

<b>Title</b>	<b>Identify and carry out repairs needed in bicycle components</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>12</b>

<b>Purpose</b>	<p>This unit standard is for people who work in bicycle repair workshops.</p> <p>People credited with this unit standard are able to identify and describe potential faults in bicycle components; repair faults in bicycle components; and test repaired bicycle components.</p>
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<b>Classification</b>	Retail, Distribution, and Sales > Bicycle Sales and Servicing
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 It is recommended that people hold credits for Unit 20182, *Use equipment in a bicycle workshop*, before being assessed against this unit standard.
- 2 This unit standard has been designed for learning and assessment in a repair workshop using commercial or non-commercial jobs. The emphasis is on the use of correct workshop repair procedures for the full range of bicycle components. Unit 20698, *Repair bicycle components*, assesses repair work for a minimum of three commercial jobs and must be assessed under normal workplace conditions.
- 3 All tasks are to be carried out in accordance with organisational procedures, the organisation being the enterprise carrying out the work.
- 4 Reference texts may include but are not limited to – Barnett, John. *Barnett's Manual DX*. Current edition. Colorado Springs, Co: Barnett Bicycle Institute, and those that come with the bicycle.
- 5 Performance of the elements of this unit standard must comply with the following standards, available through [www.standards.govt.nz](http://www.standards.govt.nz):  
 Australian/New Zealand Standards
  - AS/NZS 1927: 2010 *Pedal bicycles – Safety requirements*;
 New Zealand Standards
  - NZS 5441.1:1987 *Lighting and retroreflectors for pedal cycles – Specification for lamp units and retroreflectors suitable for fitting to pedal cycles*;
  - NZS 5441.2:1987 *Lighting and retroreflectors for pedal cycles – Code of practice for the fitting of lamp units and retroreflectors to pedal cycles*.
- 6 Any relevant Acts, regulations, and bylaws must be complied with during assessment against this standard.

## 7 Definitions

*Bicycle components* include:

wheels – hubs, spokes, rims, tyres, tubes;

drive chain – bottom bracket, chain wheel, chain, pedals, cluster;

gears – shifters, cables, derailleurs;

brakes – levers, cables, callipers, pads;

steering – headset, stem, bars, grips;

frames – drop out, forks, suspension, frame parts;

seat – seat, post.

*Organisational procedures* referred to in this unit standard may include but are not limited to the applicable procedures found in the following: organisational performance guidelines and standards; manufacturer's procedures and specifications; Government and local body legislation.

*Tools and equipment* means industry approved tools and equipment that are recognised within the industry as being the most suited to complete a task in a safe, professional and competent manner.

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## Outcomes and performance criteria

### Outcome 1

Identify and describe potential faults in bicycle components.

#### Performance criteria

1.1 Potential faults are identified and described for each component.

Range may include but is not limited to – faults in relation to manufacturer's specifications, relevant Australian/New Zealand Standards, customer's needs or requests, Consumer Guarantees Act 1993 and/or warranties; evidence for at least two faults per component is required.

### Outcome 2

Repair faults in bicycle components.

Range evidence is required for repairing two faults for each component.

#### Performance criteria

2.1 Repairs are carried out.

2.2 Broken and bent parts are repaired or replaced.

2.3 Moving parts are set up.

2.4 Tools and equipment used enable repairs to be carried out.

2.5 Components are repaired.

2.6 Work documentation is completed.

**Outcome 3**

Test repaired bicycle components.

Range evidence is required for testing of each repaired component.

**Performance criteria**

3.1 Repaired components are tested for safety and efficiency.

Range safety and efficiency – stable handling, turning and steering; no failure in parts of the bicycle; no loosening or misalignment of seat, handlebars, controls, reflectors; no loss of components or accessories.

<b>Planned review date</b>	31 December 2026
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	25 February 2004	31 December 2018
Rollover and Revision	2	20 June 2008	31 December 2018
Review	3	8 December 2016	N/A
Revision	4	28 April 2022	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0099
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

**Comments on this unit standard**

Please contact Toi Mai Workforce Development Council [qualifications@toimai.nz](mailto:qualifications@toimai.nz) if you wish to suggest changes to the content of this unit standard.