

Title	Inspect and machine engine piston and connecting rod assemblies		
Level	4	Credits	6

Purpose	People credited with this unit standard are able to inspect and machine engine piston and connecting rod assemblies.
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Classification	Motor Industry > Engines
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Available grade	Achieved
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Guidance Information

- 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.
- 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.
- 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.
- Assessment against this standard includes piston and rod assemblies applicable to petrol two and four stroke engines, and to diesel four stroke engines.
- It is recommended that people first hold credit for 32322, *Demonstrate knowledge of automotive cylinder head reconditioning practices*, before being assessed against this standard.

Outcomes and performance criteria

Outcome 1

Inspect engine piston and connecting rod assemblies.

Performance criteria

- 1.1 Piston and rod assemblies are cleaned and decarbonised.
- 1.2 Pistons, gudgeons, and connecting rods are inspected.
Range visual inspection, precision measuring, alignment checks.
- 1.3 Pistons and connecting rods are crack tested.
Range one of – dye penetrant test, magnetic particle test.

Outcome 2

Machine engine piston and connecting rod assemblies.

Performance criteria

- 2.1 Pistons are dismantled from connecting rods.
- 2.2 Piston ring grooves are machined.
- 2.3 Connecting rod tunnels are resized.
- 2.4 Connecting rods are rebushed, bored, and honed to suit gudgeon pin clearances, and if required, balanced.
- 2.5 Pistons are fitted to connecting rods without damage to components.
- 2.6 Alignment checks and adjustment of the piston and rod assembly are carried out.

Planned review date	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 September 1997	31 December 2023
Review	2	28 February 2001	31 December 2023
Review	3	25 January 2008	31 December 2023
Review	4	25 February 2021	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 MITO New Zealand Incorporated info@mito.org.nz if you wish to suggest changes to the content of this unit standard.