



Australian Government

**Assessment Requirements for MARL025
Demonstrate intermediate knowledge of
marine auxiliary machinery and systems**

Release: 1

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Modification History

Release 1. New unit of competency.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least one occasion and include:

- accessing information and sketching diagrams to interpret and explain testing requirements related to operating marine auxiliary machines
- applying relevant work health and safety/occupational health and safety (WHS/OHS) requirements and work practices
- assessing own work outcomes and maintaining knowledge of current codes, standards, regulations and industry practices
- identifying and interpreting numerical and graphical information related to starting up and shutting down marine auxiliary machines on commercial vessels
- identifying and suggesting ways of rectifying faults and malfunctions in marine auxiliary machines on commercial vessels
- identifying methods, procedures and materials needed for operating, maintaining and repairing marine auxiliary machines on commercial vessels
- imparting knowledge and ideas through verbal, written and visual means
- reading and interpreting written information related to the operation, performance and maintenance of marine auxiliary machines, including machinery specifications, machinery design drawings, machine drawings, operational manuals, specifications, and electrical and control circuit diagrams.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- corrosion causes and prevention
- fuels and basic principles of fuel systems
- International Convention for the Prevention of Pollution from Ships (MARPOL)
- nature and causes of typical start up and shut down malfunctions of main and auxiliary machinery, and associated systems and available methods for their detection and rectification
- non-destructive testing procedures and standards
- operational characteristics and performance specifications for the different types of auxiliary machinery and associated systems usually found on a commercial vessel, including pumps, air compressors, steering gears, heat exchangers and evaporators
- pollution prevention regulations
- principles and procedures of machinery lubrication
- procedures for carrying out the start up and shut down of main and auxiliary machinery and associated systems to ensure compliance with company and survey requirements and regulations
- properties of metallic and non-metallic materials
- purpose and content of safety data sheets/material safety data sheets
- responsibilities of an Engineer Class 2 in relation to auxiliary machinery of a vessel
- safety, environmental and hazard control precautions and procedures relevant to start up and shut down of marine auxiliary machinery and associated systems
- types of auxiliary machinery and components
- WHS/OHS legislation and policies.

Assessment Conditions

Assessors must satisfy National Vocational Education and Training Regulator (NVR)/Australian Quality Training Framework (AQTF) assessor requirements.

Assessment must satisfy the National Vocational Education and Training Regulator (NVR)/Australian Quality Training Framework (AQTF) standards.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations or where these are not available, in simulated workplace operational situations or an industry-approved marine operations site that replicates workplace conditions where intermediate knowledge of marine auxiliary boilers can be demonstrated.

Resources for assessment include access to:

- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals
- diagrams, specifications and other information related to marine auxiliary boilers
- technical reference library with current publications on basic marine auxiliary boilers
- tools, equipment, materials and personal protective equipment currently used in industry required to operate and maintain marine auxiliary boilers.

Performance should be demonstrated consistently over time and in a suitable range of contexts.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>