

Title	Explain marine engine management systems		
Level	3	Credits	4

Purpose	People credited with this unit standard are able to explain marine engine management systems.
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Classification	Motor Industry > Trailer Boat Systems
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Available grade	Achieved
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Guidance Information

- 1 Definition
Manufacturers' specifications refer to technical information of boat or product detailing: operation, installation and servicing procedures; technical terms and descriptions; or illustration. Manufacturers' specifications must be followed to ensure compliance with manufacturer warranty, safe operation, and operation that meets manufacturer performance claims.
- 2 Assessment information
 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with manufacturers' specifications.

Outcomes and performance criteria

Outcome 1

Explain marine engine management systems.

Performance criteria

- 1.1 Functions of marine engine management systems are explained.
 Range evidence of four functions is required.
- 1.2 Components of marine engine management system are explained in terms of functions.
 Range systems include – electronic fuel injection and delivery, air induction, engine ignition, electronic control, exhaust, valve timing.

- 1.3 Sensors controlled by the Electronic Control Unit are explained in terms of purpose.

Range sensors include – air flow, air temperature, throttle position, temperature, oxygen, MAP, knock, engine speed, engine oil, crankshaft, camshaft.

Planned review date	31 December 2030
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	26 July 2018	31 December 2027
Review	2	29 May 2025	N/A

Consent and Moderation Requirements (CMR) reference	0136
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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 Hanga-Aro-Rau Engineering, Manufacturing and Logistics Workforce Development Council at qualifications@hangaarorau.nz if you wish to suggest changes to this skill standard.