



Australian Government

Department of Education, Employment and Workplace Relations

TDMMF107B ASSIST IN SEARCH AND RESCUE OPERATIONS

Revision Number: 1

TDMMF107B ASSIST IN SEARCH AND RESCUE OPERATIONS

Modification History

Not applicable.

Unit Descriptor

UNIT DESCRIPTOR:

This unit involves the skills and knowledge required by a Master or Chief Mate to assist in the planning, and coordination of search and rescue operations at sea in accordance with the procedures contained in the IMO/ICAO International Aeronautical and Maritime Search and Rescue Manual (IAMSAR).

Application of the Unit

Application of the unit	The unit has application in qualifications for a Master or Chief Mate on a vessel of 500 gross tonnage or more operating in international waters, i.e. Advanced Diploma of Transport&Distribution(Maritime Operations - Master Unlimited).
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Licensing/Regulatory Information

Licensing/legislative requirements	The unit is consistent with the relevant sections of STCW 95, the International Ship and Port Facility Security (ISPS) Code and Marine Orders under the Australian Navigation Act 1912, describing requirements for a Master or Chief Mate on a vessel of 500 gross tonnage or more operating in international waters.
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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 Assist in planning search and rescue operations	<p>a Distress and emergency signals and communications are recognised and evaluated in accordance with procedures and relevant Australian and/or international regulations and conventions</p> <p>b Emergency is assessed and level and nature of assistance required and its practicability is established</p> <p>c Communications are established where possible with the parties in distress, other search vessels and/or aircraft and other organisations and persons who may be involved in the search and rescue operation</p> <p>d Plans for search and rescue comply as closely as possible with relevant Australian and/or international regulations and conventions</p> <p>e Organisation and command chain with other stations involved in the search and rescue operation is established in collaboration with search and rescue authorities</p>

ELEMENT	PERFORMANCE CRITERIA
<p>2 Establish and maintain radio communications</p>	<p>a Radio communications are established and maintained with the parties in distress, other search vessels and/or aircraft, search and rescue coordination authorities and other organisations and persons who may be involved in the search and rescue operation</p> <p>b Records are accurately kept of all communications made during the emergency, including frequencies and content of messages</p>
<p>3 Assist in search and rescue operations</p>	<p>a Information concerning the emergency is regularly collected from all vessels, aircraft and other parties involved in the search and rescue operation</p> <p>b Decisions on action taken during the search and rescue operation are made after analysis of all available information and after consultation with others in the established chain of command</p> <p>c Directions are given to others involved in the search and rescue operation in accordance with the agreed plan and the established chain of command</p> <p>d Manoeuvres of vessel as part of search and rescue operations are made in accordance with the agreed plan</p> <p>e Vessel's officers and crew are briefed on their role during the emergency and are deployed to the required stations</p> <p>f Manoeuvres of vessel are made safely with due regard to the limits of propulsion, steering and vessel stability and the prevailing weather and sea conditions</p> <p>g Duration of the search and rescue operations is appropriate to the level of the emergency and complies with instructions from the company and search and rescue authorities</p> <p>h Records of the incident are made in the vessel's log and other documentation is completed as required by relevant Australian and/or international regulations and conventions</p>

Required Skills and Knowledge

REQUIRED KNOWLEDGE

This describes the knowledge required for this unit.

- 1 Relevant sections of regulations and codes applicable to the limits of responsibility of masters and mates in search and rescue operations
- 2 Awareness and understanding of the role of a vessel's master when involved in search and rescue operations as described in the IMO/ICAO International Aeronautical and Maritime Search and Rescue Manual (IAMSAR).
- 3 Relevant OH&S legislation, codes of practice, policies and procedures
- 4 Search and rescue techniques and procedures
- 5 Responsibilities when participating search and rescue operations
- 6 Chain of command and organisational requirements used in search and rescue operations
- 7 Sequence of action to be taken upon sighting or receiving a distress signal or a call for assistance
- 8 Procedures for fixing the position of a distress signal or call for assistance
- 9 Drift patterns of disabled vessels and survival craft in relation to wind and current
- 10 Types of distress and emergency signals and types of response required in each case
- 11 Maritime communication techniques applicable to search and rescue operations
- 12 Typical search and rescue problems and appropriate action and solutions
- 13 Principles involved in determining the duration and scope of a search
- 14 Types of search patterns and their application
- 15 Effects on vessel handling of wind, currents and bottom topography
- 16 Typical manoeuvring and engine characteristics for vessels of 500 gross tonnage or more, including stopping distances and turning circles at various draughts, speeds and loading
- 17 Constant rate of turn techniques
- 18 Mandatory knowledge and skills in personal survival techniques, firefighting

