

<b>Title</b>	<b>Demonstrate knowledge of petrol and diesel engines</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>4</b>

<b>Purpose</b>	This unit standard is for people who are employed in the motor industry. People credited with this unit standard are able to demonstrate knowledge of engine operation and performance.
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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 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.
- 2 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the current version of the Health and Safety at Work Act 2015; and any subsequent amendments and replacements.
- 3 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* may include – technical information for a vehicle, machine, or product detailing operation; installation and servicing procedures; manufacturer instructions; technical terms and descriptions; and detailed illustrations.

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### Outcomes and performance criteria

#### Outcome 1

Identify components of an internal combustion engine.

#### Performance criteria

- 1.1 The main components of an internal combustion engine are identified.

#### Outcome 2

Describe the operation of spark ignition (SI) engines.

**Performance criteria**

- 2.1 The operation of a two-stroke SI engine is described.
- 2.2 The operation of a four-stroke SI engine is described.

**Outcome 3**

Describe the operation of compression ignition (CI) engines.

**Performance criteria**

- 3.1 The operation of a four-stroke CI engine is described.

**Outcome 4**

Demonstrate knowledge of engine performance.

**Performance criteria**

- 4.1 The terms torque and power are defined.
- 4.2 The effects of engine capacity and compression ratio on engine torque and power are described.

<b>Replacement information</b>	This unit standard replaced unit standard 231.
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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	26 October 2017	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0014
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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 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.