

<b>Title</b>	<b>Repair and refit heavy vehicle tyres</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>10</b>

<b>Purpose</b>	This unit standard is for people in the automotive repair industry. People credited with this unit standard are able to remove wheels from heavy vehicles; remove heavy vehicle tyres from wheels; repair punctured tubes from heavy vehicles; repair punctured tubeless tyres from heavy vehicles; refit heavy vehicle tubed tyres to wheels; refit heavy vehicle tubeless tyres to wheels; and refit wheels to heavy vehicles.
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<b>Classification</b>	Motor Industry > Tyres
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 It is recommended that people hold credit for Unit 24463, *Demonstrate knowledge of heavy vehicle tyres and wheels* and Unit 24458, *Prepare to repair, and repair punctures in tubes and tubeless tyres on light vehicles* before being assessed against this unit standard.
- 2 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable manufacturer's specifications, service information, company requirements (this includes the knowledge and use of suitable tools and equipment).
- 3 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the current version of – Health and Safety at Work Act 2015; Land Transport Rule: Tyres and Wheels 2001, Rule 32013; New Zealand Standard AS/NZS 2230:1999 *New pneumatic tyres for light trucks and trucks/buses*, NZS 5423:1996 *Specification for repairing and retreading car, truck and bus tyres*; *Health and Safety Guidelines for Tyre Fitters* (Wellington: Occupational Safety and Health Service, Department of Labour, 2001), AS 4457.1:2007 *Earth-moving machinery - Off-the-road wheels, rims and tyres - Maintenance and repair - Wheel assemblies and rim assemblies*; and any subsequent amendments and replacements.
- 4 Land Transport Rules are available online at [www.nzta.govt.nz](http://www.nzta.govt.nz). New Zealand Standards are available online at [www.standards.co.nz](http://www.standards.co.nz). *Health and Safety Guidelines for Tyre Fitters* is available online at [www.worksafe.govt.nz](http://www.worksafe.govt.nz).

## 5 Definitions

*Company requirements* refer to instructions to staff on policy and procedures which are documented in memo or manual format and are available in the workplace. These requirements include but are not limited to – company policies and procedures, work instructions, product quality specifications and legislative requirements.

*Service information* may include– technical information of a vehicle, machine, or product detailing operation; installation and servicing procedures; manufacturer instructions; technical terms and descriptions; and detailed illustrations. This may be accessed from the manufacturer.

*Suitable tools and equipment* means industry approved tools and equipment that are recognised within the industry as being the most suited to complete the task in a professional and competent manner with due regard to safe working practices.

*Heavy vehicle* refers to a motor vehicle that is of Class MD3, MD4, ME, NB, NC, TC or TD; or has a gross vehicle mass that exceeds 3500 kg and is not of a class specified in the Table of vehicle classes as listed from New Zealand Transport Agency website

- 6 For the purpose of this unit standard, plugging of tyre punctures excludes exterior applications.

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## Outcomes and performance criteria

### Outcome 1

Remove wheels from heavy vehicles.

Range single wheels, dual wheels.

### Performance criteria

- 1.1 Wheel type is identified to enable manufacturer's removal procedures to be followed.
- 1.2 The vehicle is raised and secured to enable the wheel to be removed.
- 1.3 The wheel is removed from the vehicle without causing damage.

### Outcome 2

Remove heavy vehicle tyres from wheels.

Range tubed tyre, tubeless tyre.

### Performance criteria

- 2.1 The tyre is completely deflated before attempting to remove the tyre.
- 2.2 The tyre bead is removed from its seat on the wheel or rim without damage to the tyre and wheel rim.

- 2.3 The lock ring and flange are removed from the multipiece wheel or rim without stretching or bending components.
- 2.4 The tyre is removed from the wheel without damage to the tyre and wheel or rims.

### **Outcome 3**

Repair punctured tubes from heavy vehicles.

#### **Performance criteria**

- 3.1 The tyre is inspected for damage and suitability to return to service.
- 3.2 The source of the puncture in the tube is located and marked to enable the repair to be carried out.
- 3.3 Suitability of repair is established in accordance with repair kit manufacturer recommendations and the condition of the tube.
- 3.4 The puncture is repaired in accordance with puncture repair kit instructions.
- 3.5 The tyre is inflated, ensuring the tyre retains operating pressure.

### **Outcome 4**

Repair punctured tubeless tyres from heavy vehicles.

#### **Performance criteria**

- 4.1 The tyre is inspected and suitability to return to service is determined.
- 4.2 The damage to the tyre is located and marked to enable the repair to be carried out.
- 4.3 Suitability of repair is established in accordance with repair kit manufacturer recommendations and the condition of the tube.
- 4.4 The tyre is repaired, ensuring the tyre retains operating pressure.

### **Outcome 5**

Refit heavy vehicle tubed tyres to wheels.

#### **Performance criteria**

- 5.1 Components are checked for condition and cleaned.
- 5.2 The tyre and tube assembly is assembled to the wheel without damage to components.

- 5.3 The wheel assembly is placed in a safety cage or made secure before inflating above 35kPa (5psi).
- 5.4 The tyre is inflated to the tyre manufacturer recommended operating pressure and the valve cap replaced.
- 5.5 The tyre is checked to ensure that no leaks exist.

### Outcome 6

Refit heavy vehicle tubeless tyres to wheels.

#### Performance criteria

- 6.1 Components are checked for condition.
- 6.2 The tyre is mounted to the wheel or rim without damage to components.
- 6.3 The wheel assembly is placed in a safety cage or made secure before inflating above 35kPa (5psi).
- 6.4 The tyre is inflated to the tyre manufacturer recommended operating pressure and the valve cap replaced.
- 6.5 The tyre is checked to ensure that no leaks exist.

### Outcome 7

Refit wheels to heavy vehicles.

Range single wheels, dual wheels.

#### Performance criteria

- 7.1 Wheel to be fitted is compatible to the vehicle's application and conforms to legislative requirements.
- 7.2 The wheel is fitted to the vehicle without damage to components.
- 7.3 A check sheet is supplied to the customer to indicate wheel nut re-torque requirements.

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<b>Planned review date</b>	31 December 2022
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	25 September 1997	31 December 2019
Review	2	28 February 2001	31 December 2019
Review	3	25 January 2008	31 December 2019
Review	4	18 May 2017	N/A

**Consent and Moderation Requirements (CMR) reference**

0014

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

**Comments on this unit standard**

Please contact MITO New Zealand Incorporated [info@mito.org.nz](mailto:info@mito.org.nz) if you wish to suggest changes to the content of this unit standard.