

Safety Requirements for Servicing of Tires, Wheels & Rims Around Canada



Tire explosions are an all too frequent source of workplace fatalities and serious injuries. Incidents typically occur while tires mounted on fixed rims are inflated or subject to extreme heat. In addition to the blast pressure, debris from the explosion can do serious harm to life and property. So, it's hardly surprising that the OHS laws of each jurisdiction require employers to take measures to ensure that tire servicing work is carried out as safely as possible. These requirements typically include:

- Restrictions on who can work on tires, wheels and rims;
- The safe work procedures that must be in place for these operations; and
- Equipment and other safeguards necessary when mounting, inflating or deflating tires on fixed rims.

Here's a rundown of what the rules are in each part of Canada.

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- NEWFOUNDLAND
- NORTHWEST TERRITORIES & NUNAVUT
- NOVA SCOTIA
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FEDERAL

Which Workers Are Allowed to Perform Tire Servicing Work?

Federal OHS regulations don't specify the kind of training or experience a worker must have to perform servicing, inspection, disassembly and reassembly of tires and wheel assemblies.

What Administrative Controls Are Required?

Employers must provide employees written instructions on how to maintain or repair motorized materials handling equipment with split-rim wheels, including instructions on training, inspection, installation, guarding, compatibility of parts used and repairs relating to the assembling and disassembling of split rim wheels, and keep a copy of those written instructions at the workplace where the motorized equipment is used for as long as the equipment is in use (COHS Regs, Sec. 14.22).

ALBERTA

Which Workers Are Allowed to Perform Tire Servicing Work?

Servicing, inspection, disassembly and reassembly of tires and wheel assemblies must be done by a “competent” worker, i.e., one who’s adequately qualified, suitably trained and sufficiently experienced to perform the work with little or no supervision (OHS Code, Sec. 193(1)).

What Administrative Controls Are Required?

It’s up to the employer to ensure that workers performing the job are competent and that they follow the manufacturer’s specifications; the employer must also ensure that the manufacturer’s service manuals for the tires and wheels being worked on are “readily available” to the workers (OHS Code, Sec. 193(2)).

What Are the Rules for Inflating Tires Mounted on a Rim?

The employer must ensure that a competent worker inflates a tire mounted on a split-rim or locking ring wheel only if: (1) the wheel assembly is in a tire cage or similarly restrained; AND (2) flying parts from split-rim or locking ring failure or tire rupture can be contained (OHS Code, Sec. 193(3)); the employer must also ensure the worker uses a clamp-on type connector to inflate split rim and locking ring wheels (OHS Code, Sec. 193(4)).

What Are the Rules for Clamp-On Connector Inflation?

If a clamp-on type of connector is used to inflate a tire, the employer must ensure the worker: (a) uses an in-line pressure gauge and positive pressure control; and (b) inflates the tire from a safe position out of the immediate danger area (OHS Code, Sec. 193(5)).

BRITISH COLUMBIA

Which Workers Are Allowed to Perform Tire Servicing Work?

Workers assigned to work on tires, rims and wheels must be trained in and follow the required safe work procedures (OHS Reg, Sec. 16.47).

What Administrative Controls Are Required?

The employer must implement safe work procedures for:

- Inspecting tire, rim and wheel components;
- Mounting a tire to the rim and wheel, and inflating a tire;
- Installing and removing tire assemblies from mobile equipment; and
- Demounting tires from the rim and wheel assemblies (OHS Reg, Sec. 16.47)

What Are the General Rules for Deflation?

A tire must be deflated before demounting in an area where ignition sources are controlled or removed (OHS Reg, Sec. 16.48(1)).

What Are the General Rules for Mounting?

Each tire, rim and wheel part must be cleaned and inspected for damage before mounting; and cracked, broken, bent or otherwise damaged parts must be replaced (OHS Reg, Sec. 16.48(2)).

What Are the General Rules for Inflation?

A tire must be inflated using a remote chuck with a sufficient length of hose and an inline, hand operated valve with a gauge so that the worker is outside the likely trajectory should wheel components separate during inflation (OHS Reg, Sec. 16.48(3)).

What Are the Rules for Inflating Tires Mounted on a Rim?

A tire mounted on a multi piece rim wheel must be placed in a cage or other restraining device when it's being inflated (OHS Reg, Sec. 16.48(4)). Any bead expander used to seat the beads of a tire must be removed before the tire is inflated to more than 34.5 kPa (5 psi) (OHS Reg, Sec. 16.48(5)).

Is Welding or Heating on Assembled Rim or Wheel Parts Allowed?

No, although limited heating to make it easier to remove a wheel from a hub is allowed after the tire has been deflated by removing the valve core (OHS Reg, Sec. 16.48(7)).

