Australian Government

MARB4005A Plan and supervise routine maintenance on a vessel up to 80 metres

Release 1

INDUSTRY SKILLS COUNCILS
Creating Australia's Future

MARB4005A Plan and supervise routine maintenance on a vessel up to 80 metres

Modification History

Release 1
This is the first release of this unit.

Unit Descriptor

This unit involves the skills and knowledge required to implement a maintenance program for a vessel up to 80 metres.

Application of the Unit

This unit applies to those working in the capacity of Master on a range of vessels up to 80 metres.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1 Develop maintenance program	1.1	***Planned maintenance system*** is accessed to establish maintenance requirements for vessel
	1.2	***Maintenance program*** for vessel is developed to meet requirements of planned maintenance system
	1.3	Maintenance schedules and budgets are identified
	1.4	Suggestions that support effective implementation of maintenance program are offered according to organisational procedures
	1.5	Strategies to minimise impact of maintenance activities on vessel operations are identified
2 Implement maintenance program	2.1	***Routine maintenance activities*** are proposed and prioritised in conjunction with others involved in or affected by maintenance work
	2.2	Routine maintenance activities are allocated within scheduled timeframes and budgets according to organisational procedures
	2.3	Vessel operations are maintained where possible without interruption
	2.4	Safety of crew is maintained at all times according to relevant legislation and organisational procedures
	2.5	Requests for assistance from crew to complete maintenance activities are responded to promptly
3 Identify failed or unsafe machinery and equipment	3.1	Faulty ***machinery and equipment*** is identified and clear and noticeable warning signs are erected according to organisational procedures
	3.2	Failed or unsafe machinery and equipment is assessed according to organisational procedures
	3.3	Repairs are allocated to appropriate crew members according to organisational procedures
	3.4	Unsafe machinery and equipment which cannot be repaired is promptly tagged and isolated according to organisational procedures
	3.5	Unsafe machinery and equipment is promptly reported according to organisational procedures
	3.6	Reports on all repair work undertaken are completed according to organisational procedures

4 Monitor supplies	4.1	Supply and stock levels are maintained to ensure ongoing availability
	4.2	***Management of supplies*** is undertaken according to organisational procedures
	4.3	Supply and stock levels are reconciled and any discrepancies are rectified or reported
	4.4	Supply records are maintained according to organisational procedures

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required Skills:

- Interpret planned maintenance system to determine maintenance requirements
- Manage maintenance of vessel
- Monitor selection and use of supplies involved in maintenance of vessel
- Prepare reports on outcomes of inspection and maintenance activities
- Read and interpret safety data sheets (SDS)/material safety data sheets (MSDS)
- Read and interpret vessel, equipment and machinery specifications, drawings, operational manuals and diagrams
- Take appropriate precautions to prevent pollution of marine environment

Required Knowledge:

- Fundamental principles of vessel construction
- Maintenance records that must be maintained on vessel to meet organisational and statutory requirements
- Nature and causes of corrosion of marine surfaces and structures, and available means for control
- Principal structural components
- Procedures for initiation and coordination of repair and/or replacement procedures on board vessel
- Relevant laws and regulations including WHS/OHS and pollution control legislation
- Slipping and docking procedures suitable for various types of hull forms
- Typical problems related to maintenance of vessels and appropriate actions and solutions

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, the required skills and knowledge, the range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the Elements, Performance Criteria, Required Skills, Required Knowledge and include:

- attention to appropriate level of detail in recordkeeping
- effectively liaising with internal and external authorities/agencies
- initiating timely action in response to defects or damage.

Context of and specific resources for assessment

Performance is demonstrated consistently over time and in a suitable range of contexts.

Resources for assessment include access to:

- industry-approved marine operations site where planning and supervising routine maintenance on a vessel up to 80 metres may be conducted
- tools, equipment and personal protective equipment currently used in industry
- relevant regulatory and equipment documentation that impacts on work activities
- range of relevant exercises, case studies and/or other simulated practical and knowledge assessments
- appropriate range of relevant operational situations in the workplace.

In both real and simulated environments, access is required to:

- relevant and appropriate materials and equipment
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals.

Method of assessment

Practical assessment must occur in an:

- appropriately simulated workplace environment and/or
- appropriate range of situations in the workplace.

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate to this unit:

- direct observation of the candidate planning and supervising routine maintenance on a vessel up to 80 metres
- direct observation of the candidate applying relevant

WHS/OHS requirements and work practices.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

In all cases where practical assessment is used it should be combined with targeted questioning to assess Required Knowledge.

Assessment processes and techniques must be appropriate to the language and literacy requirements of the work being performed and the capacity of the candidate.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below.

Planned maintenance system must include:

- Anchoring equipment
- Communications equipment
- Compliance with applicable mandatory rules and regulations, including WHS/OHS and environment protection legislation
- Continuous improvement and review procedures
- Document control procedures
- Firefighting equipment
- Identifying hazards and risk management
- Lifesaving equipment
- Navigation equipment
- Procedures for updating and correcting charts, publications and electronic chart information
- Provision of safe practices in vessel operation and a safe working environment
- Reference to applicable codes, guidelines and standards
- Steering gear
- Systems for recording completed maintenance schedules, including identification of defective equipment and rectification of defects

Maintenance program must include:

- Lines of communication and relationship between vessel and owner
- Periodic survey requirements
- Procedure for programmed maintenance of hull and machinery
- Regular inspection of all equipment referred to in planned maintenance system
- Routine maintenance as contained in manufacturer instruction manuals and drawings
- Safety and environmental policy

Routine maintenance activities may include:

- Checking life saving appliances
- Inspecting breathing apparatus
- Navigational equipment
- Operation of emergency firefighting equipment including fire hoses and nozzles
- Servicing equipment as required by service manuals and manufacturer instructions relating to vessel equipment
- Testing communication equipment, including distress calling
- Testing lifting equipment

Machinery and equipment

- Fire pumps

may include:	• Navigational equipment • Steering gear and emergency steering gear • Winches and windlasses
Management of supplies may include:	• Issue • Purchase • Receipt • Stock control • Storage

Unit Sector(s)

Not applicable.

Competency Field

Equipment Checking and Maintenance