



Australian Government

Department of Education, Employment and Workplace Relations

**TDMMC707C APPLY SEAMANSHIP
SKILLS AND TECHNIQUES WHEN
OPERATING A SMALL VESSEL
WITHIN THE LIMITS OF
RESPONSIBILITY OF A COXSWAIN**

Release: 1



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Modification History

Not applicable.

Unit Descriptor

UNIT DESCRIPTOR:

This unit involves the seamanship skills, knowledge and techniques required when operating a small commercial vessel within the limits of responsibility of a coxswain, i.e. a vessel of less than 12 metres in length within inshore limits (within 15 nm).

This includes splicing ropes; using ropes and chains; maintaining ropes, wire and chain; rigging gear and loads; operating winches and windlasses; safe handling hawsers and moorings; stowing and securing anchors for sea; securing vessel for rough weather; maintaining watertight integrity; lashing and securing equipment; and towing and being towed.

This unit has been retitled but covers the same functions as previous unit *TDMMC701C Apply seamanship skills and techniques when operating a small domestic vessel*.

Application of the Unit

Application of the unit	
	The unit has applications in qualifications for Coxswains on commercial vessels of up to 12 metres in length operating within inshore limits, i.e. Certificate II in Transport&Distribution (Coastal Maritime Operations - Coxswain). This includes but is not limited to the manoeuvring of small passenger vessels, charter vessels, tourist craft, fishing vessels, etc.

Licensing/Regulatory Information

Licensing/legislative requirements	The unit is consistent with the relevant maritime regulations describing mandatory requirements for a Coxswain. 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

<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 Use and maintain ropes, wire and chains	<ul style="list-style-type: none"> a Knots, hitches and bends using fibre and synthetic ropes are correctly made and used in the course of deck operations on board vessel b Eye splices and short splices are made in fibre and synthetic rope in accordance with established nautical practice c Rope, wire and chains are checked and maintained in accordance with company procedures and manufacturer's instructions d Breaking strain and safe working loads of ropes are determined and applied as load limits in the course of deck operations

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ELEMENT	PERFORMANCE CRITERIA
1 Use and maintain ropes, wire and chains (continued)	<ul style="list-style-type: none"> e Loads are correctly handled using appropriate ropes, chains and rigging gear in accordance with regulations f Rigging gear is checked prior to use and/or going to sea and faulty gear reported and replaced or repaired g Maximum load limits are determined and applied when lifting equipment and loads using ropes, chains, wires and other rigging gear h Lines are made up in preparation for berthing of vessel i Lines are handled as required to assist in berthing and unberthing a vessel j A warping winch/drum is used to heave in surge and veer lines k Berthing lines are turned up and secured to bitts, staghorns and cleats as required l Moorings and hawsers are safely handled as per established nautical practice
2 Operate anchor equipment, winches and windlasses	<ul style="list-style-type: none"> a Anchors cables and deck fittings are correctly identified and selected for use when required b Anchor tasks are carried out in accordance with established nautical practice c Vessel is prepared and anchored in varying weather conditions d Anchor is weighed and vessel proceed in varying weather conditions e Winches, capstans and windlasses (as appropriate) are

ELEMENT	PERFORMANCE CRITERIA
	checked and prepared for operation prior to use
	f Winches, capstans and windlasses (as appropriate) are safely operated to carry out deck operations in accordance with operational requirements and manufacturer's instructions
3 Tow and be towed	<p>a Preparations for towing are safely made in accordance with established nautical practice</p> <p>b Correct towing procedures and precautions are applied when towing and being towed</p>

