



Australian Government

Department of Education, Employment and Workplace Relations

TDMMH1707A APPLY COMMAND NAVIGATION PROCEDURES ON VESSELS LIMITED BY TONNAGE OR NEAR COASTAL OPERATIONS

Release: 1

TDMMH1707A APPLY COMMAND NAVIGATION PROCEDURES ON VESSELS LIMITED BY TONNAGE OR NEAR COASTAL OPERATIONS

Modification History

Not applicable.

Unit Descriptor

UNIT DESCRIPTOR:

This unit involves the skills and knowledge required to manage safe navigational watchkeeping on a commercial ocean-going vessel in compliance with Australian and international regulations and guidelines, protection of the marine environment and the safety of the vessel and persons on board. This includes vessels of 500 GT or less in the case of a Master or Chief Mate and vessels of 3,000 GT or less in the case of a Watchkeeper.

Application of the Unit

Application of the unit	The unit has application in qualifications for Master or Chief Mate on a vessel of less than 500 gross tonnage or more operating in international waters or for a Watchkeeper on an ocean-going vessel of 3,000 GT or less, i.e. in additional skills set for Master (Less than 500 GT) beyond the Diploma of Transport&Distribution(Maritime Operations - Deck Watchkeeper). However, the unit is also applicable to qualifications for Masters of vessels up to 3,000 GT operating in near coastal waters, i.e. Diploma of Transport&Distribution(Coastal Maritime Operations - Master Class 3).
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Licensing/Regulatory Information

Licensing/legislative requirements	The unit is consistent with the relevant sections of STCW 95 and Marine Orders under the Australian Navigation Act 1912.
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Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance Criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the Evidence Guide.</i>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Ensure safe watchkeeping procedures on vessels potentially with limited qualified personnel	<p>a A set of master's standing orders is developed to supplement the vessel's safety management system noting the number of watchkeeping personnel</p> <p>b Conduct, handover and relief of the watch conforms with accepted principles, vessel's safety management procedures and Master's standing orders</p> <p>c An appropriate bridge team is established in accordance with the vessel's safety management system and bridge personnel are confirmed as fit for duty</p> <p>d Duties are assigned to members of the bridge team and their performance of those duties monitored</p> <p>e Members of the bridge team are correctly briefed on their duties</p> <p>f Action is taken to ensure that the vessel is navigated safely using appropriate position fixing techniques to check the location of the vessel and to maintain the movement of the vessel within planned limitations.</p> <p>g Action is taken to ensure that the progress of the vessel with respect to a passage plan is analysed and the vessel's</p>

ELEMENT	PERFORMANCE CRITERIA
	navigation managed appropriately, to maintain a required estimated time of arrival at a point in the plan

TDMMH1707A APPLY COMMAND NAVIGATION PROCEDURES ON VESSELS LIMITED BY TONNAGE OR NEAR COASTAL OPERATIONS
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ELEMENT	PERFORMANCE CRITERIA
1 Ensure safe watchkeeping procedures on vessels potentially with limited qualified personnel (continued)	<ul style="list-style-type: none"> h The frequency and extent of monitoring of traffic, the vessel and the environment conform with accepted principles and procedures i The responsibility for the safety of navigation is defined in accordance with the vessel's safety management system, including periods when the Master is on the bridge and while under pilotage j Safe navigational practice is achieved through the implementation of accepted bridge resource management principles and procedures k Action is taken to ensure that fatigue management strategies are correctly applied within the bridge management team
2 Respond to potential collision and emergency situations	<ul style="list-style-type: none"> a Leadership of the bridge team is taken when called to the bridge in response to a navigational situation b Identify circumstances when assistance is required when the Master is performing watchkeeping duties c Analyse potential collision situations and take appropriate action to avoid collision in ample time and in compliance with the international collision regulations, resulting in a safe passing distance and following the practices of good seamanship. d Safety management system procedures and compliance with standard watchkeeping principles are correctly implemented when taking over the bridge watch from the officer of the watch

ELEMENT	PERFORMANCE CRITERIA
	<ul style="list-style-type: none">e Appropriate action is taken to initiate search and rescue procedures on receipt of a distress signalf Appropriate advice is given to watchkeepers and correct actions implemented regarding a response to navigational or operational emergency situations

ELEMENT	PERFORMANCE CRITERIA
3 Maintain watchkeeping records	a Action is taken ensure that the deck logbook and other required records are maintained in an appropriate manner

TDMMH1707A APPLY COMMAND NAVIGATION PROCEDURES ON VESSELS LIMITED BY TONNAGE OR NEAR COASTAL OPERATIONS

Required Skills and Knowledge

REQUIRED KNOWLEDGE

This describes the knowledge required for this unit.

