



Australian Government

Department of Education, Employment and Workplace Relations

TDMMR5607A CARRY OUT SHORE-BASED MOORING AND UNTYING OPERATIONS

Revision Number: 1

TDMMR5607A CARRY OUT SHORE-BASED MOORING AND UNTYING OPERATIONS

Modification History

Not applicable.

Unit Descriptor

UNIT DESCRIPTOR:

This unit involves the skills and knowledge required to carry out shore-based mooring and untying operations in accordance with the relevant requirements and regulations.

Application of the Unit

Application of the unit	The unit has application in qualifications for a Shore-based Linesperson, i.e. Certificate I in Transport&Distribution (Maritime Operations - Shore-based Linesperson).
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Licensing/Regulatory Information

Licensing/legislative requirements	The unit is consistent with the relevant sections of the national and international requirements and regulations relevant to the mooring and untying of ocean-going vessels.
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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 Prepare a berth	<ul style="list-style-type: none"> a Positioning information is obtained, checked and confirmed as accurate b Bridge marker (flag) or is set or, at night, vehicle with flashing hazard light is positioned on the bridge marker c Briefing is obtained and interpreted on any issues related to the mooring or untying operations such as special circumstances, bollard numbers, etc. d Communications equipment is prepared and set to correct channels e Berth conditions are checked and are made clear and ready for mooring, including removal of any obstructions and stopping of any work that creates excessive dust or noise f Any portainer cranes are correctly positioned for the berthing of the vessel g Any safety concerns are communicated to the pilot of the vessel with due care not to interfere with tug and vessel communications
2 Receive heaving line from a mooring	<ul style="list-style-type: none"> a First line is received from mooring launch in accordance with operational procedures and directions of the pilot b Assistance is provided in pulling the mooring line ashore and

ELEMENT	PERFORMANCE CRITERIA
<p>launch</p>	<p>is made fast to the applicable bollard</p> <p>c All required precautions and safety procedures are followed during receipt operations</p>
ELEMENT	PERFORMANCE CRITERIA
<p>3 Receive a heaving lines from a vessel</p>	<p>a First lines are received and are made fast to the appropriate bollards</p> <p>b Where possible, two headlines and two sternlines are made available each to two different bollards</p> <p>c Spring lines from forward and aft are received from the vessel and are attached to applicable bollards</p> <p>d Additional lines are received from the vessel and attached to applicable bollards</p>
<p>4 Return a heaving line to a vessel</p>	<p>a Vessel's crew are made aware of planned heaving line return operations</p> <p>b Lines are returned in accordance with operational procedures</p> <p>c All required precautions and safety procedures are followed during heaving line return operations</p>
<p>5 Land a gangway</p>	<p>a Precautions are taken to ensure that all personnel are well clear of the vicinity of the gangway</p> <p>b Vehicle is used to locate gangway in the correct position in a safe and efficient manner</p>
<p>5 Untying and letting go a vessel</p>	<p>a Vessel's crew are made aware of intentions to let go</p> <p>b Singling up processes are carried out in accordance with operational procedures and all required safety precautions</p>

ELEMENT	PERFORMANCE CRITERIA
c	Due care is taken during singling up processes to ensure that aft springs and stern lines are kept clear of the propeller
d	Due care is taken when waiting for order for remaining lines to be released to stand clear of the remaining lines because of strain to which these lines may be subjected
e	Remaining lines are released once order is given in accordance with operational procedures and all required safety precautions
f	In any situation in which a vessel's crew inadvertently heaves on a line being handled by the shoreside team the line is let go immediately
g	All required precautions and safety procedures are followed during untying operations

Required Skills and Knowledge

REQUIRED KNOWLEDGE

This describes the knowledge required for this unit.

- 1 Maritime regulations applicable to the mooring and untying of vessels
- 2 Relevant OH&S codes of practice, policies and procedures
- 3 Methods for mooring and untying a vessel, including all required rope handling techniques and precautions
- 4 Hazards and problems and appropriate preventative and remedial action and solutions
- 5 Procedures for assessing the stresses on lines and gear used in mooring and untying operations
- 6 Operational characteristics of different types of lines, equipment and facilities used in mooring and untying operations
- 7 Standard nautical terms in relation to mooring activities and related equipment
- 8 Personal protective equipment required for use during mooring and untying operations
- 9 Operational procedures and layouts of various types of shoreside loading and discharging terminals and wharves
- 10 Factors that affect mooring and untying operations, including the effects of wind, weather, tides, sea conditions, currents, draft changes and surges from passing vessels on mooring and untying operations
- 11 Communication techniques and equipment required during mooring and untying operations

REQUIRED SKILLS

This describes the basic skills required for this unit.

- 1 Communicate effectively with other personnel when mooring and untying a vessel using standard nautical terms
- 2 Interpret and follow procedures for mooring and untying operations, including safety instructions and precautions
- 3 Work effectively as a member of a mooring and untying team

REQUIRED KNOWLEDGE

- 4 Recognise problems that may occur during mooring operations and take appropriate action to report and resolve them
- 5 Adapt to the changes in mooring procedures and requirements at different wharf facilities and for various sizes and types of vessel
- 6 Identify and use personal protective equipment
- 7 Identify and correctly use various types of ropes, steel wires and mooring equipment.
- 8 Take proper care of ropes and mooring equipment
- 9 Recognise dangers and hazards before and during mooring operations and take appropriate action to report and rectify them

Evidence Guide

Evidence Guide

TDMMR5607A CARRY OUT SHORE-BASED MOORING AND UNTYING 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	Assessment must confirm appropriate knowledge and skills to: <ol style="list-style-type: none">a Prepare a berthb Receive heaving line from a launchc Receive a heaving line from a vesseld Return a heaving line to a vessele Land a gangwayf Untie and let go a vesselg Communicate with other members of the team during mooring/untying operations
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Evidence Guide

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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 Applies underpinning knowledge and skills when:
 - 1 preparing a berth
 - 2 receiving heaving line from a launch
 - 3 receiving a heaving line from a vessel
 - 4 returning a heaving line to a vessel
 - 5 landing a gangway
 - 6 untying and letting go a vessel
 - 7 communicating with other members of the team during mooring/untying operations

Evidence Guide (continued)

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2 Evidence required for demonstration of consistent performance:

- c Shows evidence of application of relevant workplace procedures, including
 - 1 relevant sections of STCW 95, and AMSA Marine Orders
 - 2 port and vessel security procedures
 - 3 OH&S regulations and hazard prevention policies and procedures
 - 4 issue resolution procedures
 - 5 job procedures and work instructions
 - 6 relevant manufacturer's guidelines relating to the use of machinery, including instructions on equipment

Evidence Guide (continued)

TDMMR5607A CARRY OUT SHORE-BASED MOORING AND UNTYING OPERATIONS

	<p>capability and limitations</p> <p>c Action is taken promptly to report and/or rectify any problems that may occur during mooring and untying operations in accordance with statutory requirements and company procedures</p> <p>d Work is completed systematically with required attention to detail and safety requirements</p> <p>f Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions and communication with others</p>
<p>3 Context of assessment</p>	<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 2 Appropriate practical assessment must occur: <ol style="list-style-type: none"> i at the registered training organisation; and/or ii on an shore-side terminal or wharf
<p>4 Specific resources required for assessment</p>	<p>Access is required to opportunities to:</p> <p>a participate in a range of exercises, case studies and other simulated practical and knowledge assessments that demonstrate the skills and knowledge to carry out shore-based mooring and untying operations on a vessel in a range of operational situations; and/or</p> <p>b participate as part of a team in actual shore-based mooring and untying operations for an ocean-going vessel at an</p>

Evidence Guide (continued)

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Australian terminal or wharf.

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 maritime regulations and IMO Conventions and Codes, including the relevant sections of the AMSA Marine Orders as they apply to mooring and untying operations on ocean-going vessels.
b. Work is performed:	1 under supervision as part of a mooring or untying team, with accountability and responsibility for self and others in achieving the prescribed outcomes.
c. Work involves:	1 the conduct of a range of mooring and untying techniques across a variety of vessel types and port facilities.

2. WORKSITE ENVIRONMENT

Range Statement

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a Mooring and untying operations may be carried out:	1 for any ocean-going Australian or international commercial vessel.
b Mooring and untying operations may be carried out:	1 by day or night in both normal and emergency situations 2 under any permissible conditions of weather 3 at various shoreside terminals and wharves
c Mooring and untying operations may include:	1 preparing a berth 2 receiving heaving line from a launch 3 receiving a heaving line from a vessel 4 returning a heaving line to a vessel 5 landing a gangway 6 untying and letting go a vessel

Range Statement (continued)

TDMMR5607A CARRY OUT SHORE-BASED MOORING AND UNTYING OPERATIONS

VARIABLE	SCOPE
d Persons and vessels involved in mooring and untying operations may include:	1 vessel and crew 2 pilot vessel and pilot 3 tug(s) and tug crew(s) 4 mooring launch and crew

Range Statement (continued)

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	5 mooring supervisor
	6 mooring personnel (bow)
	7 mooring personnel (stern)
e Communications required during mooring operations may include:	<p>1 oral communications with mooring supervisor or master and other members of the mooring or untying team</p> <p>2 VHF radio between tug crew and pilot on vessel</p> <p>3 VHF radio between tug crew and mooring launch crew</p> <p>4 VHF radio between mooring launch crew and pilot on vessel</p> <p>5 radio between mooring supervisor (shoreside) and pilot on vessel</p> <p>6 radio between mooring supervisor (shoreside) and mooring personnel (bow)</p> <p>7 radio between mooring supervisor (shoreside) and mooring personnel (stern)</p>
f Dangers associated with mooring duties include:	<p>1 being hit by a line being thrown down from a vessel</p> <p>2 stepping inside the bight of a line</p> <p>3 being struck by a parting line</p> <p>4 mixing rings and wire rope</p> <p>5 falling off the edge of the wharf into the water</p> <p>6 back strain from carrying a line</p> <p>7 back strain from heaving on a line</p> <p>8 back strain from heaving on a line with one hand</p> <p>9 'snap back' in the event of a synthetic line breaking</p>

Range Statement (continued)

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	10	trip hazards, e.g. crane lines
g Rope handling skills include:	1	correctly storing and caring for ropes and lines
	2	correctly tying appropriate knots such as the bowline, the reef knot, the overhand knot, the figure of eight knot, the sheet bend and the clove hitch
	3	applying a chain stopper to a wire rope

Range Statement (continued)

TDMMR5607A CARRY OUT SHORE-BASED MOORING AND UNTYING OPERATIONS

VARIABLE	SCOPE	
g Rope handling skills include: (continued)	4	correctly heaving on a line in collaboration with other members of a mooring team
	5	applying a stopper to a synthetic fibre rope
	6	applying a chain stopper to a natural cordage rope
	7	correctly attaching a line to a bollard or bitt - all lines in correct order - e.g. up through the eye
	8	flaking down a rope
	9	forming a bight
h Safety precautions include:	1	checking own personal fitness and medical wellbeing
	2	removal of any rings from fingers to avoid them being caught on steel wire ropes
	3	confirming availability of a personal flotation device upon

Range Statement (continued)

TDMMR5607A CARRY OUT SHORE-BASED MOORING AND UNTYING OPERATIONS

	<ul style="list-style-type: none"> arrival at a mooring operation 4 wearing of suitable clothing 5 obtaining and using required personal protective equipment 6 keeping work area hazard-free 7 checking whereabouts of edge of wharf 8 checking whereabouts of other members of the mooring/untying team
i Personal protective equipment may include:	<ul style="list-style-type: none"> 1 safety footwear 2 safety helmet 3 suitable gloves (optional) 4 safety vest 5 reflective braces 6 personal collar insert for flotation device
j Documentation and records may include:	<ul style="list-style-type: none"> 1 mooring and untying plans, procedures, checklists and instructions 2 relevant sections of maritime regulations concerning mooring and untying operations 3 rope and equipment manufacturer's instructions and procedures safety instructions and procedures

Range Statement (continued)

TDMMR5607A CARRY OUT SHORE-BASED MOORING AND UNTYING OPERATIONS

VARIABLE	SCOPE
j Documentation and records may include: (continued)	4 instructions of relevant maritime authorities 5 reports and records of mooring operations or any safety incident
g Applicable legislation, regulations and codes may include:	1 relevant sections of maritime regulations concerning mooring and untying operations 2 relevant port and vessel security requirements and regulations 3 IMO SOLAS Convention

Unit Sector(s)

Not applicable.

Field

Field MR Carry Out Operations on Equipment and Systems

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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