



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **DEFCA304B Prepare, operate and maintain small watercraft**

**Release: 1**

## DEFCA304B Prepare, operate and maintain small watercraft

### Modification History

Not applicable.

### Unit Descriptor

#### Unit Descriptor

This unit covers the competency required to operate *small watercraft*.

The watercraft will normally be operated in an *environment* of protected or calm inland waterways, conducting a range of tasks including the transport of personnel and/or equipment. While the technical aspects of this competency are concerned with 'operating a boat', the specialisation of the skill, and safety issues associated with waterborne operations confer additional responsibilities upon the operator. For all *watercraft operations* the individual may need to provide directions to personnel within the boat concerning specific safety matters such as seating, movement and actions on incidents such as man overboard and capsized. The individual must demonstrate sound judgement in the use of authority, and where possible, work within the existing lines of authority. The individual will usually operate the boat with minimum supervision.

### Application of the Unit

#### Application of the Unit

The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

**Prerequisite Unit/s**                      BSBCM311A Maintain workplace safety

## Employability Skills Information

**Employability Skills**                      This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for watercraft operations	<p>1.1 <i>Operating instructions</i> are interpreted to determine the task, the cargo, the destination and route, and navigation data is compiled in accordance with <i>standard procedures</i></p> <p>1.2 <i>Hasty buoyancy/flotation calculations</i> are completed to ensure passengers and cargo are safe to move</p> <p>1.3 <i>Equipment</i> is selected, checked for serviceability and unserviceable items are replaced or rejected, and reported to the supervisor in accordance with standard procedures</p> <p>1.4 <i>Shore preparation</i> is conducted in accordance with standard procedures and the watercraft is prepared and readied for launch</p> <p>1.5 Appropriate personal protective equipment is selected and worn by all personnel</p> <p>1.6 Passengers and crew are given a safety brief by the operator prior to embarking</p>
2. Construct improvised watercraft	<p>2.1 <i>Improvised flotation craft</i> are constructed/assembled, when required, in accordance with technical specifications and supervisor's instructions</p> <p>2.2 Improvised flotation craft are inspected for safety prior to use and shore preparation is completed</p>
3. Operate small watercraft	<p>3.1 Watercraft is launched safely in accordance with standard procedures and local conditions</p> <p>3.2 Watercraft is loaded and trimmed to ensure safety of crew and load</p> <p>3.3 Watercraft is <i>operated</i> consistent with <i>hazards and environmental conditions</i>, and in accordance with standard procedures</p> <p>3.4 Directions are provided, as necessary, to passengers in order to maintain safety and efficient boat operation</p> <p>3.5 <i>Contingency and emergency drills</i> are carried out, as necessary, to minimise threat to personnel and equipment</p> <p>3.6 Personnel and/or loads are disembarked and/or unloaded safely in accordance with standard procedures</p>
4. Recover and restore	<p>4.1 Watercraft is recovered from a ramp or</p>

**vessel**

improvised landing site

4.2 Watercraft and associated equipment are checked for serviceability, cleaned and serviced, defects are reported and documentation is completed in accordance with standard procedures

4.3 Debriefing requirements are completed, as required, in accordance with standard procedures

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

#### Required Skills

- use knots and lashings to secure watercraft
- use clear interpersonal communication as operator of the vessel
- constantly monitor hazards and apply safety principles to operations
- follow instructions/directives and report information
- participate in team
- encourage other team members
- use a variety of verbal and non-verbal communication techniques including language style, active listening
- read and interpret operating instructions
- calculate and record number and weight of passengers, stores and equipment

#### Required Knowledge

- applicable statutory waterways rules for watercraft operation
- local water hazards and environmental conditions
- effects of water moving over objects and obstacles
- team work
- techniques for supporting others
- composition of teams, and roles and responsibilities of team members
- verbal and non-verbal communication techniques including language style, active listening
- hasty buoyancy/floatation calculations

# Evidence Guide

## EVIDENCE GUIDE

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

Assessment must confirm the ability to safely operate selected small watercraft and improvised flotation craft on various waterways under a range of environmental conditions. The operator must demonstrate competency at carrying both equipment and personnel, and demonstrate the ability to manage the full range of contingency and emergency actions

### **Consistency in performance**

Competency should be demonstrated over a time frame that allows for the preparation, operation and maintenance of small watercraft and the construction of improvised flotation craft under a range of water operating conditions carrying personnel and cargo

### **Context of and specific resources for assessment**

#### **Context of assessment**

Competency should be assessed under a variety of water operating conditions. Evidence should be gathered by observing the individual preparing, operating and maintaining small watercraft and improvised flotation craft on a variety of tasks that address all the requirements of the critical aspects of evidence.

