

<b>Title</b>	<b>Install a replacement engine in a trailer boat</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>4</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: assess the suitability of a trailer boat for repowering; and install a replacement engine in a trailer boat.</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 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 Performance of the outcomes of this unit standard must comply with the following: Health and Safety at Work Act 2015; Consumer Guarantees Act 1993.
- 3 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.
- 4 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.
- 5 Assessment against this standard includes both outboard and inboard engines.
- 6 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

Assess the suitability of a trailer boat for repowering.

#### Performance criteria

- 1.1 The suitability of the boat for repowering is assessed and noted.
- Range economic viability, boat safety, engine suitability for the boat and customer requirements, power and torque range, compatibility of transmission and drive (where separate), cooling system (where separate), boat structural integrity, transom and engine bed condition and suitability, engine compartment space (inboard).
- 1.2 The availability of a suitable power unit is established from the boat or engine manufacturer criteria, and the choice is noted.
- 1.3 A repowering recommendation is prepared and presented to the customer.
- Range recommendation includes – the availability of a suitable repower unit and a schedule of the required modifications.

### Outcome 2

Install a replacement engine in a trailer boat.

#### Performance criteria

- 2.1 The engine mounting area is accessed, to enable the engine removal and replacement to be carried out without damage to the engine, equipment, boat, and personnel.
- 2.2 The existing engine is disconnected and removed from the boat.
- 2.3 The replacement engine is checked to ensure all components are available for the installation.
- 2.4 Any necessary modifications to the boat to accommodate the replacement engine are made without compromising boat safety.
- Range modifications may include – engine foundation and mounting brackets, engine compartment space (inboard), systems and controls.
- 2.5 The replacement engine is installed without damage to engine, boat, and equipment, normalised in its mountings so that no tension is present, and aligned.

- 2.6 Ancillaries, controls, and systems are fitted, and any adjustments necessary are completed.
- 2.7 The replacement engine is tested to ensure its performance meets the expectations of the repowering recommendation and the customer.

<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.