



Australian Government

MARH022 Plan and conduct a passage and determine position

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the MAR Maritime Training Package Release 6.0.

Application

This unit involves the skills and knowledge required to plan and conduct a passage, determine position on a vessel using a range of bridge equipment, and evaluate meteorological information for passage planning.

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

- Master of a commercial vessel less than 80 metres in length within the exclusive economic zone (EEZ)
- Master of a commercial vessel less than 500 gross tonnage (GT)
- 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 less than 80 metres Near Coastal as defined in the Marine Order 505 (Certificates of competency-National Law) 2013.

Blue Waters Qualifications:

- This unit is one of the requirements to obtain AMSA certification as a Master of a commercial vessel less than 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).

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 Navigational charts, nautical publications and related documentation are selected for the area of navigation and corrected according to the latest information available
- 1.2 Information from charts and publications is interpreted and applied to accurately identify potential navigational hazards relevant to the proposed voyage
- 1.3 State of the tide at specified locations is determined and findings are applied to the passage plan
- 1.4 Route for voyage is determined and critical points along the proposed route of voyage are identified and plotted
- 1.5 Accurate calculations and measurements of navigational information are made
- 1.6 Meteorological information is obtained and interpreted, and weather and sea condition hazards relevant to the proposed voyage are identified prior to departure
- 1.7 Route is modified, as required, to take into account weather and sea condition hazards
- 1.8 Planned route for voyage is recorded according to organisational and regulatory requirements

- 2 Conduct passage**
- 2.1 Mode of steering is selected appropriate for the prevailing weather, sea and traffic conditions and intended manoeuvres
 - 2.2 Measurements and observations of sea and weather conditions are used to determine vessel speed and direction
 - 2.3 Information from bridge equipment is interpreted to identify navigational hazards and fix vessel position
 - 2.4 Alterations to vessel course or speed are made to meet prevailing circumstances and changing conditions
 - 2.5 Navigational manoeuvres are conducted within safe operational limits of vessel
 - 2.6 Details of passage are recorded in vessel log according to regulations
 - 2.7 Variations to planned route are documented prior to archiving on completion of the voyage
- 3 Fix vessel position**
- 3.1 Primary position fixing method is selected according to prevailing circumstances and conditions
 - 3.2 Position is fixed using selected method and information derived from relevant wheelhouse equipment
 - 3.3 Position is determined within limits of acceptable instrument/system errors
 - 3.4 Position is recorded on a navigational chart according to regulatory requirements
 - 3.5 Fixes are taken at time intervals appropriate for prevailing navigational conditions
 - 3.6 Reliability of information obtained from primary method of position fixing is checked at appropriate intervals
 - 3.7 Performance checks of position fixing instruments and wheelhouse equipment are carried out according to organisational procedures and manufacturer instructions
- 4 Determine appropriate action to take with respect to plotted**
- 4.1 Assessment of the set, drift and leeway being experienced by the vessel is made

position

- 4.2 Course is adjusted to maintain or resume planned route where the position indicates a deviation has occurred
- 4.3 Dead reckoning (DR) and/or estimated position (EP) is projected along planned route according to the course made good between previously observed positions
- 5 **Analyse navigational system performance**
 - 5.1 Theoretical performance of navigational system is determined
 - 5.2 Measurement equipment is selected, and checks and tests are conducted
 - 5.3 Data is analysed and theoretical performance is checked with actual performance
 - 5.4 Significance of variation between theoretical and actual performance is determined
 - 5.5 Appropriate action is taken to bring performance to acceptable instrument/system errors

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 MARH008 Plan and conduct a passage.

Links

Companion Volume implementation guide can be found in VetNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>