

Title	Test and tune two-stroke petrol engines and diagnose and repair faults		
Level	4	Credits	6

Purpose	People credited with this unit standard are able to: carry out engine performance tests and tune two-stroke petrol engines; and diagnose and repair two-stroke petrol engine system faults.
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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 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.
- 2 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.
- 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 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.
- 4 It is recommended that people seeking credit for this unit standard, first hold credit for Unit 24294, *Demonstrate knowledge of two-stroke engine lubrication, testing and tuning*, before being assessed against this unit standard.

Outcomes and performance criteria

Outcome 1

Carry out engine performance tests and tune two-stroke petrol engines.

Range evidence of four separate engines is required.

Performance criteria

- 1.1 Engine performance is tested.
Range under load, idle, acceleration, wide open throttle.
- 1.2 Spark plugs are removed and inspected.
- 1.3 Engine pressure and vacuum tests are performed.
Range cylinder leakage, compression, crankcase; pressure, vacuum.
- 1.4 Tuning is checked and adjusted as required.

Outcome 2

Diagnose and repair two-stroke petrol engine system faults.

Range may include – fuel, oil, ignition, power valve, intake, exhaust, mechanical; evidence of four separate system faults is required.

Performance criteria

- 2.1 Engine system faults are diagnosed.
- 2.2 Engine system faults are repaired.

Replacement information	This unit standard was replaced by skill standard 40478.
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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	29 October 1993	31 December 2020
Review	2	4 October 1996	31 December 2020
Review	3	26 February 1999	31 December 2020
Review	4	25 January 2008	31 December 2020
Review	5	22 August 2019	31 December 2027
Review	6	27 March 2025	31 December 2027

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>.