

Title	Demonstrate knowledge of disassembling and reassembling a four stroke multi-cylinder engine		
Level	2	Credits	3

Purpose	People credited with this unit standard are able to demonstrate knowledge of disassembling, and reassembling a four stroke multi-cylinder engine to a running state.
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Classification	Motor Industry > Engines
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Available grade	Achieved
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Guidance Information

- 1 Evidence presented for assessment against this unit standard must be consistent with safe work 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.
- 2 Legislation, regulations and/or industry standards relevant to this unit standard may include:
 - 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 refers to information such as 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 work practices.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of disassembling an engine.

Performance criteria

- 1.1 Safety precautions whilst disassembling an engine are identified.

- 1.2 Procedures for cleaning the engine assembly to remove exterior dirt and oil are described.
- 1.3 Procedures for removing major components, including the cylinder head, are described.
- 1.4 Procedures for disassembling the cylinder head and cylinder block, and their components are described.

Outcome 2

Demonstrate knowledge of reassembling an engine to a running state.

Performance criteria

- 2.1 Safe working practices whilst reassembling an engine are identified.
- 2.2 Procedures for cleaning and protecting engine components are described.
- 2.3 Oil and water passages are identified and the flow paths of lubricating oil and coolant are described.
- 2.4 Procedures for reassembling engine components are described.
- 2.5 Clearances, settings, tightening torques, and tensions are identified; and procedures for adjusting them to specifications during assembly are described.
- 2.6 Initial starting and running procedures for a reassembled engine are described.

Planned review date	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	27 July 2005	31 December 2018
Rollover and Revision	2	26 November 2007	31 December 2018
Review	3	21 April 2016	31 December 2023
Review	4	24 March 2022	N/A

Consent and Moderation Requirements (CMR) reference	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 Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.