

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

Purpose	This theory-based unit standard is for people who wish to enter or are employed in the motor industry. 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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Explanatory notes

- 1 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 and legislative requirements (this includes the knowledge and/or use of suitable tools and equipment).
- 2 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the current version of including updated amendments to, and replacements of – Health and Safety at Work Act 2015.
- 3 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 specifications and procedures, work instructions, manufacturer specifications, product quality specifications and legislative requirements.
Service information may include but is not limited to – technical information of a vehicle, machine, or product detailing operation; installation and servicing procedures; manufacturer instructions and specifications; 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.

Outcomes and evidence requirements

Outcome 1

Demonstrate knowledge of disassembling an engine.

Evidence requirements

- 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.

Evidence requirements

- 2.1 Safe working practices whilst reassembling an engine are identified.
- 2.2 Procedures to clean and protect 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 2021
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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	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>.

Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMRs). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

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