

<b>Title</b>	<b>Diagnose and rectify inboard petrol engine faults on trailer boats</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>8</b>

<b>Purpose</b>	<p>This unit standard is intended for people in the trailer boat repair industry.</p> <p>People credited with this unit standard are able to: diagnose inboard petrol engine faults on trailer boats; and rectify inboard petrol engine faults on trailer boats.</p>
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<b>Classification</b>	Motor Industry > Engines
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 It is recommended that people hold credit for Unit 30477, *Demonstrate knowledge of petrol and diesel engines* 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.
- 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.

*Rigging* in the context of this unit standard refers to the fitting of engines and related accessories to a trailer boat.

*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.

- 6 Assessment against this standard includes both two-stroke and four-stroke engines.
- 7 For this unit standard, it is essential that the practical assessment evidence is obtained in the workplace under normal workplace conditions.

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## Outcomes and performance criteria

### Outcome 1

Diagnose inboard petrol engine faults on trailer boats.

#### Performance criteria

- 1.1 Precautions are observed throughout the task.
- Range includes but is not limited to – accidental starting, operating the engine in the boat, wearing safety equipment, working in a confined space, precautions when handling hazardous substances, conducting tests on running engines, testing electronic components.
- 1.2 Fault symptoms are determined and noted before any work is carried out.
- 1.3 A visual inspection is carried out.
- Range inspection includes but is not limited to looking for – leaks; missing, worn, and loose parts; visual defects and damage; mounting and rigging faults; levels of lubricant and fuel; defective operation of controls.
- 1.4 Compression check is carried, and results are compared with engine manufacturer specifications.
- 1.5 Engine starting procedures are followed, and any faults are noted.
- Range faults may include but are not limited to – hard starting, uneven running, abnormal noise, insufficient coolant circulation, incorrect emission levels.
- 1.6 Air flow requirements and noise level, in and around the engine and compartment, are checked, and any faults are noted.
- 1.7 Electrical and ignition test procedures are carried out, and any faults are noted.
- 1.8 Remote control and linkage adjustment checks are carried out, and any faults are noted.
- 1.9 Engine performance checks are carried out, and any faults are noted.

### Outcome 2

Rectify inboard petrol engine faults on trailer boats.

**Performance criteria**

- 2.1 Precautions are observed throughout the task.
- Range includes but is not limited to – accidental starting, operating the engine in the boat, wearing safety equipment, working in a confined space, precautions when handling hazardous substances, conducting tests on running engines, testing electronic components.
- 2.2 Faults are rectified to restore full serviceability.
- Range faults may include but are not limited to – mechanical, hydraulic, electrical, electronic; fuel system, cooling system, rigging, transmission, drive line, exhaust.
- 2.3 Lubricants and sealants are used.
- 2.4 Engine adjustments are carried out.
- 2.5 The engine is run and retested once repairs are completed to ensure that no faults remain.

<b>Planned review date</b>	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	23 February 1999	31 December 2022
Revision	2	16 April 2003	31 December 2022
Review	3	25 January 2008	31 December 2022
Review	4	29 April 2021	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	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](mailto:info@mito.org.nz) if you wish to suggest changes to the content of this unit standard.