# Tire, Rim, & Wheel Servicing Safe Work Policy & Procedures

Every year, dozens of Canadian workers suffer serious and even fatal injuries while performing work on the tires, rims, and wheels of vehicles. It’s not hard to understand why. Tires are like bombs waiting to go off, with a 20-inch tire inflated to 100 psi containing up to 40,000 pounds of explosive force. The risk is especially great when tire explosions involve multi-component wheel assemblies resulting in the sudden and violent release of tire lock rings, rims, flanges, and other flying parts. That’s why OHS laws require employers to take special precautions to protect workers who perform tire servicing operations. One of those requirements is to implement safe work procedures for tire inflation, deflation, mounting, dismounting, repairs, and other tire work. Here’s a template of basic safe work procedures for different types of tire servicing operations that you can adapt for your workplace and operations. Go to the OHS Insider website for a complete Tire Servicing Compliance Game Plan.

Safe Work Procedures for Performing Work on Tires, Rims, & Wheel Assemblies

## 1. PURPOSE

Working with the tires and wheel assemblies of vehicles and power mobile equipment involves the risk of explosions that can result in serious or even fatal injury. The purpose of

this Policy is to safeguard workers against these risks by establishing the following safe work procedures for performing tire and wheel servicing operations.

# 2. GENERAL REQUIREMENTS

**Workers must:**

- Not service any tire, rim, or wheel unless and until they have been instructed in the correct procedures of mounting, dismounting, and servicing activities such as tire inflation for tires, rims, and the safe operating precautions for the type of wheel being serviced;
- Be familiar with and strictly comply with those safe operating procedures;
- Be familiar with and follow all manufacturer's instructions and guidelines;
- Perform all required pre-operational checks before performing tire and wheel servicing work, including but not limited to thoroughly inspecting all hand tools, equipment, jacks, and other equipment;
- Report any damage or defects they identify and ensure that the damage or defective equipment is removed from service and not reused unless and until it has been properly repaired;
- Wear eye and foot protection when performing tire and wheel servicing work;
- Use the following equipment when working on either single piece or multi-piece wheel rims or both:
    - A spring-loaded clip-on or other type of air chuck;
    - At least 6 feet of hose between the air chuck and an in-line inflation valve and gauge;
- Take the following precautions when working on either single piece or multi-piece wheel rims or both:
    - Stand to one side of the tire being inflated and out of the trajectory path of the wheel rim and

components;
    - Carefully and constantly monitor the amount of air added to the tire to prevent overinflation;
    - Immediately stop the inflation process if any noises are heard coming from the tire or rim wheel being inflated;
- Completely deflate tires before dismounting them from the vehicle by removing the valve core on both single piece and multi-piece wheel rims;
- Not rework, weld, braze, or otherwise heat cracked, broken, bent, or otherwise damaged rim components; and
- Not apply heat to a multi-piece wheel or wheel component.

# 3. MULTI-PIECE RIM WHEEL SAFETY PROCEDURES

**The following precautions must be used when servicing multi-piece rim wheels and assemblies:**

1. Tires must be completely deflated by removing the valve core before a rim wheel is removed from the axel if: i. the tire has been driven underinflated at 80% or less of its recommended pressure; or ii. there is obvious or suspected damage to the tire or wheel components;
2. Non-flammable rubber lubricant must be applied to bead and rim mating surfaces during assembly of the wheel and inflation of the tire, unless the tire or wheel manufacturer recommends otherwise;
3. Where a tire on a vehicle is underinflated but has more than 80% of the recommended pressure, the tire may be inflated while the rim wheel is on the vehicle provided only if remote control inflation equipment is used, and no workers remain in the trajectory during inflation;
4. Tires may be inflated outside a restraining device only to a pressure sufficient to force the tire bead onto the

rim ledge and create an airtight seal with the tire and bead (not to exceed 10 psi);
5. Tires must be placed in a restraining device for further inflation;
6. Resting or leaning any part of the body or equipment on or against the restraining device is prohibited any time a rim wheel is in that restraining device;
7. The tire and wheel components must be inspected after the tire has been inflated and while they're still within the restraining device to make sure that they're properly seated and locked;
8. If further adjustment to the tire or wheel components is necessary, the tire must be deflated by removal of the valve core before the adjustment is made;
9. To remove the tire from the restraining device, the tire should first be deflated to 20 PSI, unless the tire is to be balanced and mounted on vehicle;
10. It's prohibited to make any attempt to correct the seating of side and lock rings by hammering, striking or forcing the components while the tire is pressurized;
11. Workers must stay out of the trajectory when multi-piece rim wheels are being handled, unless being present in the trajectory is necessary to perform the servicing operation; and
12. Fully inflated, multi-piece wheels must not be transported except in a restraining device.

# 4. SINGLE PIECE RIM WHEEL SAFETY PROCEDURES

**The following precautions must be used when servicing single piece rim wheels and assemblies:**

1. Mounting and demounting of the tire may be done only from the narrow ledge side of the wheel;
2. Care must be taken to avoid damaging the tire beads

while mounting tires on wheels;

3. Tires must be mounted only on compatible wheels of matching bead diameter and width;
4. Non-flammable rubber lubricant must be applied to bead and wheel mating surfaces before assembly of the rim wheel, unless the tire or wheel manufacturer recommends against the use of any rubber lubricant;
5. If a tire changing machine is used, the tire must be inflated only to the minimum pressure necessary to force the tire bead onto the rim ledge while on the tire changing machine;
6. If a bead expander is used, it must be removed before the valve core is installed and as soon as the rim wheel air pressure reaches 5 psi;
7. Tires may be inflated only when contained within a restraining device, positioned behind a barrier or bolted on the vehicle with the lug nuts fully tightened;
8. Tires may not be inflated when any flat, solid surface is in the trajectory and within one foot of the sidewall;
9. Workers must stay out of the trajectory when inflating a tire;
10. Tires may not be inflated to more than the inflation pressure stamped in the sidewall or in accordance with the tables ABC Company will provide listing the maximum inflation pressures for various sizes and types of tires normally encountered in case the maximum pressure isn’t clearly listed on the tire wall; and
11. Tires may not be inflated above the maximum pressure recommended by the manufacturer to seat the tire bead firmly against the rim flange.