



Australian Government

Assessment Requirements for UEEEL0053 Maintain operation of electrical marine equipment and systems

Release: 2

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Modification History

Release 2. Minor change. Typographic error in prerequisites corrected.

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package

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 two separate occasions and include:

- applying methodical fault-finding techniques
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including using risk control measures
- applying sustainable energy principles and practices
- completing and reporting on maintaining operation of electrical marine equipment
- completing workplace documentation correctly
- dealing with unplanned events in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- determining scope of work from fault/breakdown reports and discussions with appropriate person/s
- finding faults efficiently in accordance with workplace procedures and manufacturer specifications
- implementing WHS/OHS workplace procedures and practices
- maintaining operation of electrical marine equipment
- planning to maintain operation of electrical marine equipment
- rectifying faults effectively in accordance with workplace procedures and manufacturer specifications.

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:

- alternators, including construction, characteristics and synchronised operation
- apparatus, including:
 - switchboards/distribution boards

- protective devices such as circuit breakers and earth leakage devices
- control equipment
- socket outlets
- electric vehicles
- motor starters
- associated control devices
- cells and batteries in common use, including:
 - battery configurations and applications
 - capacity
 - cell and battery safety practices
 - discharge and recharge characteristics
 - discharging
 - primary cells
 - recharging
 - secondary cells
 - terminal voltages
- circuits, including:
 - circuits supplying fix equipment
 - lighting
 - motors
 - socket outlets
 - trailing cable and within electric vehicles
- electrical system commissioning requirements and surveys
- marine electrical systems, including switchboards, instrumentation and earthing
- power supplies, including uninterruptible power supply (UPS) systems, batteries, maintenance and battery bank safety procedures
- purpose and types of lighting systems
- purpose, operating parameters and corrosion factors of cathodic protection
- safety equipment and codes and regulations
- switchboards and protection, including purpose, testing and maintenance and equipment removal
- sustainable energy principles and practices
- relevant job safety assessments or risk mitigation processes
- relevant manufacturer specifications
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies and procedures.

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 Organisations current at the time of assessment.

Assessment must occur in suitable workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in suitable simulated workplace operational situations that replicate 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:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, facilities, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, equipment specifications, regulations, relevant industry standards, codes of practice and operation manuals.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>