



Australian Government

MARB004 Perform routine maintenance on a vessel up to 24 metres

Release: 2

MARB004 Perform routine maintenance on a vessel up to 24 metres

Modification History

Release 2. Mapping information has been corrected.

Release 1. New unit of competency.

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 capacity of Master on a range of vessels up to 24 metres in near coastal waters.

This unit has links to legislative and certification requirements

Pre-requisite Unit

Not applicable.

Competency Field

B - Equipment Checking and Maintenance

Unit Sector

Not applicable.

Elements and Performance Criteria

Elements describe the essential outcomes.

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	Any 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

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| 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 specification |
| | 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/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.

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| Maintenance tasks include one or more of the following: | <ul style="list-style-type: none">• fire and bilge pumps• lifesaving appliances• greasing and oiling• ropes and wires• rust prevention |
| Area includes one or more of the following: | <ul style="list-style-type: none">• battery room• engine room• exposed deck area• firefighting equipment spaces• store room• wheelhouse and accommodation area |
| Fittings and equipment include one or more of the following: | <ul style="list-style-type: none">• fuel, fresh and ballast water, bilge and firefighting pumps• lifting equipment• navigation lights and shapes• sounding and ventilation arrangements• steering gear• windlass and capstan |
| Materials include one or more of the following: | <ul style="list-style-type: none">• cleaning chemicals• paint residues• rags• spent oil |

Unit Mapping Information

This unit replaces and is equivalent to MARB3004A 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 MARB004 Perform routine maintenance on a vessel up to 24 metres

Modification History

Release 2. Clarification of guidance information in Performance Evidence, Knowledge Evidence and Assessment Conditions.

Release 1. New unit of competency.

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 one occasion and include:

- 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 samples of construction material
- identifying structural components from ship's drawings and plans, locating on a vessel and ascertaining the relevant regulation governing the structure
- reading and interpreting:
 - instructions for performing routine remedial, preventative and survey deck maintenance on a vessel
 - manufacturer specifications and safety data sheets (SDS)/material safety data sheets (MSDS)
- recognising routine problems when performing routine remedial, preventative and survey deck maintenance on a vessel
- 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, performance criteria and range of conditions and include knowledge of:

- component parts, operation and routine maintenance requirements of vessel machinery
- equipment cleaning and preservation techniques
- function of structural components and compliance with conventional maritime design
- job safety analyses (JSAs)/safe work method statements
- maintenance hazards and problems
- maintenance of steering gear
- maintenance records for a vessel

- nature and causes of corrosion of marine surfaces, structures and available methods of control
- principal parts of a vessel and basic design methods
- organisational procedures for cleaning and maintenance to ensure operational readiness
- paint types and applications
- principles and procedures of machinery lubrication as they relate to vessel 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 routine maintenance operations
- relevant WHS/OHS and:
 - personal protective equipment requirements
 - pollution control legislation
- 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:
 - vessel machinery and equipment including safety features
 - equipment/tools used in cleaning and maintenance
- use of various construction material and regulations governing structure.

Assessment Conditions

Assessors must satisfy National Vocational Education and Training Regulator (NVR)/Australian Quality Training Framework (AQTF) assessor requirements.

Assessment must satisfy the National Vocational Education and Training Regulator (NVR)/Australian Quality Training Framework (AQTF) standards.

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

- tools, equipment, machinery, materials and personal protective equipment currently used in industry
- applicable documentation such as legislation, regulations, codes of practice, workplace procedures and operational manuals
- range of relevant exercises, case studies and/or simulations.

Links

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