



Australian Government

MARB029 Perform routine maintenance on a vessel up to 24 metres

Release: 2

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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 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 routine remedial, preventative and survey deck maintenance.

It includes basic deck maintenance, cleaning tasks, marine painting, and servicing deck machinery and systems on commercial vessels up to 24 metres.

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

- Master up to 24 metres Near Coastal
- Master Inland Waters.

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 Master (Inland waters) and Master up to 24 m Near Coastal as specified in Marine Order 505.

Seafarers seeking certification should check with AMSA.

Pre-requisite Unit

Not Applicable.

Competency Field

B - Equipment Checking and Maintenance

Unit Sector

Not Applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

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

1 Plan maintenance tasks

- 1.1** Planned maintenance system is accessed to establish maintenance requirements for vessel
- 1.2** Maintenance tasks are proposed and prioritised in conjunction with others involved in or affected by the maintenance work
- 1.3** Resource requirements are identified and allocated to ensure efficient completion of tasks
- 1.4** Maintenance tasks to be performed are recorded in a maintenance schedule according to organisational procedures

2 Perform basic deck maintenance

- 2.1** Deck surfaces are checked according to planned maintenance system
- 2.2** Deterioration or corrosion of vessel deck surfaces is identified and appropriate maintenance action is carried out according to planned maintenance system
- 2.3** Minor faults and imperfections in paint surfaces are repaired according to organisational procedures
- 2.4** Weathered surfaces are restored using cleaners and liquid abrasives according to manufacturer instructions and organisational procedures
- 2.5** Tools and equipment are used correctly and safely
- 2.6** Maintenance materials are obtained, prepared and applied according to organisational procedures and manufacturer instructions

3 Carry out cleaning activities

- 3.1** Area to be cleaned is prepared and hazards are identified
- 3.2** Work area is barricaded or warning signs provided, as

- appropriate, to reduce risk to other crew members
- 3.3** Correct chemicals and cleaning agents are selected and applied according to manufacturer instructions and work health and safety (WHS)/occupational health and safety (OHS) requirements
 - 3.4** Equipment is used correctly and safely
 - 3.5** Cleaning tasks are completed according to organisational procedures and manufacturer instructions
- 4 Prepare and paint surfaces**
- 4.1** Suitable personal protective clothing is selected and used according to WHS/OHS requirements
 - 4.2** Surfaces are prepared using correct equipment
 - 4.3** Rust remover, rust converter and undercoats are applied according to manufacturer specifications
 - 4.4** Paints are mixed in correct proportions according to manufacturer specifications
 - 4.5** Paint is applied using appropriate application equipment
- 5 Carry out routine maintenance of deck fittings, equipment and systems**
- 5.1** Fittings and equipment are inspected and inspection results are compared with manufacturer specifications
 - 5.2** Maintenance tasks are carried out to specifications
 - 5.3** Mechanical equipment and system components are checked with appropriate instruments
 - 5.4** Faulty items or components are identified and maintenance procedures selected
 - 5.5** Unserviceable equipment is tagged and faults are identified according to organisational procedures
- 6 Repair or replace faulty fittings and equipment**
- 6.1** Fittings and equipment are safely isolated according to regulations and WHS/OHS requirements
 - 6.2** Faulty fittings or equipment are removed using appropriate tools, equipment and procedures
 - 6.3** Replaceable items are selected or serviceable items are fitted according to manufacturer specifications

- 6.4** Adjustments are made to fittings or equipment to comply with specifications
 - 6.5** Operational check is carried out to ensure compliance with manufacturer specifications
 - 6.6** Maintenance report is completed according to organisational procedures
- 7 Supervise crew in completing maintenance tasks**
 - 7.1** Workload is organised in order of priority according to planned maintenance system
 - 7.2** Maintenance tasks are allocated to appropriate crew members with consideration of individual experience and qualifications
 - 7.3** Crew members are clearly briefed on their responsibility and maintenance tasks and WHS/OHS requirements
 - 7.4** Guidance is provided appropriate to maintenance task and individual experience
 - 7.5** Completed work is checked to ensure maintenance is performed according to organisational procedures
- 8 Clean up**
 - 8.1** Work area is cleared and cleaned for serviceable condition
 - 8.2** Materials are disposed of or recycled according to legislative and organisational requirements
 - 8.3** Tools and equipment are cleaned, checked and stored according to organisational 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 MARB004 Perform routine maintenance on a vessel up to 24 metres.

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 MARB029 Perform routine maintenance on a vessel up to 24 metres

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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:

- carrying out inspection of:
 - freshwater or bilge or firefighting pumps
 - steering gear
 - navigation lights
 - windlass or winch or capstan
- carrying out maintenance, including:
 - greasing and oiling
 - lifesaving appliances
- completing required records when performing routine remedial, preventative and survey deck maintenance on a vessel
- demonstrating safe and environmentally responsible work practices when performing routine remedial, preventative and survey deck maintenance on a vessel
- following required work schedule according to organisational requirements
- identifying problems when performing deck maintenance on a vessel, including remedial, preventative and survey maintenance
- identifying structural components from ship's drawings and plans, locating on a vessel and ascertaining the relevant regulation governing the structure
- identifying vessel construction material
- reading and interpreting:
 - instructions for performing remedial, preventative and survey deck maintenance on a vessel
 - manufacturer specifications
 - safety data sheets (SDS)/material safety data sheets (MSDS)
- selecting and using relevant tools, equipment and materials according to instructions.

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:

- component parts, operation and routine maintenance requirements of vessel machinery
- equipment cleaning and preservation techniques
- fire and bilge pumps
- fuel, fresh and ballast water, bilge and fire pumping arrangements
- function of structural components and compliance with conventional maritime design
- inspection and routine maintenance of:
 - corrosion prevention and rectification
 - lifting gear
 - ropes and wires
 - tank sounding and ventilation equipment
- job safety analyses (JSAs) or safe work method statements
- maintenance hazards and associated problems
- maintenance of steering gear
- maintenance procedures required to test and ensure watertight integrity
- maintenance records for a vessel
- nature and causes of corrosion of marine surfaces, structures and available methods of control
- organisational procedures for cleaning and maintenance to ensure operational readiness
- paint types and applications
- pollution control legislation as it relates to maintenance activities
- principal parts of a vessel and basic design methods
- principles and procedures of machinery lubrication as they relate to deck machinery
- procedures for checking deck areas, machinery and fittings of a vessel as part of the planned routine maintenance on a vessel
- procedures for using hand tools for maintenance operations
- procedures to avoid contamination of fuel or drinking water
- relevant work health and safety (WHS)/occupational health and safety (OHS) and personal protective equipment (PPE) requirements
- rust treatment
- safety management system as it relates to planned vessel maintenance
- steering gear arrangements and safety features
- storage principles for paints, chemicals and cleaning agents used in planned maintenance operations
- types, characteristics and functions of:
 - equipment or tools used in cleaning and maintenance
 - vessel machinery and equipment
- use of various construction material and regulations governing structure.

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 system (SMS), workplace procedures and operational manuals, including:
 - manufacturer specifications
 - SDS/MSDS
 - vessel drawings and plans
- a commercial vessel greater than or equal to 7.5 m in length
- tools, equipment, machinery, materials and relevant PPE currently used in industry.

Links

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