

INJURY NARRATIVE

Farm Worker Severely Injured When Struck By Wheel Rim

Industry: Wheat Farming

Task: Heavy Equipment Maintenance

Occupation: Farm worker

Type of Incident: Explosive separation of multi-piece rim wheel

Incident Date: December 29, 2014

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In late December 2014, a 26-year-old farm worker suffered multiple serious injuries to his face and head when he was struck by parts of the multi-piece rim wheel of a road grader that separated with explosive force as he was inflating a tire. He was the only employee of a small wheat farm that also did road grading work. He had worked for the employer for just under a year, but had grown up on a farm and had experience working with smaller multi-piece rim wheels. On the morning of the incident, the worker was bringing the road grader to the shop for maintenance. At some point, he noticed that one of the grader's tires was partially deflated, but still drove it to the shop. He sent a text message to the employer, who was offsite at the time, stating that the tire was low and that when he got the grader back to the shop, he was unable to seat the bead on the tire. The worker had never done maintenance on the grader tires before. The employer told investigators that they do not work on the heavy



Photo 1: Blown-out road grader tire that injured worker was attempting to inflate when explosive separation occurred.



Photo 2: Larger of two rings that separated from rim assembly and struck worker.

equipment tires on the farm due to the multi-piece rims. Instead, he uses a tire servicing company to do repairs. The employer tried to call the worker less than 15 minutes after receiving the text, but got no answer. When he arrived back at the farm nearly four hours later, he found the severely injured worker in the shop, bleeding and disoriented. Two parts of the rim had blown away from the wheel assembly and hit the worker in his face and head. His jaw was broken in several places, many teeth were knocked out, his face was seriously cut, and he suffered a brain injury. He was not able to return to work for four months.

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Requirements

When employees service rim wheels, employers must:

- Implement a training program that covers the hazards involved in servicing rim wheels. See [WAC 296-307-53005\(1\)\(a\)](#)
- Furnish a restraining device for inflating tires on multi-piece wheels. See [WAC 296-307-53007\(1\)](#)
- Furnish an air-line assembly with a clip-on chuck, an in-line valve with a pressure gauge or a presettable regulator, and enough hose between the clip-on chuck and the in-line valve to allow the employee to stand outside the trajectory. See [WAC 296-307-53009\(1\) & \(2\)](#)
- Establish safe operating procedures for servicing multi-piece rim wheels, and ensure that employees are instructed in and follow the procedures. See [WAC 266-307-53013](#)

Recommendations

- Keep out of the trajectory of the wheel assembly when servicing inflated tires on multi-piece rims.
- Ensure employees know the hazards involved in servicing tires on multi-piece rim wheel assemblies, and that they never attempt tire servicing without proper training.
- Use a professional tire service to repair multi-piece rim wheels.

Resources

[Servicing Multi-Piece and Single-Piece Rim Wheels \(OSHA\)](#)

www.osha.gov/Publications/wheel/wheel-chart-booklet.pdf

This narrative was developed to alert employers and employees of a serious traumatic injury to a worker in Washington State and is based on preliminary data ONLY and does not represent final determinations regarding the nature of the incident or conclusions regarding the cause of the injury.

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