



Australian Government

MARH013 Plan and navigate a passage for a vessel up to 12 metres

Release: 2

MARH013 Plan and navigate a passage for a vessel up to 12 metres

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
- Minor statement changes in Performance Evidence
- Minor ECS statement change in Knowledge Evidence
- Minor statement changes in Assessment Conditions.

Release 1. New unit of competency. Licensing/regulatory information has been incorporated in accordance with Regulatory requirements. Assessment Requirements have been strengthened in accordance with Regulatory requirements.

Application

This unit involves the skills and knowledge required to conduct the passage of a vessel up to 12 metres within the 15 nautical mile (nm) limit; it includes using the range of equipment found on a vessel to plan and safely conduct the passage.

This unit applies to people working in the maritime industry commanding, and operating the engines of, a commercial vessel in the capacity of Coxswain Grade 1 Near Coastal.

Licensing/Regulatory Information

Legislative and regulatory requirements are applicable to this unit.

This unit is one of the requirements to obtain Australian Maritime Safety Authority (AMSA) certification as a Coxswain Grade 1 NC as specified in the Marine Order 505.

Seafarers seeking certification should check with AMSA.

Pre-requisite Unit

Not applicable.

Competency Field

H – Navigation

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Plan passage

PERFORMANCE CRITERIA

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

- 1.1 Appropriate charts and publications are accessed and checked for currency
 - 1.2 Destination is identified, and course and waypoints are plotted
 - 1.3 Estimated time of arrival (ETA) at waypoints and final destination are calculated
 - 1.4 Safe passage is plotted to comply with all navigational buoys, marks and beacons
 - 1.5 Navigational hazards are identified to avoid dangers to vessel
 - 1.6 Weather information is accessed to determine expected weather pattern for intended passage
 - 1.7 Proposed course is modified as necessary, to meet expected weather conditions
 - 1.8 Fuel consumption for passage, including a reserve, is calculated
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- 2.1 Propulsion equipment and alarms are tested for serviceability and vessel hull is checked for seaworthiness
 - 2.2 Navigation equipment and alarms are checked to ensure they are in proper working condition and set for the passage
 - 2.3 Navigation equipment is checked for errors and allowances are made in planning the passage
 - 2.4 Fuel is checked to ensure there is adequate fuel on board for intended passage
 - 2.5 Safety equipment is checked for compliance with legislation
 - 2.6 Communications equipment is checked to ensure it is in proper working condition

2 Conduct a pre-departure check

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|---------------------------|------------|---|
| | 2.7 | Anchoring and mooring equipment is checked to ensure it is adequate and in good condition |
| | 2.8 | Vessel and equipment are secured for sea |
| 3 Conduct passage | 3.1 | Local authorities are advised of departure and passage plan |
| | 3.2 | Vessel is steered and propulsion equipment is operated in a safe and controlled manner to complete pre-planned course |
| | 3.3 | Pilotage techniques and navigational equipment are used to monitor vessel position and maintain vessel in safe waters at all times |
| | 3.4 | Errors detected with navigational equipment are corrected to maintain planned passage |
| | 3.5 | Navigational buoys, marks and beacons are identified and complied with |
| | 3.6 | Situational awareness is maintained to avoid navigational hazards and to comply with regulations for prevention of collision at sea |
| | 3.7 | Weather and sea conditions are monitored during passage and correct adjustments are made for changing conditions |
| 4 Complete passage | 4.1 | Local authority is advised of completion of passage |
| | 4.2 | Vessel is checked to ensure it is securely moored |
| | 4.3 | Propulsion equipment is checked to ensure it is safely shut down and secured |
| | 4.4 | Navigational equipment is switched off |

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 MARH001 Plan and navigate a passage for 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 MARH013 Plan and navigate a passage for a vessel up to 12 metres

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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:

- applying International Regulations for Preventing Collisions at Sea
- applying weather information during passage planning and explaining expected weather patterns
- conducting a pre-departure check of:
 - anchoring and mooring equipment
 - communications equipment
 - engine controls and alarms
 - fuel
 - navigation equipment and alarms
 - safety equipment
- establishing relationship between degrees and minutes of latitude, with nautical miles
- explaining impact of tidal variation on charted depths
- identifying and complying with all navigational buoys, marks and beacons
- identifying and responding to relevant proximity alarms
- identifying:
 - courses to steer between turning points
 - navigational hazards
 - times and heights of high and low water from local tide tables
- obtaining and interpreting weather information applicable to an intended passage
- operating a distress flare
- plotting the position derived from global positioning system (GPS)

- plotting visual bearings on a chart to derive a position
- relating information in forecasts to conditions expected for small vessels
- steering a pre-planned course.

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:

- actions to be taken on receiving adverse weather report and on encountering heavy weather
- basic information contained in a navigation chart
- basic meteorological terms
- basic pilotage techniques
- chart information including symbols and abbreviations
- coastal features
- cyclonic and storm development
- dangers of reliance on the use of GPS in coastal areas
- electronic aids and their limitations
- electronic charting systems (ECS), electronic navigation and electronic charts
- local weather patterns including features on a synoptic weather chart
- manoeuvring difficulties of larger vessels
- navigational hazards, including:
 - restricted visibility
 - shallow water
 - traffic
 - unlit beacons
- operational checks of radio equipment
- procedure for developing a passage plan, taking into account:
 - anticipated weather conditions
 - depths of water throughout the passage
 - estimated time of arrival (ETA) at destination
 - fuel consumption
 - navigation markers during the passage
 - navigational hazards
 - tidal information
- safety equipment including:
 - alarms and communication equipment
 - distress flares or pyrotechnics
 - emergency position indicating radio beacon (EPIRB)
 - firefighting equipment
 - lifejackets
- sources and types of weather reports and warnings

- sourcing and applying chart corrections
- speed, distance and time calculations
- use of a compass and compass errors
- use of local tide tables
- work health and safety (WHS)/occupational health and safety (OHS) requirements.

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, including:
 - electronic or paper charts
 - notice to mariners
 - tide tables
- a commercial vessel greater than or equal to 5.0 metres in length
- tools, equipment, machinery, materials and relevant personal protective equipment (PPE) currently used in industry including:
 - navigation equipment
 - safety equipment.

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