#### **Specific resources for assessment**

The following resources should be made available:

- watercraft, equipment and accessories
- materials for constructing improvised flotation craft
- equipment appropriate to the task
- suitable training areas with access to flowing water.

## Range Statement

### RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

<b>Small watercraft may include</b>	<p>Motorised and non-motorised boats up to five metres in length capable of accommodating a maximum ten personnel and the operator and crewman</p> <p>Motorised and non-motorised rigid and non-rigid inflatable craft</p> <p>Powered by outboard motors of up to 40 hp</p> <p>Motorised and non-motorised bridge and ferry construction craft</p>
<b>Environment include</b>	<p>Under a range of water conditions</p> <p>In enclosed waters including tidal rivers, protected harbours, non-tidal rivers, lakes and dams</p> <p>In all weather conditions</p> <p>By day or night and under illumination</p>
<b>Watercraft operations may include</b>	<p>A float for people operating near, in or over water</p> <p>Transport of personnel</p> <p>Support to bridge, ferry and raft operations</p> <p>Evacuation of personnel, stores and equipment</p> <p>Searches, rescues</p> <p>Resupply operations</p> <p>Support to divers</p> <p>Providing safety</p>
<b>Operating instructions may include</b>	<p>Number and nature of personnel, including casualties to be transported</p> <p>Types of general cargo and weights</p> <p>Details of resupply or evacuation requirements</p> <p>Access and egress routes</p> <p>Details of ramps or launching points</p> <p>Weather forecast</p> <p>Tidal information</p>

**RANGE STATEMENT**

<p><b>Standard procedures may include</b></p>	<p>Potential hazards  Details of enemy threat and own force operations  OH&amp;S regulations for water safety  Written and verbal orders and instructions  Procedures manuals, job guides, watermanship pamphlets and other publications  Manufacturer's handbooks, industry specifications and technical instructions  Statutory waterways rules</p>
<p><b>Hasty buoyancy/floatation calculations may include</b></p>	<p>Number and weight of passengers within load limits  Weight of stores and equipment within load units  Freeboard when loaded within load limits</p>
<p><b>Equipment to be used may include</b></p>	<p>Vehicles and equipment used to transport boats  Safety equipment that may be required under state/territory legislation or standard procedures  Items of stores and equipment  Appropriate rescue and recovery equipment  Personal protective equipment such as life jackets</p>
<p><b>Shore preparation may include</b></p>	<p>Positioning vessel on ramp or launching site  Equipment checks  Assembly for launch  Loading of stores and equipment  Pre-start checks of engine</p>
<p><b>Improvised flotation craft may include</b></p>	<p>Inflatable, rigid body or improvised watercraft constructed of timber, drums, canvas, inflatable tubes or any combination</p>
<p><b>Operating the watercraft may include</b></p>	<p>Engine start-up procedures  Compliance with waterways rules and regulations  Moving at a safe speed consistent with the conditions  Navigating to destination</p>
<p><b>Hazards and environmental conditions may include</b></p>	<p>Adverse weather  Wildlife</p>



**RANGE STATEMENT**

	Fast flowing streams and near still waters
	Undertows
	Eddies
	Floating and submerged debris and snags
	Underwater hazards
	Reduced visibility due to after dark operations
	Fog or drizzle
	Heat and cold
	Time pressure
<b>Contingency and emergency drills may include</b>	Action on capsize
	Man overboard drills
	Towing disabled vessels
	Diagnosing and rectifying minor engine faults
	Propeller replacement
	Fire drills
	Abandon ship drills
	Use of oars/improvised oars
	Use of improvised rudder
	Use of sail

**Unit Sector(s)**

Not applicable.

**Corequisite Unit/s**

**Co-requisite Unit/s** Nil