

HAZARD ALERT!

Wheel rim assembly failures

WHAT HAPPENED?

In May 2005, a crane operator was fatally injured when a tire exploded as he was walking nearby. He had just finished his shift and walked towards two co-workers to offer assistance with a tire they were installing on a crane. When the tire exploded, a ring from the wheel assembly flew off and struck the man in the head instantly causing his death. The two men on both sides of the tire were not injured in the explosion.

In July 2000, one worker was fatally injured and one was critically injured while inflating the tire on a utility tractor. The tire was mounted on a three-piece rim. One of the workers was standing in the path of the trajectory when the tire exploded. In a similar incident in November of the same year, two mechanics were injured – one fatally and one critically – while working to remove an inflated wheel assembly from a haulage truck. The multi-piece rim failed, propelling the tire off the axle and striking the two workers.

WHY DID IT HAPPEN?

Multi-piece rim and wheel failures have been responsible for numerous deaths, injuries and lost-time incidents in mines, pits, and quarries in Ontario. Despite this, workers may not recognize the hazards or take them for granted. Incidents often happen during maintenance, when tires are being inflated or removed from vehicles while still inflated.

HOW COULD IT HAVE BEEN PREVENTED?

Each company should have a program for maintenance on tires and rims. As a minimum, each program should include:

- Risk assessment to identify hazards on each tire and rim assembly.
- Assessment to ensure maintenance and inspection practices are adequate.
- Training and refresher courses for maintenance workers on how to recognize wheel and rim hazards and the proper procedures for wheel and rim assembly removal.
- Procedure to clean and inspect wheel assemblies whenever they are removed from a vehicle.
- Procedures to follow manufacturer's recommendations when handling tires.

See Section 107.1 of Regulation 854 for Mining and Mining Plants to see what the law says.

