



Australian Government

Department of Education, Employment and Workplace Relations

TDMMF2907B MAINTAIN A SAFE NAVIGATIONAL WATCH ON A COASTAL VOYAGE

Revision Number: 1

TDMMF2907B MAINTAIN A SAFE NAVIGATIONAL WATCH ON A COASTAL VOYAGE

Modification History

Not applicable.

Unit Descriptor

UNIT DESCRIPTOR:

This unit involves the skills and knowledge required to maintain a safe navigational watch on a commercial vessel within limits of responsibility of a Master 3 or Skipper 1 to ensure the safety of navigation, protection of the marine environment and the safety of the vessel and persons on board.

Application of the Unit

Application of the unit	The unit has applications in qualifications for a Master 3/Skipper 1 operating a vessel: • less than 35 metres in length for unlimited domestic operations • less than 80 metres in length for ACMW operations (within 600 nm) • that is both less than 3,000 GT and less than 100 metres in length, for ACMW operations (within 600 nm) 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 maritime regulations describing mandatory minimum requirements for a Master 3/Skipper 1. This includes applicable sections of State/Territory maritime licensing and regulatory requirements and the National Standard for Commercial Vessels (NSCV) and the USL Code.
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Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Carry out watchkeeping procedures	- a The conduct, handover and relief of the watch conforms with accepted principles and vessel's procedures - b A proper look-out is maintained at all times and in such a way as to conform to accepted principles and procedures and regulatory requirements - c The vessel is navigated safely using appropriate visual and electronic techniques to check position and to keep it on the track laid down - d The progress of the vessel along a prepared track is analysed and speed and course adjusted as appropriate to maintain a required estimated time of arrival at a point on the track - e Lights, shapes and sound signals conform with the requirements contained in the International Regulations for Preventing Collisions at Sea and are correctly recognised

ELEMENT	PERFORMANCE CRITERIA
	f The frequency and extent of monitoring of traffic, the vessel and the environment conform with accepted principles and procedures g Responsibility for the safety of navigation is clearly defined at all times, including periods when the master is on the bridge and while under pilotage h Safe navigational practice is achieved through the implementation of accepted bridge resource management principles and procedures i Fatigue management strategies are correctly applied within the bridge management team
ELEMENT	PERFORMANCE CRITERIA
2 Respond to potential collision and emergency situations	a Potential collision situations are analysed and appropriate action is taken in ample time and in accordance with regulatory requirements b Correct responses are made to emergencies and situations that pose a danger to the vessel and personnel on board c Distress signals are recognised and appropriate action is taken to initiate search and rescue procedures d Master is called in the event of a navigational incident which falls outside the officer's limits of responsibility
3 Maintain watchkeeping records	a A proper and accurate record is maintained of the movements and activities relating to the navigation of the vessel b Appropriate entries pertaining to the watch are recorded in the vessel's log

Required Skills and Knowledge

REQUIRED KNOWLEDGE

This describes the knowledge required for this unit.

- 1 Sections of relevant maritime regulations dealing with bridge watchkeeping principles, arrangements, procedures, roles and responsibilities
- 2 Relevant OH&S legislation and policies
- 3 Limits of responsibility of an officer in charge of a navigational watch for various sizes of vessels and operational contexts when engaged on a coastal voyage
- 4 Bridge resource management systems
- 5 Implications of a range of factors that can affect watchkeeping functions
- 6 Causes of groundings, collisions and casualties when on board vessel engaged on a coastal voyage
- 7 Navigational hazards during a coastal voyage and implications for watchkeeping
- 8 Operating procedures for typical navigational aids and skills and knowledge needed to use them effectively
- 9 Watch handover procedures
- 10 Watchkeeping problems and emergency situations for coastal vessels and appropriate action and solutions
- 11 Manual and electronic navigational aids available to the bridge team and the procedures for their operation and use during a watch
- 12 Bridge instrumentation, controls and alarms
- 13 Functions of unmanned machinery space (UMS) controls, alarms and indicators
- 14 Rudder and propeller control and vessel manoeuvring characteristics
- 15 Precautions necessary when navigating in or near traffic separation schemes or other routing measures
- 16 Signs of fatigue
- 17 Fatigue management principles and techniques
- 18 Maritime communication techniques

REQUIRED SKILLS

This describes the basic skills required for this unit.

- 1 Communicate effectively with others on watchkeeping issues, arrangements and requirements
- 2 Read, interpret and apply instructions, procedures and information relevant to the role and responsibilities of a watchkeeper on a domestic vessel
- 3 Select and use appropriate internal and external communications equipment during watchkeeping duties
- 4 Provide leadership as a member of the bridge team during watchkeeping duties
- 5 Take appropriate initiatives related to the protection of the environment during watchkeeping duties
- 6 Interpret and apply required practices during watchkeeping duties on a domestic vessel
- 7 Modify activities dependent on differing vessel contingencies, risk situations and environments
- 8 Identify and solve problems that may arise during watchkeeping duties on a domestic vessel and report problems and issues and take appropriate action based on available information
- 9 Monitor and anticipate hazards and risks that may arise during watchkeeping duties on a domestic vessel and take appropriate action
- 10 Adapt to differences in vessels, bridge equipment and watchkeeping procedures

