hammer, the remaining pressure caused it to be ejected.
- No Safe System of Work was evident for removing the tyre and one wasn't requested before the work started. A Permit to Work with documented controls hadn't been issued.
- The contractor had previously been approved to enter our sites. At the time of the incident, access should have been denied, because mandatory training had expired.

MANAGERS – KEY POINTS TO CHECK

- All contractors are approved for the work they carry out and entry to site is not allowed if they don't fully meet the requirements.
- A risk assessment has been carried out, a Safe System of Work (SSOW) is in place and the relevant details are documented with a Permit to Work.
- The SSOW includes;
 - Trained and authorized personnel. Enough personnel to safely carry out the work.
 - Full Assessment of any potential flying objects and the trajectory, with physical controls to contain any ejection and to protect personnel.
 - Isolation of the machine on level ground with all wheel chocks installed.
 - Machine to be raised using jacks with blocks and axle stands securely in place
 - If the tyre is to be removed from the rim in situ, space may be limited so suitable hydraulic tools, lifting/handling aids, bead bars and pry bars will be necessary
 - Tyre to be fully deflated with valve core removed. If in doubt, partially re inflate and repeat the process or lower the machine to the ground to expel any residual air.
 - The bead should be broken on the inside rim flange (back of the tyre) prior to attempting to break the outside bead and removing the retaining ring
 - The most hazardous activity can be during the inflation process following re assembly. The technician and all personnel must be out of the line of fire and normal practice would be to partially inflate and deflate several times until the seals and rings have completely seated in the correct position

ALL PERSONNEL – ACTION TO TAKE

- **Always** leave tyre replacement to the trained professionals.
- If inflating tyres, **always** follow the SSOW to ensure you are safe, and away from the line of fire – When wheels are removed, use tyre cages. Whether the wheel is in a cage or on the vehicle, always use an airline with an accurate pressure gauge and a securing chuck that you don't need to hold. The length of airline from the chuck to you must also be **at least** 2 meters long, ensuring you can **stand to the side and well clear of any potential danger zone.**