



Australian Government

MARN2001A Apply seamanship skills aboard a vessel up to 12 metres

Release 1

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Modification History

Release 1

This is the first release of this unit.

Unit Descriptor

This unit involves the skills and knowledge required to apply practical seamanship skills and techniques as part of work duties aboard a vessel up to 12 metres.

Application of the Unit

This unit applies to Coxswain Grade 1 and Coxswain Grade 2 working in the maritime industry on vessels up to 12 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 Use and maintain ropes | <ul style="list-style-type: none">1.1 Rope types and common areas of use are correctly identified1.2 Ropes are checked for wear and repairs are undertaken according to manufacturer guidelines1.3 Ropes are coiled and stowed correctly1.4 Knots and hitches are tied neatly and securely, and are used according to their correct application1.5 Ropes are spliced neatly and securely according to their correct application1.6 Rope ends are whipped where appropriate to maintain good condition |
| 2 Secure vessel at anchor | <ul style="list-style-type: none">2.1 Prior to letting go, anchor and equipment are prepared2.2 Quantity of anchor cable run out or recovered is appropriate to the depth of water, weather and sea conditions, and tidal range in area of operation2.3 During operation, control of the cable is maintained within safe operating limits2.4 Degree to which anchor and equipment are secured on completion of anchoring operations is appropriate to forecast conditions2.5 During all operations, anchoring area is kept free of loose ropes, wires and debris |
| 3 Secure vessel at a berth | <ul style="list-style-type: none">3.1 At all times, mooring lines and associated equipment are handled safely3.2 Throughout operations, mooring area is kept free of loose ropes, wires and debris3.3 Tension on ropes is maintained at an appropriate level for the stage and nature of the operation |
| 4 Check condition and seaworthiness of vessel | <ul style="list-style-type: none">4.1 Coverage and frequency of checks and inspections on vessel seaworthiness are undertaken according to workplace procedures and organisational safety management system4.2 Watertight integrity is checked and appropriate action is taken to prepare for prevailing and forecast weather and sea conditions4.3 Degree to which vessel is secured is appropriate to prevailing and forecast conditions |

4.4 ***Irregularities*** are identified and appropriate action is taken to rectify the situation

4.5 Irregularities beyond ability to rectify are reported in time to enable remedial action to be taken

4.6 Reports of condition are completed according to workplace procedures

5 **Conduct refuelling operations**

5.1 All personal protective equipment is accessed and used

5.2 Safety boundary for the refuelling process is established

5.3 Spill prevention systems are correctly deployed

5.4 Refuelling operations are performed safely and according to organisational safety management system

Required Skills and Knowledge

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

Required Skills:

- Check seaworthiness and general condition of a vessel up to 12 metres
- Coil and stow ropes
- Handle ropes
- Identify deterioration and causes in hull and fittings
- Perform an eye splice and a short splice
- Perform common whipping on ropes
- Perform letting go and weighing anchor
- Prepare and throw a heaving line
- Refuel a vessel according to safety regulations and the organisational safety management system requirements
- Secure a vessel alongside using vessel mooring lines
- Tie reef-knot, bowline, clove hitch, round turn and two half hitches, rolling hitch
- Use a sea anchor as emergency steering

Required Knowledge:

- Basic structural parts of a small vessel
- Considerations to make when selecting an anchorage
- Correct application of common knots and hitches
- How to make a vessel watertight
- Maintenance of synthetic and natural fibre ropes
- Mooring line arrangements for securing at a berth
- Principles of maintaining watertight integrity
- Procedure for anchoring
- Procedure for deploying a sea-anchor
- Types of anchors used on small vessels up to 12 metres
- Work health and safety (WHS)/occupational health and safety (OHS) requirements and work practices

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:

- being aware of own ability and limits to rectify irregularities and faults
- providing the required amount of detail in reports.

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 the application of seamanship skills aboard an appropriate vessel up to 12 metres can 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 performing seamanship skills
- direct observation of the candidate applying relevant WHS/OHS requirements and work practices.

Guidance information for

Holistic assessment with other units relevant to the industry

assessment

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.

Rope types may include:

- Braided
- Kevlar
- Natural fibre
- Plaited
- Polyester
- Wire core rope
- Wire rope

Knots and hitches may include:

- Bowline
- Clove hitch
- Eye splice
- Reef knot
- Rolling hitch
- Round turn and two half hitches
- Short splice

Anchor and equipment may include:

- Anchor buoy
- Anchor securing arrangements
- Sea anchor
- Single anchor
- Twin anchor
- Windlass

Mooring lines may include:

- Back springs
- Bow and stern ropes
- Breast lines
- Fore and aft springs

Coverage may include

- Accommodation spaces
- Engine room
- Galley
- Personal facilities
- Storage spaces
- Wheelhouse

Secured may include:

- Accommodation and storage spaces
- Anchors
- Galley, stores and equipment
- Materials on deck and below
- Large objects likely to move in a sea way
- Openings

Irregularities may include:

- Affecting the safety and integrity of:
 - crew
 - equipment
 - materials, such as cargo
 - vessel

Unit Sector(s)

Not applicable.

Competency Field

Seamanship