

# SAFE WORK

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E** SPOT THE HAZARD  
ASSESS THE RISK  
FIND A SAFER WAY  
EVERYDAY

No. 228  
December 2008

## Tire Servicing

### Potential hazard:

Using improper methods when servicing single rim or multi-piece wheels/tires can result in serious injury or death. Numerous workers in North America have died over the last decade as a result of tire blowouts/explosions occurring while they were servicing tires.

### How to control the hazard:

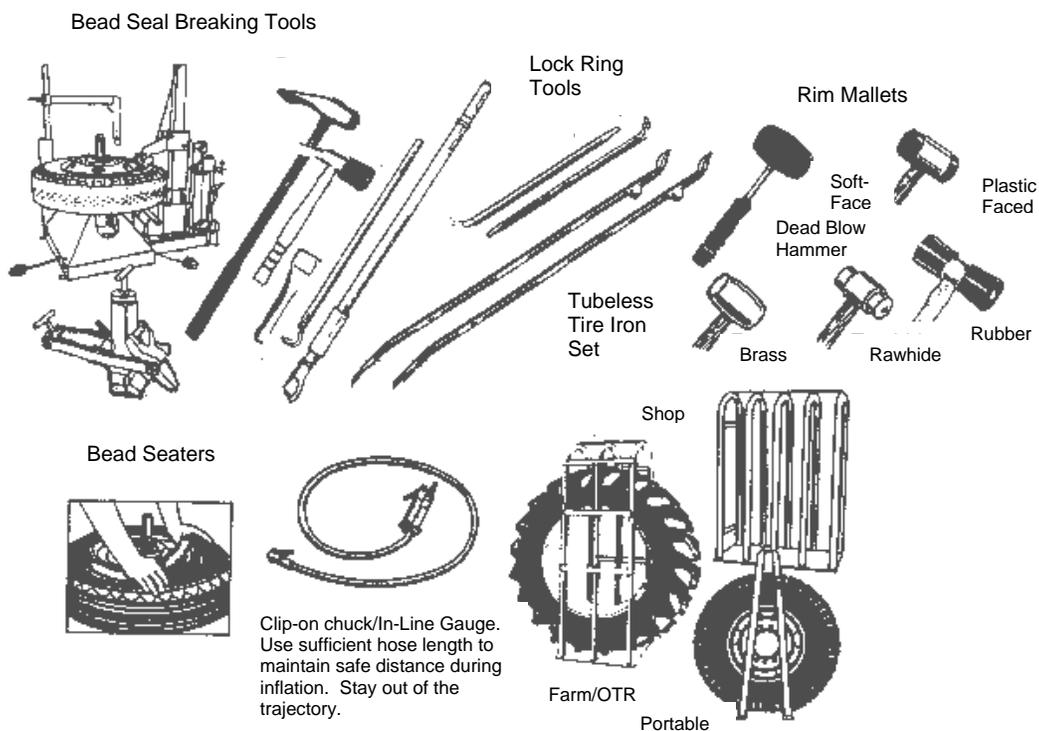
Injuries to workers servicing tires can be prevented by following safe work procedures. Some general safe work procedures to be followed when servicing tires can be found on the next page.

Employers are required to make certain that only competent persons service, inspect, disassemble or reassemble tires or tire and wheel assemblies of powered mobile equipment. This must be done according to the specifications of both the tire manufacturer and the manufacturer of the powered mobile equipment. The manufacturer's service manuals for the tires and wheels must be readily available to the competent person.

**REMEMBER:** Before you start to service a wheel/tire, refer to the safe work procedures provided by the wheel/ tire manufacturers, and the tire servicing equipment manufacturer's safe operating procedures. Never work on any wheel/tire with which you are not familiar.

**WEAR:** Personal protective equipment (e.g. eye, foot and hearing protection)

**USE:** Only servicing tools recommended by the tire manufacturer



### Workplace Safety and Health Division Contact Information:

Winnipeg: (204) 945-3446  
Toll-Free: 1-866-888-8186 (Manitoba only)  
24-Hour Emergency Line: (204) 945-0581

Publications/resources available at: [www.safemanitoba.com](http://www.safemanitoba.com)



## Recommended General Safe Work Procedures

### Single-piece wheels

1. The tire must be completely deflated by removing the valve core before the tire is removed from the rim.
2. Demounting and mounting of tires must be performed only from the offset ledge side of the wheel. Care must be taken to avoid damaging the tire beads while mounting tires on wheels. Tires **MUST** be mounted on compatible wheels of matching bead diameter and width.
3. Nonflammable rubber lubricant must be applied to the bead and the wheel matting surfaces before assembling the rim wheel, unless the tire or wheel manufacturer recommends against the use of any rubber lubricant.
4. When using a tire servicing machine,\* the tire **MUST** be inflated only to the minimum pressure to force the tire bead onto the rim ledge and create an airtight seal before removal from the tire changing machine.
5. The tire may be inflated only when contained within a secured restraining device, positioned behind a secure barrier, secured on tire servicing machine\*, or bolted on the vehicle with the lug nuts fully tightened.
6. A Clip-on Chuck with an air-line pressure gauge or pre-set regulator must be applied to ensure the worker is a safe distance during inflation of the tire.
7. The tire must not be inflated to more than the inflation pressure stamped in the sidewall unless the manufacturer recommends a higher pressure.
8. Cracked, broken, bent, or otherwise damaged wheels must not be reworked, welded, brazed or otherwise heated. Heat of any nature must not be applied to a wheel.

**\* In accordance with the tire service machine manufacturer's safe work and operating procedures.**

### Multi-piece rim/ wheels

1. The tire must be completely deflated by removing the valve core before a rim wheel is removed from the vehicle axle in the following situations:
  - When the tire has been driven underinflated at 80% or less of its recommended pressure, or
  - When there is obvious or suspected damage to the tire wheel components.
2. The tire must be completely deflated by removing the valve core before demounting.
3. A rubber lubricant must be applied to the bead and the rim matting surface when assembling the wheel and inflating the tire unless the tire or wheel manufacturer recommends against it.
4. If 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 a remote distance Clip-on Chuck/In-Line gauge equipment is used, so no worker remains in the trajectory during inflation.
5. Prior to any assembly, **consult the matching charts from the manufacturer** and make certain that all pieces are manufactured to fit that particular rim assembly.
6. The tire shall only be inflated inside a secured restraining device. Restraining devices must be secured so not to become a trajectory during tire inflation.
7. A Clip on chuck with an air -line pressure gauge or pre-set regulator must be applied to ensure the worker is a safe distance during inflation of the tire.
8. Whenever the rim wheel is in a restraining device, the employee must not rest or lean any part of his or her body, or equipment, on or against the restraining device.
9. After tire inflation, the tire and wheel must be inspected while still within the restraining device to make sure that they are properly seated and locked. If further adjustment is necessary, the tire must be deflated by removing the valve core before the adjustment is made.
10. Workers must not correct the seating of the side and lock rings by hammering, striking or forcing the components while the tire is pressurized.
11. Cracked, broken, bent, or otherwise damaged wheel components must not be reworked, welded, brazed, or otherwise heated. Heat must not be applied to a multi-piece rim/ wheel.

**Reference to legal requirements under workplace safety and health legislation:**

- Powered Mobile Equipment: Manitoba Regulation 217/2006 Part 22

**Additional workplace safety and health information available at: [www.safemanitoba.com](http://www.safemanitoba.com)**