



Australian Government

MARH008 Plan and conduct a passage

Release: 1

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Modification History

Not applicable.

Application

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

This unit applies to a Watchkeeper Deck, a Master up to 500 gross tonnage or a Master up to 80 metres Near Coastal.

This unit has links to legislative and certification requirements.

Pre-requisite Unit

Not applicable.

Competency Field

H – Navigation

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 Plan passage

- 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 position**
 - 4.1 Assessment of the set, drift and leeway being experienced by the vessel is made
 - 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

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.

Navigational charts, nautical publications and related documentation include one or more of the following:

- electronic chart display systems
- Nautical Almanac
- nautical tables
- Notices to Mariners
- paper charts
- radio navigational warnings
- sailing directions
- temporary warning notices
- tide tables
- vessel routing information
- weather reports and warnings

Navigational hazards include one or more of the following:

- restricted visibility
- shallow ground
- traffic
- unlit beacons

Mode of steering includes one or more of the following:

- automatic pilot
- electric systems
- hydraulic systems

Conditions include one or more of the following:

- buoyage
- overall passage plan requirements
- prevailing weather and sea conditions
- proximity and course of other vessels
- relevant navigational hazards
- signage

Primary position fixing method includes one or more of the following:

- celestial observations
- radar ranges or bearings
- radio navigation aids
- running fix
- simultaneous bearings or transits of coastal features
- soundings to determine position

- terrestrial observations

Unit Mapping Information

This is a new unit. This unit is equivalent to MARH5002A Plan and conduct a passage.

Links

Companion Volume implementation guides are found in VETNet -

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