



**Australian Government**

# **DEFCA314B Operate an inland modular raft/ferry**

**Release: 1**

## DEFCA314B Operate an inland modular raft/ferry

### Modification History

Not applicable.

### Unit Descriptor

#### Unit Descriptor

This unit covers the competency required to operate an inland modular raft or ferry. The raft or ferry will consist of at least three connected, unpowered pontoons that are propelled by at least two tugs. This Unit of Competency covers the assembly, navigation, and manoeuvring, of the raft or ferry.

The raft or ferry will normally be driven in an environment of *protected or inland waterways*, while conducting a range of tasks including the transport of personnel and/or equipment.

The individual must demonstrate sound judgement in the use of authority. The individual will control the operation of the raft or ferry and crew.

### 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

<b>Prerequisite Unit/s</b>	DEFCA304B Prepare, operate and maintain small watercraft
	DEFCA311B Operate an inland tug boat

## Employability Skills Information

<b>Employability Skills</b>	This unit contains employability skills.
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## 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 raft or ferry operation	<p>1.1 Operating instructions are interpreted to determine the task, the cargo, the destination and route</p> <p>1.2 Navigation data is compiled in accordance with <i>standard procedures</i></p> <p>1.3 Cargo weight is calculated to ensure weight is within the safe operating limit of the craft and <i>manifests</i> are completed to ensure passengers and cargo are safe to move in accordance with standard procedures</p> <p>1.4 <i>Launch site survey</i>, risk and environmental assessment are conducted</p> <p>1.5 Suitable <i>raft or ferry design</i> is determined based on the operation</p> <p>1.6 Assembly and disassembly plan is developed in accordance with design, resources, surveys, risks and environmental considerations</p> <p>1.7 Equipment is selected, checked for serviceability and unserviceable items are replaced or rejected, and reported in accordance with standard procedures</p> <p>1.8 Operator and crew are checked to ensure they conform with relevant state/territory and federal licensing requirements</p> <p>1.9 Problems that cannot be resolved locally are referred to higher authority for resolution</p> <p>1.10 Crew is briefed in accordance with standard procedures</p> <p>1.11 Liaison is undertaken with outside agencies as required</p> <p>1.12 Shore preparation is conducted in accordance with standard procedures and the pontoons and tugs are prepared and readied for launch</p> <p>1.13 Occupational health and safety (OH&amp;S) requirements and recognised safety precautions are applied throughout the operation in accordance with standard procedures</p>
2. Assemble and manoeuvre the raft or ferry	<p>2.1 Crew is directed and supervised in accordance with standard procedures</p> <p>2.2 Tugs and pontoons are safely launched in</p>

- accordance with standard procedures
- 2.3 Raft or ferry is assembled in accordance with assembly plan
  - 2.4 Passengers are briefed on safety issues prior to embarking in accordance with standard procedures
  - 2.5 Raft or ferry is loaded in accordance with manifest and checks are completed for security, alignment and load stability
  - 2.6 Raft or ferry is navigated and manoeuvred consistent with *hazards and environmental conditions*, and in accordance with standard procedures
  - 2.7 *Contingency and emergency drills* are carried out, as necessary, to minimise threat to personnel and equipment in accordance with standard procedures
  - 2.8 Personnel and/or equipment are disembarked and/or unloaded safely in accordance with standard procedures
  - 2.9 All unexpected situations that require a quick and decisive response are recognised and responded to in accordance with operational requirements and standard procedures
- 3. Recover and restore raft or ferry**
- 3.1 Raft or ferry is disassembled in accordance with disassembly plan
  - 3.2 pontoons and tugs are recovered safely in accordance with standard procedures
  - 3.3 Equipment is checked for serviceability, cleaned and serviced, and any defects are reported
  - 3.4 *Documentation* is completed in accordance with standard procedures
  - 3.5 Debriefing requirements are completed 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

- command and control the crew, passengers and loads
- command and navigate the raft or ferry by day and night
- constantly monitor hazards and apply safety principles to operations
- read and interpret navigation charts
- safely operate the LRV to launch and recover tugs and pontoons
- supervise raft and ferry construction
- use clear interpersonal communication as operator of the vessel
- use knots and lashings to secure watercraft