- 1 Principles for maintaining a safe navigational watch on vessels with potentially limited qualified personnel
- 2 Regulations for the prevention of collisions at sea (Colregs)
- 3 Principles of bridge team management
- 4 Precautions necessary when navigating in or near traffic separation schemes or other routeing measures
- 5 Bridge watch handover procedures
- 6 Relevant OH&S legislation and policies
- 7 Implications of a range of factors that can affect watchkeeping functions on vessels under 500 GT
- 8 Causes of groundings, collisions and casualties when on board vessel
- 9 Navigational hazards during a voyage and implications for watchkeeping
- 10 Fatigue management principles and techniques

TDMMH1707A APPLY COMMAND NAVIGATION PROCEDURES ON VESSELS LIMITED BY TONNAGE OR NEAR COASTAL OPERATIONS

REQUIRED SKILLS

This describes the basic skills required for this unit.

- 1 Communicate effectively with other personnel when managing safe navigational watchkeeping activities
- 2 Provide leadership to the bridge team
- 3 Solve problems that may arise when managing a bridge team
- 4 Assess necessary action when called to the bridge by the officer of the watch
- 5 Assess circumstances requiring the Master to call for assistance from a second qualified watchkeeper
- 6 Determine actions to take with respect to the execution of a passage plan
- 7 Brief officers of the watch on the passage plan and their watchkeeping duties
- 8 Recognise situations warranting alterations to the bridge team, including situations where the vessel is under pilotage
- 9 Exchange information with a pilot with respect to the pilotage plan and the conduct of the bridge team
- 10 Perform pilotage duties where permitted
- 11 Conduct emergency procedures
- 12 Determine which watchkeeping task is the most important at any given time
- 13 Use available technology when managing navigational watchkeeping activities

Evidence Guide

Evidence Guide

TDMMH1707A APPLY COMMAND NAVIGATION PROCEDURES ON VESSELS LIMITED BY TONNAGE OR NEAR COASTAL OPERATIONS

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

1 Critical aspects of evidence required to demonstrate competency in this unit	<p>Assessment must confirm appropriate knowledge and skills to:</p> <ul style="list-style-type: none"> a Establish watchkeeping arrangements and procedures b Manage watchkeeping operations on a vessel c Ensure the established passage plan is correctly followed in the course of watchkeeping operations d Take appropriate action in the event of a potential collision or other emergency situation when called to the bridge e Communicate effectively with others in the course of watchkeeping duties
2 Evidence required for demonstration of consistent performance	<ul style="list-style-type: none"> a Performance is demonstrated consistently over a period of time and in a suitable range of contexts b Applies underpinning knowledge and skills when <ul style="list-style-type: none"> 1 establishing watchkeeping arrangements and procedures 2 managing watchkeeping operations 3 ensuring that the established passage plan is correctly carried out 4 taking action in the event of a potential collision or other emergency situation when called to the bridge 5 communicating with others in the course of watchkeeping duties c Shows evidence of application of relevant workplace procedures, including <ul style="list-style-type: none"> 1 Relevant sections of maritime regulations 2 OH&S regulations and hazard prevention policies and procedures 3 job procedures and work instructions 4 relevant guidelines relating to bridge management and

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

- watchkeeping arrangements on board vessel engaged on a coastal voyage
- 5 following bridge housekeeping processes
- d Action is taken promptly to report and/or rectify watchkeeping incidents in accordance with established procedures
- e Work is completed systematically with required attention to detail
- f Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions and communication with others

Evidence Guide (continued)

TDMMH1707A APPLY COMMAND NAVIGATION PROCEDURES ON VESSELS LIMITED BY TONNAGE OR NEAR COASTAL OPERATIONS

3 Context of assessment

- a Assessment of competency must comply with the assessment requirements of the relevant maritime regulations
- b Assessment of this unit must be undertaken within relevant marine authority approved and audited arrangements by a registered training organisation:
 - 1 As a minimum, assessment of knowledge must be conducted through appropriate written/oral examinations, and
 - 2 Appropriate practical assessment must occur:
 - i at the registered training organisation, involving appropriately equipped facilities and an integrated navigation bridge simulator approved by the relevant marine authority; and/or
 - ii on an appropriate working or training vessel approved by the relevant marine authority

3 Context of assessment	a Assessment of competency must comply with the assessment requirements of the relevant maritime regulations
4 Specific resources required for assessment	<p>Access is required opportunities to:</p> <p>a demonstrate the ability to manage watchkeeping situations using an integrated navigation bridge simulator approved by the relevant marine authority; and/or</p> <p>b manage watchkeeping operations on an operational ocean-going vessel in an appropriate range of situations and weather and sea conditions</p>

Range Statement

Range Statement

TDMMH1707A APPLY COMMAND NAVIGATION PROCEDURES ON VESSELS LIMITED BY TONNAGE OR NEAR COASTAL OPERATIONS

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

VARIABLE

SCOPE

1. GENERAL CONTEXT

a. Work must be carried out:	<p>1 in compliance with mandatory rules and regulations and IMO Conventions and Codes, including the relevant sections of the AMSA Marine Orders and ensuring that applicable codes, guidelines and standards recommended by IMO, the classification societies and maritime industry organisations are taken into account</p>
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The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

b. Work is performed:	1 as the leader of a bridge team under broad operational requirements, with accountability and responsibility for self and others in achieving the prescribed outcomes
c. Work involves:	1 the application of nautical principles and watchkeeping techniques across a wide and often unpredictable variety of operational contexts. Implementation of the vessel's watchkeeping plan is required. Accountability and responsibility for self and others in achieving the required watchkeeping functions is involved
d. Work requires:	1 judgement and leadership in monitoring and supplementing watchkeeping duties and procedures during a voyage

