

Title	Disassemble, inspect, and reassemble an engine short block under general supervision		
Level	3	Credits	3

Purpose	<p>This unit standard is intended for people in the automotive repair industry.</p> <p>People credited with this unit standard are able to: disassemble and inspect an engine short block; and reassemble an engine short block, under general supervision.</p>
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Classification	Motor Industry > Engines
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Available grade	Achieved
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Guidance Information

- 1 It is recommended that people hold credit for Unit 24287, *Demonstrate knowledge of disassembling, inspecting, and reassembling an engine short block* before being assessed against this unit standard.
- 2 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.
- 3 Performance of the outcomes of this unit standard must comply with the following:
Health and Safety at Work Act 2015;
Resource Management Act 1991, s15 Discharge of contaminants into environment;
Land Transport Rule: Vehicle Repair 1998.
- 4 Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.
- 5 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 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 working practices.

Outcomes and performance criteria

Outcome 1

Disassemble and inspect an engine short block under general supervision.

Performance criteria

- 1.1 Procedures and sequence to disassemble the cylinder block are identified and verified with the supervisor.
- 1.2 Procedures to clean components prior to inspection are identified.
- 1.3 Engine short block and associated components are cleaned and protected without damage to components.
- 1.4 Coolant is drained from the short block.
- 1.5 Engine short block is disassembled, and components are laid out in order of disassembly for inspection.
- 1.6 Care is taken during disassembly to note and preserve any evidence that could help in diagnosing the causes of faults, and to tabulate the components for easy identification.
- 1.7 Components are stored in parts trays to prevent loss and damage.
- 1.8 Piston assemblies are removed and inspected for damage and wear.

Range may include but is not limited to – fit of the gudgeon pin into the piston;
connecting rod – bend, bow, twist.
- 1.9 The crankshaft is removed and inspected for damage and wear.

Range includes but is not limited to – bearing and journal wear.
- 1.10 Timing gears or drive, water pump, and oil pump are removed and inspected for damage and wear.
- 1.11 The dismantled block is inspected for damage and wear.

Range includes but is not limited to – bore or sleeve wear, flatness and damage to machined surfaces, corrosion and erosion of water jacket.
- 1.12 Core plugs, bolts, studs, and threaded holes are inspected for signs of leakage, damage, clogging, and breakage.

Outcome 2

Reassemble an engine short block under general supervision.

Performance criteria

- 2.1 Engine short block components are prepared, to enable the block to be reassembled without damage, and without time delay due to missing and damaged parts, in accordance with supervisor instructions.
- 2.2 Engine short block components are installed in the manner and sequence specified by supervisor instructions.
- 2.3 Adjustments are carried out.
Range torque settings, clearances, running requirements.

Replacement information	This unit standard and unit standard 24306 replaced unit standard 925.
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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 January 2008	31 December 2022
Review	2	29 April 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.