

Tire Inflation and Servicing Rims

A fully inflated average-sized truck tire exerts a force of more than 40,000 pounds against the rim flange. Failure of tire/wheel components can result in an explosion, propelling locking rings or other components at speeds up to 130 miles per hour, which could kill or seriously injure anyone nearby. Most accidents occur during tire inflation, usually because of over-inflation, improper procedure, or improperly seated, mismatched, or damaged tire/wheel components. *Red italics indicate where you must customize the content of this tailgate meeting for the types of equipment and conditions your employees will encounter.*

Only employees who have undergone our training are authorized to perform this work, as per 8 CCR sections [3203](#), [3325](#), and [3326](#).

Tire Inflation

- Use a clip-on chuck with at least 24" of hose between the chuck and an in-line foot or hand valve and pressure gauge. *Discuss if using an in-line regulator (preset to 40 psi for passenger car tires), a restraining device, or one of the exceptions found in section 3325(a).*
- Ensure tire inflation control valves automatically shut off when released or at the pre-set level.
- Ensure correct tire-to-rim size before inflating. *Discuss how that will be ensured.*
- Do not inflate tires beyond the manufacturer's recommendation.
- Do not exceed 40 psi when seating beads. *Discuss instances where the tire manufacturer recommends going above 40 psi.*
- Inspect for proper bead seating at intervals of 20 psi, at most.
- When the beads don't seat properly, completely deflate the tire by removing the valve core before adjusting.
- Use a restraining device when seating beads or inflating tires installed on single piece, split rim, or rims equipped with locking rings. *Discuss exceptions allowed by section 3326, if applicable.*
- Never inflate a tire within one foot of any flat, solid surface. *Discuss if section 3326(i)(10) exceptions apply.*
- Do not position yourself over a tire being inflated or in a potential trajectory.

Restraining Devices

- *Review findings of daily visual inspections conducted prior to use of restraining devices, as required by section 3326(f)(1).*

- *Discuss defects to look for (e.g., cracks at welds; pitting; cracked, broken, bent, sprung components) and that the devices will be removed from service for structural repairs as needed.*
- Only use restraining devices that meet section 3326 requirements.

Wheel Servicing and Tire Mounting

- Pre-inspect for proper tire and wheel sizing. Discuss the (1) current split and multi-piece rim or wheel matching chart; (2) typical rim contours and marking location chart; and (3) current rim manual containing instructions for proper tools recommended for the type of rim or wheel being serviced.
- Only use tools recommended in the rim manual for the types of rims being serviced.
- Inspect single, split, and multi-piece components prior to assembly. Rims or components that are bent out of shape, pitted from corrosion, or broken/cracked must be tagged out of service and removed from the service area.
- Visually inspect the tire and feel for sidewall damage, distortions, or irregularities. If you find deficiencies, refer to the tire industry or manufacturer.
- Replace damaged or leaking valves.
- Remove tires from wheels before welding and do not replace until the weld has cooled to room temperature. Welding must be done according to manufacturer specifications.
- Tires are to be mounted/demounted only from the narrow ledge side of the wheel.
- Avoid damaging the beads.
- Ensure tires are mounted on compatible wheels of matching bead diameter and width.
- Ensure rim flanges, rim gutters, bead seating surfaces, and the bead areas of tires are free of dirt, rust, and debris prior to mounting and inflation.
- Check for incompatible parts. Do not interchange multi-piece wheel components except as provided for in the charts or manuals.
- Lubricate beads and rim surfaces with non-flammable lubricant unless the manufacturer recommends against it.
- Remove bead expanders before installing the valve core and as soon as the rim becomes airtight.
- Do not position yourself over a tire being inflated or rest or lean any part of the body or equipment against the

- restraining device while it is being used.
- Do not attempt to correct the seating of side and lock rings by force while the tire is pressurized. *Discuss exceptions allowed by sections 3325 and 3326.*
- Inspect tire and wheel components for proper seating and locking before removal from the restraining device.

and multi-piece wheels from the axle, and the possible exception to this requirement.

- Do not apply heat to single, split, or multi-piece rims while a tire is still mounted. *Discuss that after the tire is completely flat, frozen or broken lug nuts may be cut off without excessive heating of the wheel.*

Demounting Tires

- Completely deflate tires by removing the valve core. *Discuss how a wire or equivalent device will be used to ensure complete deflation before removal of split*

Mobile Repair Trucks

Ensure mobile and roadside repair trucks are equipped with all safety devices, such as tire cages and a clip-on chuck with at least 24" of hose.

Discussion Questions

- How does using a clip-on chuck and 24" hose extension help you stay clear of the potential trajectory?
- Where would you look for rim markings?
- Where are the charts and rim manual located?
- How could servicing wheel rims be made safer in your shop?

Disclaimer

This information is not meant to be either a substitute for or legal interpretation of the occupational safety and health regulations. Readers must refer directly to the California Code of Regulations, title 8 for details regarding scope, specifications, and exceptions and for other requirements that may apply to their operations.

Automobile or light truck tires used on light pickups and single piece rims or wheels used on vans when a hold-down cone-type tire inflation system is used in accordance with tire manufacturer recommendations are exempt from section 3326 requirements.

This Toolbox Topic is an overview and does not, by itself, qualify as the training required by sections 3203 (Injury and Illness Prevention Program) and 3326. Section 3326 requires employers to ensure that employees understand, demonstrate, and maintain the ability to safely inflate tires and service single, split, and multi-piece wheels. Train employees on at least the following:

- Demounting of tires (including deflation).
- Inspection and identification of the rim wheel components.
- Mounting of tire (including inflation with a restraining device or other safeguard).
- Use of other required equipment.
- Inflation of the tire when a single piece rim wheel is installed on a vehicle.
- The necessity of standing outside the trajectory during tire inflation and rim wheel inspection that follows.
- Installation and removal of rim wheels from the vehicle.

Resources

[California Code of Regulations, title 8](http://www.dir.ca.gov/samples/search/query.htm) (www.dir.ca.gov/samples/search/query.htm)

- [Section 3325](#) Tire Inflation
- [Section 3326](#) Servicing Single, Split and Multi-Piece Rims or Wheels

[Cal/OSHA Publications](http://www.dir.ca.gov/dosh/PubOrder.asp) (www.dir.ca.gov/dosh/PubOrder.asp)

[Cal/OSHA Consultation Service](http://www.dir.ca.gov/dosh/consultation.html) (www.dir.ca.gov/dosh/consultation.html)

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