



Australian Government

MARC033 Complete engine room tasks

Release: 2

MARC033 Complete engine room tasks

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 re-ordering of 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 perform tasks to support the operation of marine internal combustion engines, marine propulsion systems, vessel machinery and auxiliary 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
- 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 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 Plan tasks

1.1 Work plan is developed and sequenced in conjunction with others involved in or affected by work plan, according to organisational procedures

1.2 Timelines, jobs and work priorities are confirmed with Master and other relevant authorities, as required

2 Conduct refuelling operations

2.1 Tank levels are correctly measured and reported before and after fuelling operations

2.2 Fuel capacity is calculated and recorded

2.3 Tools and equipment are selected and checked for serviceability

2.4 Safety boundary and signage for refuelling operation are accessed and used

2.5 Fire and spill prevention equipment is correctly deployed

2.6 Personal protective equipment (PPE) is accessed and used

2.7 Refuelling operations are performed safely and effective communication is maintained with relevant personnel to ensure safety and integrity of vessel and crew

2.8 Appropriate action is taken to handle incidents arising during fuelling operations according to organisational procedures and regulatory requirements

3 Maintain stock and consumables

3.1 Stock levels and consumables are monitored and maintained at required levels

3.2 Stock and consumables are reordered as required

3.3 Records of stock inventories and consumables are

- maintained and discrepancies are identified
- 4 Perform general housekeeping tasks**
- 4.1** Housekeeping tasks are clarified against work plan
- 4.2** Appropriate equipment for specific tasks is determined, prepared and used
- 4.3** Housekeeping tasks are performed and assessed against task requirements
- 4.4** Procedures for handling, storing and disposing of cleaning liquids are implemented according to regulatory requirements
- 5 Stow and manage flammable and explosive materials**
- 5.1** Hazards related to flammable and explosive materials are identified
- 5.2** Suitability of stowage areas is verified against regulatory requirements and organisational procedures
- 5.3** Procedures for safe handling and stowage of flammable and explosive materials are implemented according to regulatory requirements and organisational practices
- 6 Prepare simple reports**
- 6.1** Requirements for simple reports are identified
- 6.2** Information is prepared according to organisational procedures
- 6.3** Calculations for fuel consumption and voyage duration are completed
- 6.4** Information is assessed for accuracy, currency and relevance for inclusion in report
- 6.5** Report is written using appropriate terminology

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 MARC001 Complete engine room tasks.

Links

Companion Volume Implementation Guides are found in VETNet -

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

Assessment Requirements for MARC033 Complete engine room tasks

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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 work health and safety (WHS)/occupational health and safety (OHS) practices, including hazard identification, risk assessment and risk control options
- carrying out housekeeping tasks, including:
 - correct disposal of waste
 - pumping of bilges
 - removal or lashing of loose items
- completing all work to specifications
- converting:
 - fractions to decimals
 - units to multiples of base units
- keeping running and maintenance logs
- performing calculations involving:
 - consumption of fuel and lubricating oil, hourly fuel consumption, theoretical steaming times and distances
 - volume and capacity of regular shaped tanks
- sequencing tasks
- writing simple reports.

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:

- appropriate actions to address the following incidents during refuelling operations:
 - fire
 - spillage on board
 - spillage over the side
- common International System of Units (SI units), such as kilogram, tonne, litre and metre
- correct storage and use of:
 - chemicals
 - equipment
 - tools
- hazards related to flammable and explosive materials, including:
 - battery generated gases
 - chemicals
 - fuels
 - liquefied petroleum gas (LPG)
 - lubricating oils
 - oil soaked rags (spontaneous combustion)
- principles of simple report writing
- procedures and requirements for cleaning and housekeeping
- procedures for monitoring and maintaining levels, and re-ordering of, stock and consumables
- relevant parts of legislation, regulations, codes of practice
- WHS/OHS procedures and practices including:
 - hazard identification, risk assessment and risk control measures
 - identification of hazardous goods
 - safe handling and stowage of flammable and explosive materials
 - safety data sheets (SDS)/material safety data sheets (MSDS).

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 current at the time of assessment.

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.

Practical assessment must occur in a workplace, or realistic simulated workplace, under the normal range of workplace conditions.

Simulations and scenarios may be used where situations cannot be provided in the workplace or may occur only rarely, in particular for situations relating to emergency procedures and adverse weather conditions where assessment would be unsafe, impractical or may lead to environmental

damage.

Resources for assessment must include access to:

- applicable documentation, such as legislation, regulations, codes of practice, safety management systems (SMS), workplace procedures, operational manuals and SDS/MSDS
- a commercial vessel with inboard diesel propulsion power of greater than or equal to 150 kW or appropriate engine, propulsion plant and auxiliary systems ashore
- tools, equipment, machinery, materials and relevant personal protective equipment (PPE) that are currently used in industry.

Links

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