



Australian Government

MARK011 Manoeuvre the ship

Release: 2

MARK011 Manoeuvre the ship

Modification History

Release 2. This is the second release of this unit of competency in the MAR Maritime Training Package.

- Minor statement changes in unit Application.

Release 1. This is the first release of this unit of competency in the MAR Maritime Training Package.

Application

This unit involves the skills and knowledge required to perform manoeuvres on a ship in all operating conditions and in emergencies.

This unit applies to people working in the maritime industry in the capacity of:

- Master up to 100 metres Near Coastal
- Master up to 500 gross tonnage (GT) Near Coastal
- Watchkeeper Deck.

Licensing/Regulatory Information

Legislative and regulatory requirements are applicable to this unit.

- Regulatory requirements include STCW International Maritime Organization (IMO) model course competencies and areas of knowledge, understanding and proficiency, together with the estimated total hours required for lectures and practical exercises. Teaching staff should note that timings are suggestions only and should be adapted to suit individual groups of trainees depending on their experience, ability, equipment and staff available for training.

Near Coastal Qualifications:

- This unit is one of the requirements to obtain Australian Maritime Safety Authority (AMSA) certification as a Master up to 100 metres Near Coastal as specified in Marine Order 505.

Blue Waters Qualifications:

- This unit is one of the requirements to obtain Australian Maritime Safety Authority (AMSA) certification as a Master of a commercial vessel up to 500 gross tonnage (GT) or Watchkeeper Deck and to meet regulatory requirements this unit must be delivered consistent with Marine Orders and with the relevant sections of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW).

Training providers seeking to offer this unit of competency must gain AMSA approval before the unit is offered.

Seafarers seeking certification should check with AMSA.

Pre-requisite Unit

Not applicable.

Competency Field

K – Manoeuvring Ships

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Manoeuvre ship in normal operations

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1** Ship heading is maintained within acceptable limits to meet the requirements of the operating situation
- 1.2** Alterations of heading and power are smooth and controlled
- 1.3** Suitable mode of steering is selected for the manoeuvre to meet the requirements of the operating situation
- 1.4** Constant rate of turn techniques are used to achieve constant radius turns during manoeuvres
- 1.5** Safe operating limits of ship propulsion, steering and power systems are not exceeded in normal manoeuvres

2 Make adjustments to ship course and speed to maintain safe navigation

- 2.1** Effects of operational environment on ship performance are evaluated at regular intervals
- 2.2** Implications of the changed operational environment on ship handling are assessed
- 2.3** Appropriate alterations to ship heading and power are made in response to the assessment of the operational environment

3 Manoeuvre ship during

- 3.1** Impending adverse weather conditions are identified and

adverse weather	implications for ship operations are evaluated
	3.2 Preparations are made to minimise risk and damage to ship and personnel
	3.3 Communications are made with engine room to ensure main engines are readied for manoeuvring
	3.4 Ship heading and power is maintained in response to adverse weather and sea conditions
4 Manoeuvre ship in emergencies	4.1 Nature of emergency is established and initial action is taken
	4.2 Risk to the ship and the safety of persons onboard is assessed
	4.3 Appropriate manoeuvres are made during the emergency to maintain the safety of the ship
	4.4 Propulsion equipment is used and monitored to assist in completing actions safely
	4.5 Safe operating limits of propulsion and steering equipment are not exceeded

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.

Unit Mapping Information

This unit replaces and is equivalent to MARK004 Perform basic vessel manoeuvres.

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 MARK011 Manoeuvre the ship

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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:

- manoeuvring a ship:
 - for the rescue of person overboard
 - in bad weather
 - in heavy swell
 - in shallow water
 - recognising emergency situations
 - through coming to and leaving a mooring
 - to and from anchor
- operations, including the following:
 - handling a disabled or partially disabled ship
 - implementing anchoring and berthing procedures
 - issuing helm and engine orders
 - maintaining situational awareness
- selecting suitable mode of steering, including:
 - automatic pilot
 - emergency steering
 - manual 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:

- communication techniques with the following:
 - bridge personnel and berthing stations
 - engine room

- helmsman
- tugs and pilot
- vessel traffic services (VTS)
- effects of deadweight, draught, trim, speed and under-keel clearance on turning circles and stopping distances
- effects on ship handling of wind, currents and bottom topography
- features of a ship that relate to its handling characteristics
- manoeuvring and engine characteristics for various ships
- manoeuvring problems for ships and appropriate actions and solutions
- manoeuvring procedures in and near traffic separation schemes and ship traffic service areas
- methods for controlling ship speed and direction
- operational environment, including:
 - designated anchorages
 - designated shipping areas
 - head reach
 - heavy traffic areas
 - ice
 - marine park areas
 - safe water
 - shallow and restricted waters
 - stopping distances
 - tide
 - traffic separation zones
 - weather
- procedures and manoeuvres for the rescue of person overboard
- procedures for turning a ship in various situations
- proper procedures for anchoring and mooring
- safe operating limits of propulsion and power systems, and steering equipment
- squat, shallow water, interaction and similar effects on ship handling
- work health and safety (WHS)/occupational health and safety (OHS) requirements and work practices.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

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.

Practical assessment must occur in a workplace or realistic simulated workplace, under the normal range of workplace conditions.

Simulations and scenarios may be used where situations cannot be provided in the workplace or may occur only rarely, in particular for situations relating to emergency procedures and adverse weather conditions where assessment would be unsafe, impractical or may lead to environmental damage.

Resources for assessment must include access to:

- applicable documentation such as legislation, regulations, codes of practice, workplace procedures and operational manuals
- tools, equipment, machinery, materials and relevant personal protective equipment (PPE) currently used in industry.

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