

Tire Explosion: A Hazard to Workers Inflating Large Vehicle and Off-Road Machine Tires*

Injury Incident

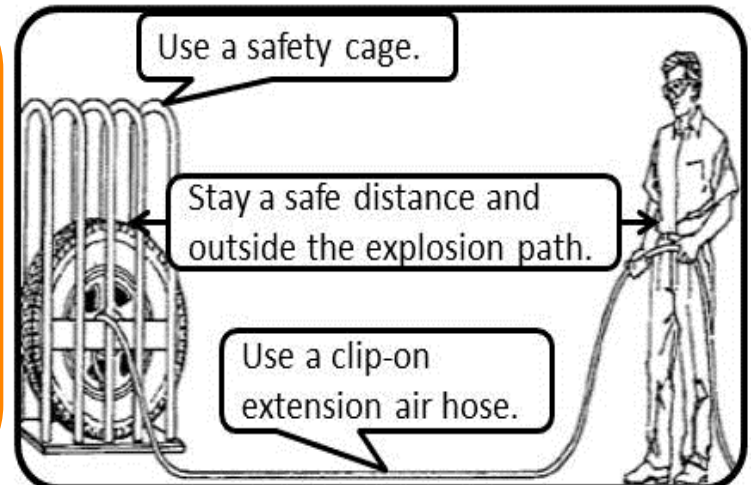
On September 30, 2013, a foreman at an auto salvage yard was severely injured when a loader tire's sidewall failed, releasing an explosive blast of air which knocked him backward about 10 feet. He was hospitalized with injuries to his face and torso which included four fractured ribs. The tire was purchased used. It is unknown whether it had been previously damaged in such a way which would cause it to explode during inflation.

He was inflating the tire to seat it on its rim when the sidewall failed. The recommended maximum pressure to seat the bead of the tire was 40 psi; the compressor was set to fill the tire to 80 psi. To seat the bead, first inflate to 20 psi and inspect the tire for bulges or cracks. **Never inflate tires over 40 psi when seating the bead.** If both beads are not completely seated at 40 psi, deflate the tire and start over. Only after both beads are fully seated, inflate tires to recommended operating pressure.



Recommendations for Preventing Similar Incidents

- When inflating tires, stay outside the likely explosion path of forcefully released air, tire debris, and the rim and its components.
- Follow the manufacturer's instructions and warnings for inflating and servicing tires.
- Do not inflate or use tires that were operated while underinflated or overloaded or show signs of damage until inspected by a trained technician.
- Use a pressure gauge and regulator to prevent over inflation and an in-line valve for deflation.
- Use a safety cage, clip-on air chuck, and a sufficient length of hose that allows the worker to stand outside the likely explosion path.



Requirements

- When servicing split rim (multi-piece) wheels and single rim wheels used on large vehicles and off-road machines follow the requirements of [WAC 296-864](#).

Resources

- Division of Occupational Safety and Health, Washington State Department of Labor & Industries. Three safety posters about tire and rim servicing (created by OSHA). www.lni.wa.gov/posters
- OSHA booklet of tire and rim servicing (same information as on posters above). www.osha/wheel-chart-booklet.pdf

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