What Are the Rules for Multipiece Wheels?

A tire mounted on a multipiece rim wheel must be deflated to atmospheric pressure before any of the wheel nuts are loosened (OHS Reg, Sec. 16.48(8)). Multipiece rim and wheel components may not be interchanged except as allowed by the manufacturer's rim/wheel charts (OHS Reg, Sec. 16.48(9)). Multipiece rim wheels that have been used at less than 80% of the recommended inflation pressure for that application must be deflated, disassembled and reinspected before they're reinflated (OHS Reg, Sec. 16.48(10)).

MANITOBA

Which Workers Are Allowed to Perform Tire Servicing Work?

Servicing, inspection, disassembly and reassembly of tires and wheel assemblies of powered mobile equipment must be done by a "competent" person, i.e., one who's adequately qualified, suitably trained and sufficiently experienced to perform the task (WSH Regs, Sec. 22.23(1)).

What Administrative Controls Are Required?

It's up to the employer to ensure that persons performing the job are competent and that they follow the specifications of both tire manufacturer and powered mobile equipment operator; the employer must also ensure that the tire manufacturer's service manuals for the tires and wheels being worked on are "readily available" to the competent persons (WSH Regs, Sec. 22.23(2)).

What Are the Rules for Inflating Tires Mounted on a Rim?

The employer must ensure that a competent person: (1) uses a clamp-on type of connector to inflate split-rim or locking ring wheels; AND (2) only inflates a tire mounted on a split-rim or locking ring wheel if: (i) the wheel assembly is in a tire cage or similarly restrained; AND (ii) potential flying parts from split-rim or locking ring failure or tire rupture are contained (WSH Reg, Sec. 22.23(2)).

What Are the Rules for Clamp-On Connector Inflation?

If a clamp-on type of connector is used to inflate a tire, the employer must ensure the person doing the inflating: (1) uses an in-line pressure gauge and positive pressure control; and (2) inflates the tire from a safe position out not within the tire's potential trajectory ((WSH Reg, Sec. 22.23(3)).

NEW BRUNSWICK

Which Workers Are Allowed to Perform Tire Servicing Work?

New Brunswick doesn't specify the kind of training or experience a worker must have to perform servicing, inspection, disassembly and reassembly of tires and wheel assemblies.

What Are the Rules for Inflating Tires Mounted on a Rim?

When a tire for a vehicle or powered mobile equipment is installed and inflated on a rim, the employer must ensure that a safety cage or other restraining device is used for the tire and rim, and that other precautions are taken to protect employees in case the tire explodes (OHS General Reg, Secs. 229(1.1) and 230.3(1)).

NEWFOUNDLAND

Which Workers Are Allowed to Perform Tire Servicing Work?

Workers assigned to work on tires, rims and wheels of powered mobile equipment must be trained in and follow the required safe work procedures (OHS Regs, Sec. 278(2)).

What Administrative Controls Are Required?

The employer must implement safe work procedures for:

- Inspecting tire, rim and wheel components;
- Mounting a tire to the rim and wheel, and inflating a tire;
- Installing and removing tire assemblies from mobile equipment; and
- Demounting tires from the rim and wheel assemblies (OHS Regs, Sec. 278(1)).

What Are the General Rules for Deflation?

A tire must be deflated before demounting in an area where ignition sources are controlled or removed (OHS Regs, Sec. 279(1))

What Are the General Rules for Mounting?

Each tire, rim and wheel part must be cleaned and inspected for damage before mounting; and cracked, broken, bent or otherwise damaged parts must be replaced (OHS Regs, Sec. 279(2)).

What Are the General Rules for Inflation?

A tire must be inflated using a remote chuck with a sufficient length of hose and an inline, hand operated valve with a gauge so that the worker is outside

the likely trajectory should wheel components separate during inflation (OHS Regs, Sec. 279(3)).

What Are the Rules for Inflating Tires Mounted on a Rim?

A tire mounted on a multipiece rim wheel must be placed in a cage or other restraining device when it's being inflated (OHS Regs, Sec. 279(4)). Any bead expander used to seat the beads of a tire must be removed before the tire is inflated to more than 34.5 kPa (5 psi) (OHS Regs, Sec. 279(5)).

Is Welding or Heating on Assembled Rim or Wheel Parts Allowed?

No, although limited heating to make it easier to remove a wheel from a hub is allowed after the tire has been deflated by removing the valve core (OHS Regs, Sec. 279(6)).

What Are the Rules for Multipiece Wheels?