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ELEMENT	PERFORMANCE CRITERIA
4 Secure a small vessel for sea	<p>a Accommodation spaces and personnel facilities on board the vessel are checked for cleanliness, hygiene and tidiness and correctly secured for sea in accordance with established procedures and tourism or operational standards</p> <p>b Equipment and items on deck and in equipment and galley spaces are secured in accordance with regulatory requirements</p> <p>c Watertight integrity of vessel is checked and appropriate action is taken to prepare for prevailing and forecast weather and sea conditions</p>
5 Apply seamanship skills and techniques	<p>a Rope types and common areas of use are correctly identified</p> <p>b Reef knots, bowlines, sheet bends, clove hitches, round turns and two half hitches are correctly identified, explained and demonstrated</p> <p>c Procedures for eye splicing a fibre/synthetic rope end and joining two rope ends are demonstrated in accordance with the</p>

ELEMENT	PERFORMANCE CRITERIA
	rope manufacturer's recommendations
d	Common whippings are demonstrated
e	A sea anchor is rigged to control a specified rate and direction of drift and or angle to sea and also for emergency steering and to prevent broaching

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Required Skills and Knowledge

REQUIRED KNOWLEDGE

This describes the knowledge required for this unit.

- 1 Relevant sections of applicable maritime regulations
- 2 Relevant OH&S legislation and policies as they relate to small vessel deck operations
- 3 Parts of a small vessel and the materials, fittings and equipment used in a small vessel.
- 4 Names of lines used from various parts of a vessel and the various ways a vessel is made fast to a wharf
- 5 Procedures for berthing and unberthing a small vessel
- 6 Types of anchors, cables and associated deck fittings in common use on small vessels and their purpose
- 7 Procedures involved in anchor work on a small vessel
- 8 Procedures for checking and operating winches, windlasses and capstans during vessel operations
- 9 Methods of making appropriate reports by visual and verbal means to others on board during vessel operations
- 10 Types of knots, bends and hitches in common use, their applications and limitations, and methods of tying them using synthetic and fibre rope of varying construction and size
- 11 Procedures for splicing synthetic and fibre rope
- 12 Factors involved in rope deterioration and maintenance requirements for different types of rope
- 13 Procedures for checking the watertight integrity of a small vessel

REQUIRED KNOWLEDGE

- 14 Methods of securing a vessel before it puts to sea
- 15 Procedures for stowing galley appliances, food utensils, containers and supplies for sea
- 16 Procedures for checking and securing personnel accommodation and facilities prior to putting to sea
- 17 Maritime communication techniques
- 18 Procedures for the checking and inspecting a vessel's seaworthiness
- 19 Basic knowledge of fishing operations (where applicable)

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REQUIRED SKILLS

This describes the basic skills required for this unit.

- 1 Use basic verbal communication skills required when operating a small domestic vessel
- 2 Read, interpret and apply basic instructions relevant to operations on a small domestic vessel
- 3 Work safely and collaboratively with others during operations on a small domestic vessel
- 4 Select and use ropes and equipment as per operating instructions
- 5 Recognise faulty or worn ropes and equipment and take appropriate action as per operating instructions
- 6 Recognise routine problems during operations on a small domestic vessel and take appropriate action
- 7 Tie knots and demonstrate rope handling skills as required in vessel operations
- 8 Adapt to changes in equipment and procedures in the workplace
- 9 Follow required work schedule as per company requirements

REQUIRED SKILLS

- 10 Follow all required OH&S procedures and precautions when operating a small domestic vessel
- 11 Secure a vessel before it puts to sea
- 12 Check and inspect a vessel's seaworthiness and watertight integrity

Evidence Guide

Evidence Guide

TDMMC707C APPLY SEAMANSHIP SKILLS AND TECHNIQUES WHEN OPERATING A SMALL VESSEL WITHIN THE LIMITS OF RESPONSIBILITY OF A COXSWAIN

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> <ol style="list-style-type: none"> a Organise and carry out deck operations in accordance with established standards of good seamanship b Exercise all required safety and hazard control procedures c Communicate effectively with others during deck and vessel operations d Carry out fishing operations (where applicable)
2 Evidence required for demonstration of consistent performance	<ol 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 seamanship knowledge and skills when: <ol style="list-style-type: none"> 1 carrying out deck operations, anchor work and securing a vessel for sea 2 towing and being towed

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.

- 3 applying safety precautions relevant to deck operations
- 4 assessing watertight integrity of the vessel and the security of vessel's equipment and spaces
- c Shows evidence of application of relevant workplace procedures, including:
 - 1 relevant maritime regulations
 - 2 OH&S regulations and hazard prevention policies and procedures
 - 3 job procedures and work instructions
 - 4 relevant manufacturer's guidelines relating to the use of ropes, wires, cables, anchors, deck equipment and machinery, including instructions on equipment capability and limitations
 - 5 on-board housekeeping processes
- d Action is taken promptly to report accidents, safety incidents and operational problems
- 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)

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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

3 Context of assessment	<p>a Assessment of competency must comply with the assessment requirements of the relevant maritime regulations 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> <ol style="list-style-type: none"> a a suitable range of appropriately simulated operational situations for a small commercial vessel; and/or b demonstrate carry out seamanship skills and techniques when operating a small vessel within inshore limits

Range Statement

Range Statement

TDMMC707C APPLY SEAMANSHIP SKILLS AND TECHNIQUES WHEN OPERATING A SMALL VESSEL WITHIN THE LIMITS OF RESPONSIBILITY OF A COXSWAIN

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
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1. GENERAL CONTEXT

a. Work must be carried out:	<ol style="list-style-type: none"> 1 in compliance with the relevant maritime and OH&S regulations

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 within defined operational procedures, with responsibility for own outputs and limited responsibility for others in achieving the specified quality of small vessel operations
c. Work involves:	1 It involves the organisation and conduct of a range of specified deck operations for a small commercial vessel

2. WORKSITE ENVIRONMENT

a Vessel may include:	1 small fishing and trading vessels engaged on coastal voyages
b Deck operations may be carried out:	1 by day or night in normal operational situations 2 under normal and adverse conditions of sea and weather 3 during berthing and unberthing operations 4 while berthed alongside 5 while anchoring or mooring 6 while towing and being towed
c Deck operations on a small vessel (dependent upon limits of responsibility) may include:	1 using and maintaining ropes, wires and chains 2 splicing natural fibre and synthetic ropes 3 cleanliness, hygiene and tidiness of accommodation and facilities 4 checking the watertight integrity of the vessel 5 checking the securing deck, engineering and accommodation spaces prior to going to sea 6 assisting in anchor work

Range Statement (continued)

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VARIABLE	SCOPE
c Deck operations on a small vessel (dependent upon limits of responsibility) may include: (continued)	7 working mooring lines and assisting in the mooring of the vessel
	8 checking and operating winches, capstans and windlasses
	9 checking and using ropes, chains and rigging gear when lifting loads, including the determination of safe working loads
	10 towing arrangements
	11 anchoring methods (listed separately below)
	12 fishing operations
d Anchor work on a small vessel (dependent upon limits of responsibility) may include:	13 using sea anchors
	1 clearing away an anchor ready for letting go
	2 letting go an anchor and laying out cable
	3 weighing anchor
	4 securing an anchor for sea
	5 assessing when a vessel is brought up and is riding to the anchor
	6 assessing when an anchor is aweigh
	7 operating a winch, windlass and/or capstan as required for anchor work

VARIABLE	SCOPE
e Documentation and records may include:	<ol style="list-style-type: none"> 1 relevant regulations 2 safety management system 3 vessel's operational plan 4 vessel manufacturer's instructions and recommended procedures 5 codes of practice 6 instructions of relevant maritime authorities
f Applicable legislation, regulations and codes may include:	<ol style="list-style-type: none"> 1 relevant sections of regulations of State and Territory marine authorities and NSCV and USL Code 2 relevant Commonwealth, State and Territory OH&S legislation

Unit Sector(s)

Not applicable.

Field

Field MC Manoeuvring Vessel

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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