



Australian Government

Assessment Requirements for MARC010

Operate electrical systems

Release: 2

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Modification History

Release 2. Performance Evidence and Knowledge Evidence amended to include correct information.

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 and performance criteria on at least one occasion and include:

- adjusting electrical supply to accommodate load demand
- connecting and disconnecting shore supply
- locating, interpreting and applying manufacturer specifications for electrical systems and equipment
- operating and monitoring alternating current (AC) electrical systems according to manufacturer recommendations, regulations and vessel operating procedures to ensure safe operation
- operating and monitoring direct current (DC) systems according to manufacturer recommendations, regulations and vessel operating procedures to ensure safe operation.

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 care of electrical systems and equipment in general - fault recognition
- batteries:
 - care
 - hazards
 - types
- charging systems:
 - alarms/indicators
 - regulators
- connecting batteries in series and parallel
- DC systems not exceeding 32V DC
- earth indicating devices
- electric systems (above 32 V DC and up to 415 V AC)
- emergency supply and regulatory requirements
- fault identification, location, and safety implications
- operation of starter motors, alternators and associated equipment
- personal safety
- protective devices on switchboards
- shore power connection
- single and three-phase ac power
- uses of fuses and circuit breakers:
 - selection of correct capacity
- work health and safety (WHS)/occupational health and safety (OHS) requirements and work practices.

Assessment Conditions

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

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

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.

Resources for assessment must include access to:

- tools, equipment, machinery, materials and personal protective equipment currently used in industry
- applicable documentation such as legislation, regulations, codes of practice, workplace procedures and operational manuals
- range of relevant exercises, case studies and/or simulations.

Links

MAR Maritime Training Package Companion Volume Implementation Guide at: -
http://companion_volumes.vetnet.education.gov.au/Pages/TrainingPackage.aspx?pid=22