



Australian Government

MARK003 Manoeuvre a vessel up to 80 metres

Release: 1

MARK003 Manoeuvre a vessel up to 80 metres

Modification History

Release 1. New unit of competency.

Application

This unit involves the skills and knowledge required to manoeuvre a vessel up to 80 metres.

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

This unit has links to legislative and certification requirements.

Pre-requisite Unit

Not applicable.

Competency Field

K – Manoeuvring Vessels

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 Manoeuvre vessel in normal conditions	1.1	Features of vessel that relate to its handling characteristics are recognised
	1.2	Adequate resources are organised prior to and during operations
	1.3	Details of manoeuvres are communicated to relevant personnel clearly and concisely using standard maritime vocabulary
	1.4	Situational awareness is maintained to ensure safe manoeuvres
	1.5	Manoeuvres are completed in relevant conditions of tide and wind to meet passage requirements

- 1.6 Propulsion equipment is used and monitored to assist in completing manoeuvres safely
 - 1.7 Appropriate alterations to vessel heading and power are made in response to operational environment
 - 1.8 Safe operating limits of propulsion and steering systems are not exceeded
- 2 Manoeuvre vessel in adverse weather conditions**
 - 2.1 Nature of adverse weather conditions is identified and implications for vessel operations are evaluated
 - 2.2 Preparations are made and required precautions are taken to minimise risk and damage to vessel, personnel and time loss on passage
 - 2.3 Manoeuvres are adjusted to allow for weather and sea conditions, and to keep vessel in safe water
 - 2.4 Propulsion equipment is used and monitored to assist in completing actions safely
 - 2.5 Heading is maintained within acceptable limits
 - 2.6 Appropriate allowance is made for effects of deadweight, draft, trim, speed and underwater keel clearances during turning circles and stopping distance
 - 2.7 Safe operating limits of propulsion and steering equipment are not exceeded
 - 2.8 Situational awareness is maintained at all times to review actions and ensure safety of vessel
- 3 Manoeuvre vessel in emergencies**
 - 3.1 Nature of emergency is established and required action is determined
 - 3.2 Risks to vessel and safety of persons on board is assessed and safety of required action is confirmed
 - 3.3 Details of action are communicated to relevant personnel clearly and concisely using standard maritime vocabulary
 - 3.4 Appropriate manoeuvres are made during emergency to maintain safety of vessel and those on board, and any other vessels or persons involved
 - 3.5 Propulsion equipment is used and monitored to assist in completing actions safely

- 3.6 Safe operating limits of propulsion and steering equipment are not exceeded
- 3.7 Special handling techniques are correctly applied during launching of boats or life rafts and rescues of persons overboard
- 4 Tow and be towed**
 - 4.1 Preparations for towing are safely made according to established nautical practice
 - 4.2 Correct towing procedures and precautions are applied when towing and being towed

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.

Features of vessel include one or more of the following:

- displacement and planing hulls
- propulsion units
- rudders and propellers

Manoeuvres must include:

- astern movements
- berthing and leaving a berth
- berthing in a pen
- coming to and leaving mooring
- positioning vessel to safely launch boats or life rafts in bad weather

- retrieval of person overboard
 - turning short around
 - turning vessel across tide and wind
- Propulsion equipment include one or more of the following:
- inboard engine
 - outboard engine
 - inboard/outboard engine
 - jet propulsion engine
- Adverse weather conditions includes one or more of the following:
- fog and restricted visibility
 - wind and sea conditions that may affect safety of vessel
- Nature of emergencies include one or more of the following:
- beaching
 - collision
 - damage to vessel
 - disabled or partially disabled vessel
 - fire
 - grounding
 - loss of steering gear
 - person overboard
- Preparations for towing include one or more of the following:
- ensuring appropriate lights and shapes for the tow are available and in working order
 - ensuring means of communication between the two vessels is available
 - ensuring tow ropes are in good condition and of adequate strength for proposed tow
 - making appropriate reports are to authorities
 - preparing messenger ropes for passing tow lines
- Correct towing procedures include one or more of the following:
- ensuring tow line is of sufficient length
 - making provision for rapid slipping of tow in emergency situations
 - making tow fast to towing vessel to ensure steerage is maintained

Unit Mapping Information

This is a new unit. This unit is equivalent to MARK4001A Manoeuvre a vessel up to 80 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 MARK003 Manoeuvre a vessel up to 80 metres

Modification History

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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:

- anchoring a vessel
- determining required action for a range of emergency situations
- handling a disabled or partially disabled vessel
- issuing helm and engine orders
- manoeuvring a vessel in:
 - bad weather
 - in heavy swell and surf
 - crossing a bar
 - following and quartering seas
- manoeuvring a vessel in normal and emergency situations
- manoeuvring a vessel through:
 - berthing and leaving a berth and anchor work in various wind and tidal conditions
 - berthing and unberthing
 - coming to and leaving a mooring
 - person overboard
 - steering astern through an 's' configuration
 - towing and being towed
 - turn short around
 - turning a vessel across the tide across the wind
- manoeuvring a vessel to embark or disembark a pilot
- manoeuvring in shallow water
- maintaining situational awareness.

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:

- effects of displacement and planing hulls
- effects of inboard propulsion units

- effects of rudders and propellers
- factors that could adversely affect vessel safety during operations
- features of a vessel that relate to its handling characteristics
- interaction with passing vessels , banks and shallow water
- launching boats or life rafts
- lessening drift and use of oil
- manoeuvres assisting a vessel or aircraft in distress
- manoeuvres to beach and refloat the vessel
- manoeuvring characteristics
- means of keeping a vessel out of a trough
- methods of taking on board survivors from lifeboats and life rafts
- precautions in manoeuvring or launching boats or life rafts in bad weather
- procedures for towing and being towed
- radio communications
- requirements for entering, departing and crossing a traffic separation area
- techniques for crossing a coastal bar with and against the sea
- trim and displacement
- use of a sea anchor
- 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.

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