



Australian Government

Assessment Requirements for MARC003 Operate and maintain extra low and low voltage electrical systems and equipment

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 and performance criteria on at least one occasion and include:

- applying safety requirements throughout the work sequence including the use of personal protective equipment
- completing all work to specification
- ensuring correct requirements and details of basic maintenance of electrical systems and equipment are available
- implementing safe and environmentally responsible work practices in testing and maintenance activities
- initiating timely action in response to defects or damage
- locating, interpreting and applying manufacturer specifications for electrical systems and equipment
- operating direct current (DC) systems and conducting operator preventive maintenance according to manufacturer recommendations, regulations and vessel operating procedures to ensure safe operation
- operating electrical systems according to manufacturer recommendations, regulations and vessel operating procedures to ensure safe operation
- recognising electrical system faults and where necessary taking steps to make them immediately safe
- selecting and using appropriate processes, tools and equipment.

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 and fault recognition of electrical systems and equipment
- batteries:
 - care and maintenance
 - hazards
 - types
- charging systems:
 - alarms/indicators
 - regulators
- connecting batteries
- DC systems not exceeding 32 V DC
- electrical systems:
 - above 32 V DC and up to 415 V alternating current (AC)
- fault identification, location and safety implications
- personal safety
- protective devices on switchboards
- relevant state/territory training and qualification requirements for carrying out installation, maintenance and/or repair of refrigeration equipment especially with regard to preventing the escape of refrigerants into the atmosphere and to electrical work
- shore power connection
- starter motors, alternators and associated equipment:
 - operation
 - maintenance
- 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 including:
 - hand and power tools
 - test equipment
 - distilled water
 - rags
 - used components
- 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