



Australian Government

MARC039 Operate marine internal combustion engines, and propulsion and auxiliary systems

Release: 2

MARC039 Operate 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 safe work statement changes in Performance Evidence
- Minor safe work statement 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 safely operate marine internal combustion engines, and propulsion and auxiliary systems on a vessel.

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
- Marine Engine Driver Grade 3 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 3 NC, Marine Engine Driver Grade 2 NC and a Marine Engine Driver Grade 1 NC as specified in Marine Orders 505.

Note: Relevant state/territory training and qualification requirements need to be fulfilled by any persons carrying out installation, maintenance and/or repair of refrigeration equipment especially with regard to preventing the escape of refrigerants into the atmosphere.

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

Elements describe the essential outcomes.

1 Prepare engine, and propulsion and auxiliary systems for use

PERFORMANCE CRITERIA

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

1.1 Appropriate personal protective equipment (PPE) is selected, used, maintained and stored according to work health and safety (WHS)/occupational health and safety (OHS) requirements

1.2 Routine pre-operational checks are carried out on equipment according to manufacturer specifications and workplace requirements

1.3 Engine is started according to manufacturer specifications and organisational requirements

1.4 Deviations from the norm are promptly identified and rectified

1.5 Adjustments are made to achieve a safe and efficient operation

1.6 Inability to start equipment is reported, and logged promptly and accurately to appropriate personnel

2 Operate engine, and propulsion and auxiliary systems

2.1 Engine, and propulsion and auxiliary systems are operated in a safe and controlled manner

2.2 Performance and efficiency of engine, and propulsion and auxiliary systems are monitored according manufacturer instructions

2.3 Engine, and propulsion and auxiliary systems are operated within defined operating limits when running, to achieve optimum safety and efficiency

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| | 2.4 | Environmental implications associated with operation of engine, and propulsion and auxiliary systems are identified and controlled |
| | 2.5 | Deviations from normal operations are promptly identified |
| | 2.6 | Action is taken to identify and rectify basic operational faults to maintain optimum safety and efficiency |
| | 2.7 | Appropriate action is taken in the event of a malfunction or emergency |
| 3 Complete operations | 3.1 | Equipment shutdown procedures are carried out according to manufacturer specifications and workplace procedures |
| | 3.2 | Engine, propulsion and auxiliary system operational records are maintained according to workplace procedures |
| | 3.3 | Equipment damage, malfunctions or irregular performance is recorded and reported according to workplace procedures |

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 MARC007 Operate marine internal combustion engines, and propulsion and auxiliary systems.

Links

Companion Volume Implementation Guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>