2. WORKSITE ENVIRONMENT

a Management of watchkeeping duties may be carried out:	1 as a master on any ocean-going commercial vessel of 500 GT or less or a watchkeeper on any ocean-going commercial vessel under 3,000 GT
b Management of watchkeeping arrangements and procedures may be carried out:	1 by day or night in both normal and emergency situations 2 under any possible conditions of weather and loading 3 while underway 4 during berthing and unberthing operations 5 while anchoring or mooring 6 while in port 7 while moored or at anchor

Range Statement (continued)

TDMMH1707A APPLY COMMAND NAVIGATION PROCEDURES ON VESSELS LIMITED BY TONNAGE OR NEAR COASTAL OPERATIONS

VARIABLE	SCOPE
c Watchkeeping management principles include:	<ol style="list-style-type: none"> 1 ensuring that a proper watch is maintained at all times, including correct response to avoiding collision and maintaining the safe navigation of the vessel's passage 2 all necessary precautions must be taken to avoid pollution of the marine environment 3 appropriate assistance must be available to be summoned to the bridge if required by a change in the vessel's situation 4 ensuring that a proper watch is maintained at all times 5 all necessary precautions must be taken to avoid pollution of the marine environment
d Emergencies and potentially dangerous navigational situations may include:	<ol style="list-style-type: none"> 1 fire 2 stranding 3 possible collision 4 heavy weather 5 synchronous rolling 6 distress signal 7 failure of bridge equipment, steering equipment, navigational lights 8 loss of main engines 9 person overboard 10 fog and restricted visibility 11 cargo shift

VARIABLE	SCOPE
	12 retrieval of survivors from the water
	13 loss of watertight integrity
	14 intoxicated persons on board vessel
	15 dragging anchor
	16 fouled hawse
	17 loss of mooring lines or winches when berthing
	18 entry into confined spaces
	19 personnel working aloft or overside
	20 sudden list or loll

Range Statement (continued)

TDMMH1707A APPLY COMMAND NAVIGATION PROCEDURES ON VESSELS LIMITED BY TONNAGE OR NEAR COASTAL OPERATIONS

VARIABLE	SCOPE
e Fatigue management strategies may include:	1 recognition of symptoms of fatigue
	2 arranging assistance for watchkeepers when symptoms of fatigue are identified
	3 planning appropriate actions when no unfatigued personnel are available
	4 maintenance of personal fitness and health
	5 appropriate dietary habits
	6 ensuring the avoidance of excessive consumption of alcohol prior to watchkeeping duties

VARIABLE	SCOPE
f Available navigational aids may include, but are not restricted to:	<ol style="list-style-type: none"> 1 compass and azimuth mirror 2 electronic navigation systems 3 radar 4 electronic charts 5 other equipment required for the safe navigation of the vessel
g Factors to be taken into account when monitoring watchkeeping duties may include but are not restricted to:	<ol style="list-style-type: none"> 1 need to adhere to the established passage plan 2 a proper lookout by all available means must be maintained at all times 3 bridge must never be left unattended 4 weather and sea conditions, visibility and whether there is daylight or darkness 5 proximity of navigational hazards 6 use and operational condition of navigational aids 7 the operational status of bridge instrumentation, controls and alarms 8 provision on the bridge of unmanned machinery space (UMS) controls, alarms and indicators 9 unusual demands on the navigational watch arising from operational conditions 10 traffic density and other activities occurring in the area in which the vessel is navigating 11 the size of the vessel and the field of vision available from the conning position 12 the attention necessary when navigating in or near traffic separation schemes or other routing measures 13 rudder and propeller control and vessel manoeuvring characteristics

Range Statement (continued)

TDMMH1707A APPLY COMMAND NAVIGATION PROCEDURES ON VESSELS LIMITED BY TONNAGE OR NEAR COASTAL OPERATIONS

VARIABLE	SCOPE
h Documentation and records may include but are not restricted to:	1 operational orders
	2 master's standing and night orders
	3 established passage plan
	4 navigational charts
	5 relevant maritime regulations as they relate to watchkeeping functions and operations during a coastal voyage
	6 vessel's log
	7 company safety management system
	8 instructions of relevant maritime authorities
i Applicable legislation, regulations and codes may include:	1 National Standard for Commercial Vessels (NSCV) Relevant regulations of State and Territory marine authorities
	2 IMO STCW 95 Convention and Code
	3 relevant sections of AMSA Marine Orders
	4 International Regulations for Preventing Collisions at Sea
	5 relevant international, Commonwealth, State and Territory OH&S legislation

Unit Sector(s)

Not applicable.

Field

Field MH Navigation

Relationship to other units

Relationship to other units	The unit may be assessed in conjunction with other units that relate to the functions of the occupation(s) concerned.
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