A tire mounted on a multipiece rim wheel must be deflated to atmospheric pressure by removing the valve core or other effective means before dismounting, and in the case of a dual wheel arrangement, both tires must be deflated to atmospheric pressure before any of the wheel nuts are loosened (OHS Regs, Sec. 279(7)). Multipiece rim and wheel components may not be interchanged except as allowed by the manufacturer's rim/wheel charts (OHS Regs, Sec. 279(8)). Multipiece rim wheels that have been used at less than 80% of the recommended inflation pressure for that application must be deflated, disassembled and inspected before they're reinflated (OHS Regs, Sec. 279(9)).

NORTHWEST TERRITORIES & NUNAVUT

Which Workers Are Allowed to Perform Tire Servicing Work?

Northwest Territories and Nunavut don't specify the kind of training or experience a worker must have to perform servicing, inspection, disassembly and reassembly of tires and wheel assemblies.

What Administrative Controls Are Required?

If a worker is required to mount a tire and the maximum inflation pressure isn't clearly indicated on the tire wall, the employer must provide the worker written instructions specifying the maximum inflation pressures for the various sizes and types of tires normally encountered and ensure that the worker follows those instructions (OHS Regs, Sec. 134(1)).

What Are the Rules for Inflating Tires Mounted on a Rim?

Employer Obligations

The employer must provide a worker required to mount a tire on a split-rim or locking ring assembly: (i) a clamp-on type air hose, an in-line pressure gauge and a positive pressure control; and (ii) a suitable cage or other restraining device to contain flying parts in the event of a split-rim assembly or locking ring assembly failure or tire rupture; employer must also ensure that the worker inflates the tire from a safe position out of the immediate danger area (OHS Regs, Sec. 134(3)). The employer must also ensure that the tire and rim assembly on which it's to be mounted are designed and constructed to be compatible with each other (OHS Regs, Sec. 134(2)).

Worker Obligations

- Must place the tire to be mounted on a split rim assembly or locking ring assembly in a cage or restraining device before mounting begins;
- May not inflate the tire in excess of the maximum pressure indicated on the tire wall or listed for the size and type of tire in the written instructions the employer provides;
- Must use a clamp-on type air hose, an in-line pressure gauge and positive pressure control; and
- Must inflate the tire from a safe position out of the immediate danger area (OHS Regs, Sec. 134(4)).

NOVA SCOTIA

Which Workers Are Allowed to Perform Tire Servicing Work?

Nova Scotia doesn't specify the kind of training or experience a worker must have to perform servicing, inspection, disassembly and reassembly of tires and wheel assemblies.

What Are the Rules for Inflating Tires Mounted on a Rim?

When a split-rim or retainer ring type is being mounted on a rim and is in the process of being inflated, the employer must provide and the employee must use:

- A safety cage or restraining device;
- A clip-on chuck with an adequate length of hose; and
- An in-line hand-operated valve with a gauge (Occ. Safety General Regs, Sec. 92(1)).

What Are the Rules for Split-Rim Wheel Assembly?

Employer must ensure that assembly of the components of split-rim or retainer type tires is done in accordance with the manufacturer's specifications, including a multi-piece rim matching chart (Occ. Safety General Regs, Sec. 92(2)).

ONTARIO

Which Workers Are Allowed to Perform Tire Servicing Work?

Ontario doesn't specify the kind of training or experience a worker must have to perform servicing, inspection, disassembly and reassembly of tires and wheel assemblies.

What Are the Rules for Inflating Tires Mounted on a Rim?

When a tire mounted on a rim is inflated, the employer must ensure that safety cages or other protections against blown-off side or lock rings are used (OHS Indus. Ests., Sec. 77); if the work is done on a construction project and a safety cage is used, the inflation must be done by remote means (OHS Const. Projects, Sec. 110(2)).

PRINCE EDWARD ISLAND

Which Workers Are Allowed to Perform Tire Servicing Work?

Prince Edward Island doesn't specify the kind of training or experience a worker must have to perform servicing, inspection, disassembly and reassembly of tires and wheel assemblies.

What Are the Rules for Inflating Tires Mounted on a Rim?

Tires that have been removed from trucks or heavy construction equipment may not be inflated on lock ring type rings unless a restraining device is used to contain flying parts in case of a blowout (OHS Act Gen Regs, Sec. 31.4).

QUÉBEC

Which Workers Are Allowed to Perform Tire Servicing Work?

Québec doesn't specify the kind of training or experience a worker must have to perform work on "wheels under pressure," defined as wheel composed of a one-piece or multi-piece rim assembled with a compatible tire mounted on vehicles whose weight, to which the rated load is added, is 4,500 kg or more (OHS Regs, Sec. 337).

What Administrative Controls Are Required?

Work on a "wheel under pressure," including handling and inspection, must be carried out in accordance with "trade practice" (OHS Regs, Sec. 337).