REQUIRED KNOWLEDGE

and fire prevention required of all seafarers

REQUIRED SKILLS

This describes the basic skills required for this unit.

- 1 Communicate effectively with others when assisting in search and rescue operations
- 2 Read, interpret and apply instructions, procedures and information relevant to the role and responsibilities of a Master when assisting in search and rescue operations
- 3 Select and use appropriate internal and external communications equipment when assisting in search and rescue operations
- 4 Provide leadership as a member of the bridge team when assisting in search and rescue operations
- 5 Identify and solve problems that may arise during search and rescue operations, report problems and issues, and take appropriate action based on available information
- 6 Take appropriate initiatives related to search and rescue operations
- 7 Monitor and anticipate hazards and risks that may arise during search and rescue operations and take appropriate action
- 8 Modify activities dependent on differing vessel contingencies, risk situations and environments
- 9 Adapt to differences in vessels, equipment and standard operating procedures
- 10 Perform constant rate of turn techniques when manoeuvring a vessel

Evidence Guide

Evidence Guide

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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.

<p>1 Critical aspects of evidence required to demonstrate competency in this unit</p>	<p>Assessment must confirm appropriate knowledge and skills to:</p> <ul style="list-style-type: none"> a Interpret the requirements of the IMO/ICAO International Aeronautical and Maritime Search and Rescue Manual (IAMSAR) when participating in a real or simulated search and rescue operation b Participate in real or simulated search and rescue operations in conjunction with search and rescue authorities and other relevant parties c Manoeuvre vessel safely during a real or simulated search and rescue operation d Identify typical search and rescue problems and take appropriate action e Communicate effectively with search and rescue authorities and others during real or simulated search and rescue operations f Record search and rescue incidents accurately in accordance with company and international and Australian regulatory requirements
<p>2 Evidence required for demonstration of consistent performance</p>	<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 1 assisting in real or simulated search and rescue operations 2 identifying and evaluating search and rescue problems

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- and determining appropriate courses of action
- 3 identifying and implementing improvements to procedures when assisting in search and rescue processes
- 4 applying safety precautions relevant to search and rescue operations
- c Shows evidence of application of relevant workplace procedures, including:
 - 1 relevant maritime regulations and codes
 - 2 OH&S regulations and hazard prevention policies and procedures
 - 3 vessel's safety management system and procedures (where relevant)
 - 4 relevant manufacturer's guidelines relating to the use of equipment, including instructions on equipment capability and limitations
 - 5 search and rescue procedures
 - 6 environmental protection during search and rescue operations

Evidence Guide (continued)
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| <p>2 Evidence required for demonstration of consistent performance (continued)</p> | <ul style="list-style-type: none"> d Action is taken promptly to report and/or rectify accidents and incidents arising during search and rescue operations in accordance with statutory requirements and company 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 |
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Evidence Guide (continued)**TDMMF107B ASSIST IN SEARCH AND RESCUE OPERATIONS**

	interactions and communication with others
3 Context of assessment	<p>a Assessment of competency must comply with the assessment requirements of the relevant maritime regulations</p> <p>b Assessment of this unit must be undertaken within relevant marine authority approved and audited arrangements by a registered training organisation:</p> <ol style="list-style-type: none"> 1 As a minimum, assessment of knowledge must be conducted through appropriate written/oral examinations, and 2 Appropriate practical assessment must occur: <ol style="list-style-type: none"> i at the registered training organisation; and/or ii on an appropriate working or training vessel
4 Specific resources required for assessment	<p>Access is required to opportunities to:</p> <p>a participate in a range of role plays, case studies and other simulated practical and knowledge assessments that demonstrate the skills and knowledge to assist in the planning, coordination and conduct of a search and rescue operations; and/or</p> <p>b assist in the planning, coordination and conduct of a suitably simulated search and rescue operation, including possible operation of a suitable vessel simulator over an appropriate range of simulated search and rescue situations</p>

Range Statement

Range Statement

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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.

