

High-pressure blowout

t's the simplest of maintenance processes. But inflating a tire is not risk-free, especially when the tire is mounted on a dump truck or piece of heavy equipment. They can run to 100 psi or more and require special precautions.

The victim was a mechanic for a heavy equipment company. He had been working for the contractor for a year and a half but was originally hired for his welding skills. He was from El Salvador and spoke little English, and in the shop, there were few bilingual coworkers who could communicate with him in Spanish.

On the day of the accident, a driver of a triaxle dump truck returned to the shop and noticed the truck leaning to one side as a result of a low tire. The tubeless, steel-belted tires were mounted on single-piece rims and sized at 385/65/22.5 – some 42 inches in diameter – and rated for 130 psi. The chuck on the end of the

air hose could not be locked onto the valve and required the victim to hold it in position while inflating. According to investigators, the chuck likely belonged to the victim, as the mechanics at the company were required to supply their own tools.

The victim chocked the dump truck's tires but did not inspect the tire for defects and began to inflate, standing directly in front of it. As the pressure increased, the sidewall failed, exploding apart near the top of the tire and throwing the mechanic nearly 15 feet in the air.

When the driver heard the blast, he rushed to the mechanic's side, but when emergency personnel arrived, the victim was pronounced dead due to blunt force trauma. Investigators believe the tire suffered a "zipper rupture" in which individual strands in the sidewall broke and caused stress to adjacent strands that also broke, leading the tire to fly apart.

How this accident could have been prevented

- Inflation cages or restraining devices should be used when inflating heavy truck or equipment tires.
- Locking chucks should be used to allow mechanics to stand away from the tire.
- Never allow anybody to stand in the trajectory of the blast forces when inflating a tire.
- Always inspect tires for bulges, cuts, chips and other damage or defects before inflating.
- Ensure workers are properly trained to identify the hazards and understand the safe procedures for working with large truck and equipment tires.
- Make sure all workers get safety training in a language they are most familiar with. For more information, visit bit.ly/tireblow

Date of safety talk:_____ Attending:

Leader: