



**Australian Government**

# **AURRTE008 Install marine engines, controls and instruments**

**Release: 1**

# AURRTE008 Install marine engines, controls and instruments

## Modification History

Release	Comment
Release 1	New unit of competency.

## Application

This unit describes the performance outcomes required to install marine engines, controls and instruments. It involves preparing for the task, installing and testing the operation of marine engines, controls and instruments, and completing workplace processes and documentation.

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 - Engines

## 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 install engine, controls and instruments	1.1 Job requirements are determined from workplace instructions 1.2 Installation procedures and information are sourced and interpreted 1.3 Installation options are analysed and those most appropriate to the circumstances are selected 1.4 Hazards associated with the work are identified and risks are managed

<b>Elements</b>	<b>Performance Criteria</b>
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.
	1.5 Tools, equipment and materials are selected and checked for serviceability
2. Install engine	2.1 Engine, controls and instruments are checked for correct application and any damage 2.2 Engine assembly is installed according to manufacturer specifications, workplace procedures, and <b><i>safety and environmental requirements</i></b> , and without causing damage to components or systems 2.3 Installed engine is tested for correct operation and required adjustments are made according to manufacturer specifications, workplace procedures and safety requirements
3. Install engine controls	3.1 Engine controls are installed according to manufacturer specifications, workplace procedures and safety requirements, and without causing damage to components or systems 3.2 Installed controls are tested for correct operation and required adjustments are made according to manufacturer specifications, workplace procedures and safety requirements
4. Install engine instruments and commission engine, controls and instruments	4.1 Engine instruments are installed according to manufacturer specifications, workplace procedures and safety requirements, and without causing damage to components or systems 4.2 Installed engine instruments are tested for correct operation and required adjustments are made according to manufacturer specifications, workplace procedures and safety requirements 4.3 Final adjustments are made and engine, controls and instruments are re-tested in normal operating conditions
5. Complete work processes	5.1 Final inspection is made to ensure work is to workplace expectations and vessel is presented ready for use 5.2 Work area is cleaned, waste and non-recyclable materials are disposed of, and recyclable material is collected 5.3 Tools and equipment are checked and stored according to workplace procedures 5.4 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
Learning skills to:	<ul style="list-style-type: none"> <li>locate appropriate sources of information efficiently.</li> </ul>
Reading skills to:	<ul style="list-style-type: none"> <li>interpret information from manufacturer and workshop literature when seeking specifications and procedures.</li> </ul>
Writing skills to:	<ul style="list-style-type: none"> <li>legibly and accurately fill out workplace documentation when reporting work performed and recording parts and material used.</li> </ul>
Oral communication skills to:	<ul style="list-style-type: none"> <li>clarify instructions</li> <li>report findings and make installation recommendations.</li> </ul>
Numeracy skills to:	<ul style="list-style-type: none"> <li>measure components and use basic mathematical operations, including addition, subtraction, multiplication and division to calculate distances, areas, tolerances and deviations from manufacturer specifications.</li> </ul>
Planning and organising skills to:	<ul style="list-style-type: none"> <li>plan own work requirements and prioritise actions to achieve required outcomes and ensure tasks are completed within workplace timeframes.</li> </ul>
Problem solving skills to:	<ul style="list-style-type: none"> <li>determine installation methods for different vessels.</li> </ul>
Technology skills to:	<ul style="list-style-type: none"> <li>use measuring equipment, such as rulers, vernier calipers, test lights and multimeters.</li> </ul>

## 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.

<b><i>Safety and environmental requirements</i></b> must include:	<ul style="list-style-type: none"> <li>work health and safety (WHS) and occupational health and safety (OHS) requirements, including lifting and supporting procedures for marine engines</li> <li>environmental requirements, including procedures for trapping, storing and disposing of fluids released from engines.</li> </ul>
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## Unit Mapping Information

Equivalent to AURRTE3008 Install marine engines, controls and instruments

## **Links**

Companion Volume implementation guides are found in VETNet -

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