VARIABLE

SCOPE

1. GENERAL CONTEXT

a. Work must be carried out:	1 in compliance with relevant rules and regulations
b. Work is performed:	1 relatively independently under broad operational requirements, with accountability and responsibility for self and others in achieving the prescribed outcomes
c. Work involves:	1 the application of a significant range of search and rescue coordination principles and techniques across a wide and often unpredictable variety of maritime emergency contexts. Contribution to the development of a broad plan or strategy for the coordination of marine search and rescue operations is required
d. Work requires:	1 significant judgement in planning, technical and leadership functions related to search and rescue operations and procedures

2. WORKSITE ENVIRONMENT

a Vessel may include:	1 any Australian or international commercial vessel

Range Statement
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<p>b Search and rescue operations may be carried out:</p>	<p>1 by day or night 2 under any possible weather and sea conditions 3 as sole vessel in the operation 4 in conjunction with other vessels, aircraft and other parties</p>
<p>c Party in distress may include:</p>	<p>1 vessel(s) in distress 2 person(s) in distress in sea 3 person(s) in distress in survival craft 4 ditched aircraft</p>

Range Statement (continued)
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<p>VARIABLE</p>	<p>SCOPE</p>
<p>d Distress signal or request for assistance may originate from:</p>	<p>1 vessel(s) in distress 2 person(s) in distress in sea 3 person(s) in distress in survival craft 4 ditched aircraft in sea 5 observer on a vessel at sea 6 land-based source 7 request from a search and rescue centre</p>

Range Statement (continued)**TDMMF107B ASSIST IN SEARCH AND RESCUE OPERATIONS**

<p>e Coordination of search and rescue operations may include:</p>	<ol style="list-style-type: none"> 1 receiving and relaying instructions from search and rescue authorities 2 establishing the required organisational arrangements and chain of command 3 establishing and maintaining a communications net 4 communicating with others in the chain of command 5 establishing position of distressed person(s), vessel or aircraft 6 developing a plan of action for the search and rescue operations 7 implementing contingency plans 8 evaluating progress information on the search and rescue operation 9 making operational decisions concerning the operation 10 receiving and/or giving directions to others during the operation 11 maintaining accurate records of the operation and its outcomes
<p>f Signals and communications may be:</p>	<ol style="list-style-type: none"> 1 by radio and/or visual methods and may be maintained with: <ol style="list-style-type: none"> i party in distress ii search and rescue authorities iii other vessels iv aircraft v other parties involved in the rescue

Range Statement (continued)**TDMMF107B ASSIST IN SEARCH AND RESCUE OPERATIONS**

VARIABLE	SCOPE
g Special handling techniques required during a rescue may include:	<ol style="list-style-type: none"> 1 assisting a vessel or aircraft in distress 2 towing operations 3 launching rescue boats and survival craft 4 taking on board survivors from rescue boats and survival craft
h Documentation and records may include:	<ol style="list-style-type: none"> 1 instructions of relevant Australian and/or international search and rescue authorities 2 IMO/ICAO International Aeronautical and Maritime Search and Rescue Manual (IAMSAR). 3 relevant maritime regulations and codes 4 operational orders 5 navigational charts 6 vessel's log 7 company procedures 8 vessel manufacturer's instructions and recommended procedures 9 ISM Code safety management system plans, procedures, checklists and instructions (where relevant) 10 instructions of relevant maritime authorities 11 relevant Australian and/or international standards

Range Statement (continued)**TDMMF107B ASSIST IN SEARCH AND RESCUE OPERATIONS**

i Applicable legislation, regulations and codes may include:	1	relevant international, Australian and/or State/Territory search and rescue conventions and regulations
	2	relevant maritime regulations and codes
	3	International Regulations for Preventing Collisions at Sea
	4	relevant international, Australian and/or State/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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