

Title	Remove and replace a heavy vehicle and/or machine diesel engine cylinder head		
Level	3	Credits	2

Purpose	This unit standard is for people in the automotive repair industry. People credited with this unit standard are able to remove a cylinder head from a heavy vehicle and/or machine diesel engine, and refit a cylinder head to a heavy vehicle and/or machine diesel engine.
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Classification	Motor Industry > Engine Repairs
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Available grade	Achieved
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Explanatory notes

- 1 The following legislation and their amendments are required to be consulted and followed where applicable:
 - Health and Safety in Employment Act, 1992
 - Resource Management Act 1991.
- 2 Reference to *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 to a professional and competent manner with due regard to safe working practices.
- 3 Because of the particular nature of this unit standard, it is essential that the practical assessment evidence is obtained from commercial jobs in the workplace under normal workplace conditions.

Outcomes and evidence requirements

Outcome 1

Remove a cylinder head from a heavy vehicle and/or machine diesel engine.

Evidence requirements

- 1.1 Safe working practices are observed throughout the task.

Range	personal safety, safety of others, equipment, vehicle and machine safety.
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- 1.2 Suitable tools and workshop equipment are selected and used to enable a cylinder head to be removed from a diesel engine.

- 1.3 Coolant is drained from the cooling system in accordance with environmental legislation.
- 1.4 The cylinder head is removed from the engine in the manner and sequence prescribed by the manufacturer.
- 1.5 Care is taken during disassembly to note and preserve any evidence that could help in diagnosing the cause(s) of faults, and to tabulate the parts for easy identification.
- 1.6 Cylinder head parts are stored in parts trays to prevent loss and damage.
- 1.7 The cylinder block is protected against the disturbance of seals and ingress of foreign matter.

Outcome 2

Refit a cylinder head to a heavy vehicle and/or machine diesel engine.

Evidence requirements

- 2.1 Safe working practices are observed throughout the task.
 Range personal safety, safety of others, equipment, vehicle and machine safety.
- 2.2 Suitable tools and workshop equipment are selected and used to enable a cylinder head to be refitted to a diesel engine.
- 2.3 The cylinder head and block components are prepared to enable the head to be refitted without damage, without time delay due to missing and damaged parts, and according to manufacturer's specifications.
- 2.4 Replacement components are obtained and installed to enable the cylinder head to be refitted to the engine according to manufacturer's specifications.
- 2.5 The cylinder head is assembled to the engine in the sequence and manner prescribed by the manufacturer.
- 2.6 Adjustments are carried out in the manner and sequence prescribed by the manufacturer, and to manufacturer's specifications.
 Range torque settings, clearances.

Replacement information	This unit standard and unit standard 923 have been replaced by unit standard 24274 and unit standard 24807.
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This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	23 February 1999	31 December 2016
Revision	2	16 April 2003	31 December 2016
Review	3	25 January 2008	31 December 2016
Rollover	4	19 November 2010	31 December 2016
Rollover	5	18 February 2016	31 December 2020

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, or an inter-institutional body with delegated authority for quality assurance, 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.

Consent requirements and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). 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.

This unit standard is expiring