What Are the Rules for Inflating Tires Mounted on a Rim?

Inflating of tires must be done according to trade practice, in particular by using a holding device that prevents the projection of wheel components, such as a cage, support, chain, bar assembly or, in the absence of such device, any other means ensuring the workers' safety (OHS Regs, Sec. 337).

SASKATCHEWAN

Which Workers Are Allowed to Perform Tire Servicing Work?

Saskatchewan doesn't specify the kind of training or experience a worker must have to perform servicing, inspection, disassembly and reassembly of tires and wheel assemblies.

What Administrative Controls Are Required?

If a worker is required to mount a tire and the maximum inflation pressure isn't clearly indicated on the tire wall, the employer must provide the worker written instructions specifying the maximum inflation pressures for the various sizes and types of tires normally encountered and ensure that the worker follows those instructions (OHS Regs, Sec. 128(1)).

What Are the Rules for Inflating Tires Mounted on a Rim?

Employer Obligations

The employer must provide a worker required to mount a tire on a split-rim or locking ring assembly: (i) a clamp-on type air hose, an in-line pressure gauge and a positive pressure control; and (ii) a suitable cage or other restraining device to contain flying parts in the event of a split-rim assembly or locking ring assembly failure or tire rupture; employer must also ensure that the worker inflates the tire from a safe position out of the immediate danger area (OHS Regs, Sec. 128(3)). The employer must also ensure that the tire and rim assembly on which it's to be mounted are designed and constructed to be compatible with each other (OHS Regs, Sec. 128(2)).

Worker Obligations

- Must place the tire to be mounted on a split rim assembly or locking ring assembly in a cage or restraining device before mounting begins;
- May not inflate the tire in excess of the maximum pressure indicated on the tire wall or listed for the size and type of tire in the written instructions the employer provides;
- Must use a clamp-on type air hose, an in-line pressure gauge and positive pressure control; and
- Must inflate the tire from a safe position out of the immediate danger area (OHS Regs, Sec. 128(4)).

YUKON

Which Workers Are Allowed to Perform Tire Servicing Work?

Workers assigned to work on tires, rims and wheels must be trained in and follow the required safe work procedures (OHS Regs, Sec. 6.43(2)).

What Administrative Controls Are Required?

The employer must implement safe work procedures for:

- Inspecting tire, rim and wheel components;
- Mounting a tire to the rim and wheel, and inflating a tire;
- Installing and removing tire assemblies from mobile equipment; and
- Demounting tires from the rim and wheel assemblies (OHS Regs, Sec. 6.43(1)).

What Are the General Rules for Deflation?

A tire must be deflated before demounting in an area where ignition sources are controlled or removed (OHS Regs, Sec. 6.44(1))

What Are the General Rules for Mounting?

Each tire, rim and wheel part must be cleaned and inspected for damage before mounting; and cracked, broken, bent or otherwise damaged parts must be replaced; tire must undergo an internal inspection before it's mounted it on a wheel or rim (OHS Regs, Secs. 6.44(2) and (3)).

What Are the General Rules for Inflation?

A tire must be inflated using a remote chuck with a sufficient length of hose and an inline, hand operated valve with a gauge so that the worker is outside the likely trajectory should wheel components separate during inflation (OHS Regs, Sec. 6.44(4)). Any bead expander used to seat the beads of a tire must be removed before the tire is inflated to more than 34.5 kPa (5 psi) (OHS Regs, Sec. 6.44(5)). The tire must be inflated to the pressure, and within the range, specified by the tire or the equipment manufacturer for the particular application (OHS Regs, Sec. 6.44(6)).

What Are the Rules for Inflating Tires Mounted on a Rim?

A tire mounted on a multipiece rim wheel must be placed in a cage or other restraining device when it's being inflated (OHS Regs, Sec. 6.44(7)).

Is Welding or Heating on Assembled Rim or Wheel Parts Allowed?

No, although limited heating to make it easier to remove a wheel from a hub is allowed after the tire has been deflated by removing the valve core (OHS Regs, Sec. 6.44(8)).

What Are the Rules for Multipiece Wheels?

A tire mounted on a multipiece rim wheel must be deflated to atmospheric pressure by removing the valve core or other effective means before dismounting, and in the case of a dual wheel arrangement, both tires must be deflated to atmospheric pressure before any of the wheel nuts are loosened (OHS Regs, Sec. 6.44(9)). Multipiece rim and wheel components may not be interchanged except as allowed by the manufacturer's rim/wheel charts (OHS Regs, Sec. 6.44(10)). Multipiece rim wheels that have been used at less than 80% of the recommended inflation pressure for that application must be deflated, disassembled and inspected before reinstallation (OHS Regs, Sec. 6.44(11)).