



Australian Government

MARC042 Operate electrical systems

Release: 2

MARC042 Operate electrical 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 clarification changes in Performance Evidence
- Minor clarification 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.

Application

This unit involves the skills and knowledge required to operate 220 to 440 Volts alternating current (AC) electrical systems.

This unit applies to people working in the maritime industry in the capacity of:

- Marine Engine Driver Grade 1 Near Coastal
- Marine Engine Driver Grade 2 Near Coastal

Licensing/Regulatory Information

Legislative and regulatory requirements are applicable to this unit.

This unit is one of the requirements to obtain Australian Maritime Safety Authority (AMSA) certification as a Marine Engine Driver Grade 2 NC and a Marine Engine Driver Grade 1 NC as specified in Marine Order 505.

Seafarers seeking certification should check with AMSA.

Pre-requisite Unit

Not Applicable.

Competency Field

C - Equipment Operations

Unit Sector

Not Applicable.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Prepare electrical systems and equipment for operation

1.1 Risks to self, others and the environment are identified according to organisational procedures

1.2 Pre-operational checks are carried out according to manufacturer specifications and organisational procedures

2 Operate electrical systems and equipment

2.1 Electrical systems and equipment are operated according to manufacturer specifications, regulations and vessel procedures

2.2 Performance of electrical equipment is monitored

2.3 Alternating current (AC) electrical supply is monitored and changed to meet demand

2.4 Operational faults are recognised and recorded, and corrective action is taken according to manufacturer specifications and fault-finding procedures

3 Connect and disconnect ship to shore electrical supply

3.1 Checking vessel is positioned and secured for connecting to shore electrical supply

3.2 Power cable is inspected and connected to shore supply

3.3 Procedures for changing from vessel supply to shore supply are implemented following vessel procedures

3.4 Electrical supply is monitored for correct operation according to vessel procedures

3.5 Operational faults are recognised and recorded, and corrective action is taken according to vessel procedures

3.6 Procedures for changing from shore supply to vessel supply are implemented following vessel procedures

3.7 Power cable is disconnected, inspected and stored

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

This unit replaces and is equivalent to MARC010 Operate electrical systems.

Links

Companion Volume Implementation Guides are found in VETNet -

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