



Australian Government

Assessment Requirements for MARC038 Operate main propulsion unit and auxiliary systems

Release: 2

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Modification History

Release 2. This is the second release of this unit of competency in the MAR Maritime Training Package.

- Minor statement changes in unit Application
- Minor statement changes in Performance Evidence
- Minor statement changes in Knowledge Evidence
- Minor statement changes in Assessment Conditions.

Release 1. New unit of competency. Licensing/regulatory information has been incorporated in accordance with Regulatory requirements. Assessment Requirements have been strengthened in accordance with Regulatory requirements.

Performance Evidence

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

- applying work health and safety (WHS)/occupational health and safety (OHS) requirements and safe work practices including:
 - using appropriate personal protective clothing and equipment (PPE)
- carrying out pre-operational checks, including:
 - checking fuel system
 - checking leads, lines and connections
 - checking oils and lubricants
 - inspecting safety guards
- implementing environmentally responsible work practices
- maintaining engine work load within specifications
- measuring and calculating volumes, consumption and servicing requirements
- monitoring noise levels for correct operation
- operating propulsion machinery and ancillary equipment
- recordkeeping.

Knowledge Evidence

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

- basic operating principles of two and four-stroke engines
- environmental impacts and minimisation measures associated with operating propulsion

- machinery and auxiliary equipment
- environmental responsibilities
- identification of components
- manufacturer specifications for operating propulsion machinery and auxiliary equipment
- operating principles and operating methods for propulsion machinery and auxiliary equipment
- potential hazards and risks associated with operating propulsion machinery and auxiliary equipment
- propulsion machinery and ancillary equipment, including:
 - ancillary equipment
 - bilge systems
 - cooling, lubricating and fuel systems
 - diesel engines
 - drive train assembly
 - low voltage electrical systems
 - machinery monitoring equipment
 - outboard engines
 - shore power leads and connections
 - steering gear
- routine checks required with the operation of propulsion machinery, auxiliary equipment and other mechanical equipment
- shore power connections and associated hazards
- use of low voltage electrical systems
- what to do in the case of malfunctions and emergencies with propulsion machinery, auxiliary equipment and other mechanical equipment
- WHS/OHS requirements and safe work practices including:
 - factors associated with the safe operation of propulsion and auxiliary equipment
 - hazards of refrigerant gases
 - potential hazards and risks involved with types of fuels or industrial gases, for example, petrol, diesel and liquefied petroleum gas (LPG)
 - preparing for the safe use of propulsion machinery, auxiliary equipment and other mechanical equipment.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training current at the time of assessment.

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.

Practical assessment must occur in a workplace, or realistic simulated workplace, under the normal range of workplace conditions.

Simulations and scenarios may be used where situations cannot be provided in the workplace or may occur only rarely, in particular for situations relating to emergency procedures and adverse weather conditions where assessment would be unsafe, impractical or may lead to environmental damage.

Resources for assessment must include access to:

- a commercial vessel greater than or equal to 5.0 m in length with propulsion power of greater than or equal to 75 kW, or appropriate engine ashore
- applicable documentation, such as legislation, regulations, codes of practice, safety management system, workplace procedures and operational manuals
- tools, equipment, machinery, materials and relevant personal protective equipment (PPE) that are currently used in industry.

Links

Companion Volume Implementation Guides are found in VETNet -

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