

<b>Title</b>	<b>Check a motorcycle engine for condition and carry out engine tuning requirements</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>4</b>

<b>Purpose</b>	<p>This unit standard is intended for people in the motorcycle repair industry.</p> <p>People credited with this unit standard are able to: check a motorcycle engine for condition; and carry out engine tuning requirements.</p>
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<b>Classification</b>	Motor Industry > Engines
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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 21687, *Demonstrate knowledge of basic tuning on a four stroke petrol engine* 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 service information, and company requirements and legislative requirements. This includes the knowledge and use of suitable tools and equipment.
- 3 Performance of the outcomes of this unit standard must comply with the following:  
Health and Safety at Work Act 2015;  
Land Transport Rule: Vehicle Repair 1998.
- 4 Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.
- 5 Definitions  
*Company requirements* refer to instructions to staff on policy and procedures that are available in the workplace. These requirements may include – company policies and procedures, work instructions, product quality specifications and legislative requirements.  
*Service information* refers to technical information for a vehicle, machine, or product detailing operation; installation and servicing procedures; manufacturer instructions; technical terms and descriptions; and detailed illustrations.  
*Suitable tools and equipment* refer to 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.

- 6 For this unit standard, it is essential that the practical assessment evidence is obtained in the workplace under normal workplace conditions.

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## Outcomes and performance criteria

### Outcome 1

Check a motorcycle engine for condition.

#### Performance criteria

- 1.1 An inspection of the engine is carried out.
- Range includes but is not limited to – oil leaks, coolant leaks, damage, security, noise, cleanliness.
- 1.2 A compression test is carried out. The results are recorded and compared to the manufacturer's specifications, and any readings found outside the manufacturer's specifications are reported.
- 1.3 An engine vacuum test is carried out. The readings are recorded and interpreted, and any readings found outside the manufacturer's specifications are reported.
- 1.4 Spark plug type and heat range are selected.
- 1.5 Ignition and fuel system settings are checked.

### Outcome 2

Carry out engine tuning requirements.

#### Performance criteria

- 2.1 The level and extent of tuning required is determined from the results of the inspection and tests carried out.
- 2.2 The engine is tuned to manufacturer's specifications.
- Range fuel system, ignition system, exhaust system, mechanical adjustments;  
may include but is not limited to – reference to engine fault codes.

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<b>Planned review date</b>	31 December 2025
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	25 January 2008	31 December 2022
Review	2	29 April 2021	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.