

General Workplace Inspectorate

Promoting Safety and Health in the Workplace

ACCIDENT/INCIDENT ALERT

19 March 2002

Tyre Explodes During Inflation

Incident

An agricultural trailer tyre was being inflated when it exploded and the tyre was thrown upward striking the victim in the face. The resulting injuries were the loss of 1½ teeth, lacerations to the face, multiple fractures to the right cheekbone and a fracture above the right eye socket.

Circumstances

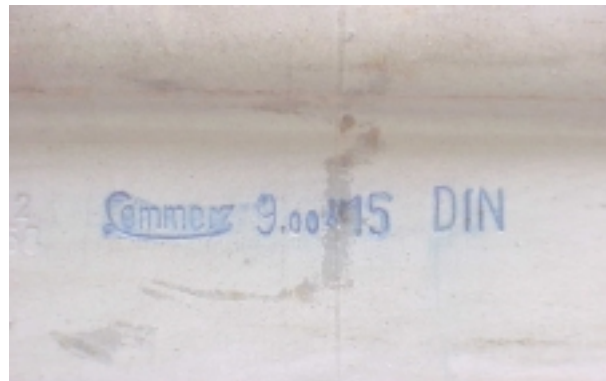
A farmer brought in two agricultural trailer rims, two used tyres and one tyre tube. A tyre company was requested to supply one tyre tube and fit the tubes and tyres onto the rims. Two tyre fitters had attempted to 'seat the bead' of the first tyre onto the first rim - both were unsuccessful. The victim placed the partially fitted tyre and rim onto the tyre changer machine and during inflation the tyre exploded.

Investigation

Tyre Rim Incorrectly Marked

The markings on the rim are 9.00 X 15 DIN. This would indicate that the rim was 9 inches wide and had a nominal bead diameter of 15 inches and would take a 15-inch tyre. However measurement of the rim confirm it as a 15.3-inch diameter rim. The key to identifying the incorrectly marked rims is that they are 9 inches wide, were

manufactured before 1982, and are from European farm equipment.



Tyre Cage Not Used

The wheel was not restrained nor placed in a tyre cage during inflation. If the wheel was placed in a tyre cage during inflation the force of the exploding tyre would have been contained within the cage and nobody would have been injured.

Recommendations

1. That all agricultural 9-inch-wide wheel rims be measured to determine the actual rim diameter ensuring that the correct tyre can be fitted.
2. Tyres of large volume and any tyres where 'seating the bead' is a problem are to be restrained or placed in a tyre cage.