



Australian Government

AURRTA003 Winterise vessels and engine systems

Release: 1

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Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to winterise or prepare a vessel and its engine systems for seasonal shutdown and storage. It involves preparing for the task, testing the vessel systems and engine prior to winterising, making any recommendations for further action, and carrying out treatments of vessel and engine systems.

It applies to those working in the marine service and repair industry.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Competency Field

Marine

Unit Sector

Technical

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold and italicised text is used, further information is detailed in the range of conditions section.
1. Prepare to winterise vessel and engine systems	1.1 Job requirements are determined from workplace instructions 1.2 Winterising procedures and information are accessed and interpreted 1.3 Hazards associated with the work are identified and risks are managed 1.4 Tools and equipment are selected and checked for serviceability

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold and italicised text is used, further information is detailed in the range of conditions section.
2. Winterise vessel	2.1 Vessel systems are tested prior to winterising according to manufacturer specifications, workplace procedures, and <i>safety and environmental requirements</i> 2.2 Vessel systems that fail testing are reported according to workplace procedures, and rectification approval is gained from customer 2.3 Vessel systems are winterised according to manufacturer specifications, workplace procedures, and safety and environmental requirements
3. Winterise engine and systems	3.1 Vessel engine and systems are tested prior to winterising according to manufacturer specifications, workplace procedures, and safety and environmental requirements 3.2 Vessel engine and system components that fail testing are reported according to workplace procedures, and rectification approval is gained from customer 3.3 Vessel engine and systems are winterised according to manufacturer specifications, workplace procedures, and safety and environmental requirements 3.4 Engine openings are sealed against ingress of foreign matter according to manufacturer specifications and workplace procedures
4. Complete work processes	4.1 Final inspection is made to ensure work is to workplace expectations and vessel is presented or stored according to workplace procedures 4.2 Work area is cleaned, waste and non-recyclable materials are disposed of, and recyclable material is collected 4.3 Tools and equipment are checked and stored according to workplace procedures 4.4 Workplace documentation is processed according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance and are not explicit in the performance criteria.

Skills	Description
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Skills	Description
Learning skills to:	locate appropriate sources of information efficiently.
Reading skills to:	- interpret safe operating procedures for vessels and engine systems in workplace and manufacturer literature - interpret information from manufacturer and workshop manuals when seeking vessel and engine system specifications.
Writing skills to:	legibly and accurately fill out workplace documentation when reporting findings and recording work completed.
Oral communication skills to:	clarify instructions, report findings, and gain customer consent for required rectification measures.
Numeracy skills to:	use basic mathematical operations, including addition and subtraction, to calculate amounts and ratios of fluids.
Planning and organising skills to:	plan own work requirements and prioritise actions to achieve required outcomes and ensure tasks are completed within workplace timeframes.
Technology skills to:	use measuring equipment, such as battery load testers.

Range of Conditions

This section specifies work environments and conditions that may affect performance.

Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Bold italicised wording, if used in the performance criteria, is detailed below.

<i>Safety and environmental requirements</i> must include:	- work health and safety (WHS) and occupational health and safety (OHS) requirements, including procedures for checking and dealing with flammable gas build-up in boats - environmental requirements, including procedures for trapping, storing and disposing of fluids drained from engine systems.
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Unit Mapping Information

Equivalent to AURRTA3003 Winterise vessel and engine systems

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1>

Assessment Requirements for AURRTA003 Winterise vessels and engine systems

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Performance Evidence

Before competency can be determined, individuals must demonstrate they can perform the following according to the standards defined in this unit's elements, performance criteria, range of conditions and foundation skills:

- winterise two different vessels and their engine systems, in which the work must involve:
 - fogging engine cylinders
 - treating fuel systems
 - disconnecting batteries
 - lubricating linkages and starter drive mechanisms
 - treating cooling systems
 - weatherproofing systems and components.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) requirements relating to testing and winterising vessels and engine systems, including procedures for checking and dealing with flammable gas build-up in boats
- environmental requirements, including procedures for trapping, storing and disposing of fluids drained from engine systems
- pre-winterising testing procedures for vessels and engine systems, including:
 - electrical system testing
 - engine and driveline testing
 - control system testing
- winterising procedures for vessels and engine systems, including:
 - properties and use of servicing fluids, lubricants and anti-corrosion products used in winterising procedures

- fogging engine cylinders
- emptying and treating fuel systems
- disconnecting batteries
- lubricating linkages and starter drive mechanisms
- treating cooling systems
- weatherproofing systems and components.

Assessment Conditions

Assessors must satisfy NVR/AQTF assessor requirements.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessment must include direct observation of tasks.

Where assessment of competency includes third-party evidence, individuals must provide evidence that links them to the vessels that they have winterised, e.g. repair orders.

Assessors must verify performance evidence through questioning on skills and knowledge to ensure correct interpretation and application.

The following resources must be made available:

- marine repair workplace or simulated workplace
- workplace instructions
- manufacturer vessel specifications
- two different vessels, engines and associated systems requiring winterising
- testing equipment for vessels and engine systems
- tools, equipment and materials appropriate for winterising vessels and engine systems.

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