#### Required Knowledge

- applicable statutory waterways rules for watercraft operation
- boat specific safety requirements and fire suppressant system
- employment of divers
- gap reconnaissance
- hasty buoyancy/floatation calculations
- launch and recovery procedure for the launch and recovery vehicle (LRV)
- legal responsibilities
- loading procedures and centre of gravity
- effects of water moving over objects and obstacles
- effects of wind on floating objects
- manifest data
- potential water hazards and environmental conditions
- raft and ferry design and construction sequence
- relevant legislation and procedures in relation to environmental requirements
- relevant OH&S regulations/requirements, equipment, material and personal safety requirements

## 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 a raft or ferry on various waterways and to manage the full range of contingency and emergency actions.

Assessment must also confirm the ability to manoeuvre a raft or ferry, with a minimum weight of twenty ton.

Operation of the raft or ferry must be completed in a safe manner by day and night over a range of environmental conditions which must include:

- wind gusts of approximately 10 knots
- small swell
- varying currents.

#### **Consistency in performance**

Competency should be demonstrated over a time frame that allows for the preparation, launch, recovery, navigation and manoeuvring of a raft or ferry under a range of water operating conditions carrying personnel or cargo.

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

##### **Context of assessment**

Competency should be assessed in the workplace or in a simulated work environment under conditions that safely replicate a range of conditions that could be expected in the workplace.

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

Access to tugs and pontoons; associated equipment and accessories, including cargo crew; and suitable waterways with access to flowing/tidal 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.

#### Protected or inland waterways are defined as

Estuaries  
 Closed waters and open water to a maximum of 400 m from the low water mark  
 Dams  
 Delta  
 Rivers

#### Standard procedures may include

Australian Standards  
 Job guides, pamphlets and other publications  
 Manufacturers' handbooks, industry specifications and technical instructions  
 OH&S regulations  
 Organisational policies and procedures  
 Relevant local government by-laws  
 Relevant state/territory or federal legislation or regulations  
 Statutory waterways rules  
 Written and verbal orders and job instructions

#### Manifests may include

Deployment planning data sheet (DPDS)  
 Ship's log  
 Written orders

#### Launch site survey may include

Alternate sites  
 Camouflage and concealment  
 Construction site  
 Crossing sites  
 Gap assessment (measurements, profiling, soil tests, California bearing ratio, angle of repose of banks, bank height and differences)  
 Improvements required (plant assistance)  
 Launch sites



**RANGE STATEMENT**

	Location and map reference
	Reconnaissance
	Routes in/out
	Sketch and photos
	Tidal variation
	Underwater inspection for obstacles
	Water current measurement
	Water depth
	Waiting and cushion areas
<b>Raft or ferry design must be in accordance with operational procedures</b>	MLC 20 (30) - 1 x internal and 2 x ramp modules
	MLC 40 (50) - 2 x internal and 2 x ramp modules
	MLC 60 (70) - 3 x internal and 2 x ramp modules
	Note: Figures in brackets indicate exceptional loads
<b>Hazards and environment conditions may include</b>	Adverse weather
	Eddies
	Fast flowing streams and near still waters
	Fire
	Floating and submerged debris and snags
	Fog or drizzle
	Heat and cold
	Other vessels
	Reduced visibility due to after dark operations
	Sea states
	Spillage
	Time pressure
	Undertows
	Underwater hazards
	Wildlife
<b>Contingency and emergency drills may include</b>	Abandon raft or ferry drills
	Action on capsize
	Diagnosing and rectifying minor engine faults

**RANGE STATEMENT**

	Fire drills
	Man overboard drills
	Propeller replacement
	Towing vessels
	Use of improvised rudder
<b>Documentation may include</b>	Activity log
	Assembly documentation
	Commander's notebook
	Environmental compliance
	Equipment documentation
	Maintenance records
	Manifest
	Maps and charts
	Post activity report
	Ship's log

**Unit Sector(s)**

Not applicable.

**Corequisite Unit/s**

**Co-requisite Unit/s** Nil