



Australian Government

MARN002 Apply seamanship skills aboard a vessel up to 12 metres

Release: 1

MARN002 Apply seamanship skills aboard a vessel up to 12 metres

Modification History

Release 1. New unit of competency.

Application

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.

This unit applies to Coxswain Grade 1 Near Coastal and Coxswain Grade 2 Near Coastal working in the maritime industry on vessels up to 12 metres.

This unit has links to legislative and certification requirements.

Pre-requisite Unit

Not applicable.

Competency Field

N – Seamanship

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 Use and maintain ropes

- 1.1 Rope types and common areas of use are correctly identified
- 1.2 Ropes are checked for wear and repairs are undertaken according to manufacturer guidelines
- 1.3 Ropes are coiled and stowed correctly
- 1.4 Knots and hitches are tied neatly and securely, and are used according to their correct application
- 1.5 Ropes are spliced neatly and securely according to their correct application

- | | | |
|--|-----|---|
| | 1.6 | Rope ends are whipped where appropriate to maintain good condition |
| 2 Secure vessel at anchor | 2.1 | Prior to letting go, anchor and equipment are prepared |
| | 2.2 | 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 operation |
| | 2.3 | During operation, control of cable is maintained within safe operating limits |
| | 2.4 | Degree to which anchor and equipment are secured on completion of anchoring operations is appropriate to forecast conditions |
| | 2.5 | During all operations, anchoring area is kept free of loose ropes, wires and debris |
| 3 Secure vessel at a berth | 3.1 | At all times, mooring lines and associated equipment are handled safely |
| | 3.2 | Throughout operations, mooring area is kept free of loose ropes, wires and debris |
| | 3.3 | Tension on ropes is maintained at an appropriate level for the stage and nature of the operation |
| 4 Check condition and seaworthiness of vessel | 4.1 | Coverage and frequency of checks and inspections on vessel seaworthiness are undertaken according to workplace procedures and organisational safety management system |
| | 4.2 | Watertight integrity is checked and appropriate action is taken to prepare for prevailing and forecast weather and sea conditions |
| | 4.3 | 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 | 5.1 | All personal protective equipment is accessed and used |

operations

- 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

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Rope types include one or more of the following:

- braided
- Kevlar
- natural fibre
- plaited
- polyester
- wire core rope
- wire rope

Knots and hitches include one or more of the following:

- bowline
- clove hitch
- eye splice
- reef knot
- rolling hitch
- round turn and two half hitches
- short splice

- Anchor and equipment includes one or more of the following:
- anchor buoy
 - anchor securing arrangements
 - sea anchor
 - single anchor
 - twin anchor
 - windlass
- Mooring lines include one or more of the following:
- back springs
 - bow and stern ropes
 - breast lines
 - fore and aft springs
- Coverage includes one or more of the following
- accommodation spaces
 - engine room
 - galley
 - navigation lights
 - personal facilities
 - storage spaces
 - trailer lights
 - wheelhouse
- Secured includes one or more of the following:
- 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 include one or more of the following:
- factors affecting the safety and integrity of:
 - crew
 - equipment
 - materials, such as cargo
 - vessel

Unit Mapping Information

This is a new unit. This unit is equivalent to MARN2001A Apply seamanship skills aboard a vessel up to 12 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 MARN002 Apply seamanship skills aboard a vessel up to 12 metres

Modification History

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 and performance criteria on at least one occasion and include:

- being aware of own ability and limits to rectify irregularities and faults
- checking seaworthiness and general condition of a vessel up to 12 metres
- coiling and stowing ropes
- handling ropes
- identifying deterioration and causes in hull and fittings
- performing an eye splice and a short splice
- performing common whipping on ropes
- performing letting go and weighing anchor
- preparing and throwing a heaving line
- providing the required amount of detail in reports
- refuelling a vessel according to safety regulations and organisational safety management system requirements
- securing a vessel alongside using vessel mooring lines
- tying reef-knot, bowline, clove hitch, round turn and two half hitches, rolling hitch
- using a sea anchor as emergency steering.

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:

- 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
- loading, discharging and movement of weights
- 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.

Assessment Conditions

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

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

Companion Volume implementation guides are found in VETNet -

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