



Australian Government

Assessment Requirements for MARB028 Service marine internal combustion engines and propulsion and auxiliary systems

Release: 2

Assessment Requirements for MARB028 Service marine internal combustion engines and propulsion and auxiliary systems

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 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 work practices
- carrying out servicing tasks, including:
 - checking propeller for damage
 - checking shaft alignment
 - cleaning strainers
 - lubricating
 - replacing:
 - anodes
 - drive belt
 - filters
 - gland packing
 - pumps
 - topping up oils
- implementing safe and environmentally responsible work practices
- implementing workplace environmental and waste management procedures correctly.

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:

- air intake system and system maintenance

- basic combustion process
- basic electronic control unit and governor maintenance
- basic reverse or reduction gearbox maintenance
- basic timing diagrams
- circulating pumps and maintenance
- cleaning heat exchangers
- controllable pitch propellers maintenance
- cooling systems and cooling system maintenance
- couplings types, fittings, keys and keyways, securing nuts and locking
- disposal and recycling of refrigerant gases
- environmental responsibilities, regulations and legislative requirements
- fuel systems and fuel system maintenance
- instrumentation maintenance
- lube oil contamination
- lubricating systems and systems maintenance
- principles of lubrication
- process for cleaning on completion of work, including:
 - cleaning and stowing tools and equipment
 - clearing and cleaning work area
 - disposing of or recycling materials
- propeller and intermediate shaft alignment
- routine and remedial maintenance of:
 - drive systems, belts, clutches and motors
 - hydraulic systems
 - pumping systems
 - refrigeration systems
 - seawater piping, including corrosion control
 - shaft seals and rudder stock, glands and packings
 - steering systems
- routine servicing of:
 - firefighting equipment in engine space
 - valves used in fire and bilge pumping systems
- shaft bearing maintenance
- stern drive and water jet drive unit maintenance
- techniques for reading and interpreting:
 - manufacturer specifications
 - safety data sheets (SDS)/material safety data sheets (MSDS)
- types, characteristics and functions of equipment or tools used in maintenance
- WHS/OHS requirements and work practices.

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 with inboard diesel 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 (SMS), workplace procedures and operational manuals
- tools, equipment, machinery, materials and relevant personal protective equipment (PPE) 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>