

Title	Demonstrate knowledge of forced air intake systems on a marine engine		
Level	3	Credits	4

Purpose	People credited with this unit standard are able to demonstrate knowledge of forced air intake systems on a marine engine, and explain servicing procedures of forced air intake systems.
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Classification	Boating Industries > Boatbuilding
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Available grade	Achieved
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Guidance Information

Definition

Service information refers to technical information of a boat or product detailing: operation; installation and servicing procedures; manufacturer instructions and specifications; technical terms and descriptions; or illustrations.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of forced air intake systems on a marine engine.

Performance criteria

- 1.1 Types of air intake systems are explained and compared in terms of air volumes required in accordance with service information.
- Range intake systems include – naturally aspirated, turbocharge, blower.
- 1.2 Main components of forced air intake systems are explained in terms of their purpose in accordance with service information.
- Range turbine wheel, compressor, bearing system, boost pressure control system, intercooler, wastegates, blow-off valves, piping, manifolds.
- 1.3 Principles of turbocharging are described in accordance with service information.
- Range suction, compression, expansion, exhaust.
- 1.4 Principles of a Roots-type blower are described in accordance with service information.

Outcome 2

Explain servicing procedures of forced air intake systems.

Performance criteria

2.1 Servicing procedures of forced air intake systems are explained in accordance with service information.

Range procedures include – dismantling, cleaning of parts, inspection, assembly, reinstallation.

Planned review date	31 December 2022
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	14 December 2017	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 the NZ Marine and Composites Industry Training Organisation training@nzmarine.com if you wish to suggest changes to the content of this unit standard.