Evidence Guide

Evidence Guide

TDMMF2907B MAINTAIN A SAFE NAVIGATIONAL WATCH ON A COASTAL VOYAGE

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	Assessment must confirm appropriate knowledge and skills to: - a Implement watchkeeping arrangements and procedures - b Fulfil watchkeeping responsibilities - c Take appropriate action in the event of a potential collision or other emergency situation arising during a watch - d Communicate effectively with others in the course of watchkeeping duties
2 Evidence required for demonstration of consistent performance	- a Performance is demonstrated consistently over a period of time and in a suitable range of contexts - b Consistently applies underpinning knowledge and skills when: 1 maintaining a safe watch on a vessel engaged on a coastal voyage 2 identifying and evaluating watchkeeping problems and determining appropriate courses of action 3 identifying and implementing improvements to bridge management procedures 4 applying safety precautions relevant to watchkeeping operations 5 dealing with potential collisions and other potentially dangerous situations arising during a watch - c Shows evidence of application of relevant workplace procedures, including:

Evidence Guide

TDMMF2907B MAINTAIN A SAFE NAVIGATIONAL WATCH ON A COASTAL VOYAGE

- 1 relevant sections of maritime regulations
- 2 OH&S regulations and hazard prevention policies and procedures
- 3 job procedures and work instructions
- 4 guidelines relating to bridge management and watchkeeping arrangements
- 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 among crew and others

Evidence Guide (continued)

TDMMF2907B MAINTAIN A SAFE NAVIGATIONAL WATCH ON A COASTAL VOYAGE

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; and/or
 - ii on an appropriate working or training vessel

Evidence Guide (continued)

TDMMF2907B MAINTAIN A SAFE NAVIGATIONAL WATCH ON A COASTAL VOYAGE

4 Specific resources required for assessment

Access is required to opportunities to:

- a demonstrate the ability to maintain a safe watch in range of suitably simulated of watchkeeping situations on board a vessel engaged on a coastal voyage; and/or
- b maintain a safe watch on a vessel engaged on a coastal voyage in an appropriate range of situations and weather and sea conditions

Range Statement

Range Statement

TDMMF2907B MAINTAIN A SAFE NAVIGATIONAL WATCH ON A COASTAL VOYAGE

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:	1 in compliance with the relevant maritime regulations
b. Work is performed:	1 as a member of a bridge team under broad operational requirements, with limited accountability and responsibility for self and others in achieving the prescribed outcomes

Range Statement

TDMMF2907B MAINTAIN A SAFE NAVIGATIONAL WATCH ON A COASTAL VOYAGE

c. Work involves:	1 the application of nautical principles and watchkeeping techniques across a wide and often unpredictable variety of operational contexts in coastal waters
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d. Work requires:	1 the implementation of the vessel's watchkeeping plan
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2. WORKSITE ENVIRONMENT

a Vessel may include:	1 any Australian or international commercial vessel operating within coastal limits
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b Watchkeeping arrangements and procedures may be implemented:	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 8 when bunkering 9 during cargo operations
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Range Statement (continued)

TDMMF2907B MAINTAIN A SAFE NAVIGATIONAL WATCH ON A COASTAL VOYAGE

VARIABLE	SCOPE
c Watchkeeping principles include:	1 proper lookout must be maintained at all times 2 duties of look-out and helmsman must be kept separate 3 look-out must give full attention to keeping a proper look-out and must not be given other duties which could interfere with the task 4 all necessary precautions must be taken to avoid pollution of the marine environment 5 appropriate assistance must be available to be summoned to the bridge if required by a change in the vessel's situation
d Fatigue management strategies may include:	1 recognition of symptoms of fatigue 2 arranging to take a break when symptoms of fatigue are identified 3 maintenance of personal fitness and health 4 appropriate dietary habits 5 avoidance of excessive consumption of alcohol prior to watchkeeping duties
e Emergencies and potentially dangerous navigational situations may include:	1 fire 2 stranding 3 possible collision 4 heavy weather 5 synchronous rolling 6 distress signal

Range Statement (continued)

TDMMF2907B MAINTAIN A SAFE NAVIGATIONAL WATCH ON A COASTAL VOYAGE

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| 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 |
| 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)

TDMMF2907B MAINTAIN A SAFE NAVIGATIONAL WATCH ON A COASTAL VOYAGE

VARIABLE	SCOPE
f Available navigational aids may include:	1 electronic navigation systems and equipment, including radar 2 electronic position indicating devices 3 other equipment affecting the safe navigation of the vessel

Range Statement (continued)

TDMMF2907B MAINTAIN A SAFE NAVIGATIONAL WATCH ON A COASTAL VOYAGE

g Factors to be taken into account when carrying out watchkeeping duties include:	1 bridge must never be left unattended 2 weather and sea conditions, visibility and whether there is daylight or darkness 3 proximity of navigational hazards 4 use and operational condition of navigational aids 5 the operational status of bridge instrumentation, controls and alarms 6 provision on the bridge of unmanned machinery space (UMS) controls, alarms and indicators 7 unusual demands on the navigational watch arising from operational conditions 8 traffic density and other activities occurring in the area in which the vessel is navigating 9 the size of the vessel and the field of vision available from the conning position 10 the attention necessary when navigating in or near traffic separation schemes or other routeing measures 11 rudder and propeller control and vessel manoeuvring characteristics
h Documentation and records may include:	1 operational orders 2 navigational charts 3 relevant maritime regulations as they relate to watchkeeping functions and operations during a coastal voyage 4 vessel's log 5 company procedures

Range Statement (continued)

TDMMF2907B MAINTAIN A SAFE NAVIGATIONAL WATCH ON A COASTAL VOYAGE

	6 instructions of relevant maritime authorities
i Applicable legislation, regulations and codes may include:	1 relevant sections of State and Territory maritime regulations, the NSCV and the USL Code 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 MF Operational Quality and Safety

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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