



Australian Government

DEFDV015B Employ explosive power tools in an underwater environment

Release 2

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Modification History

Release	TP Version	Comments
2	DEF12 V2	Layout adjusted. No changes to content.
1	DEF12 V1	Primary release.

Unit Descriptor

This unit covers the competency required to employ explosive power tools (EPT) in an underwater environment.

The unit also include selecting the appropriate EPT for the work task and inspecting them for serviceability. The diver must ensure the EPT are secure on own body throughout the dive, and correctly operate the EPT during the work task, with particular attention to safety during firing.

The diver will be responsible for the recovery of any waste arising from the work task to ensure the preservation of the environment. Finally, the EPT must be de-serviced and stored appropriately for ongoing use.

Note: This Unit of Competency relates, in part, to the existing standards of the Australian Diver Accreditation Scheme (ADAS). All information was correct at the time of development of this Unit of Competency; however, any diver seeking ADAS accreditation should consult ADAS and not rely on the information contained in this unit.

Application of the Unit

As agreed in the creation of this Training Package, applications for units transferred from the PUA00 Public Safety Training Package will be developed as part of continuous improvement plans, and taking into account the change in Unit of Competency format as detailed in templates for Streamlined Training Packages

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

DEFDV001B Dive using self contained underwater breathing apparatus in open water to 30 metres.

DEFDV008B Employ hand tools in an underwater environment.

Employability Skills Information

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 Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to use EPT underwater	1.1 Work task and worksite data are determined and analysed to determine the specific requirements for EPT. 1.2 Work plan is developed consistent with the dive plan 1.3 EPT, explosive charges and protective equipment are selected, inspected and prepared. 1.4 EPT and explosive charges are secured safely to/from the dive site. 1.5 Access obstructions and other hazards are assessed and action is taken to remove/reduce the risk.
2. Operate EPT underwater	2.1 EPT and explosive charges are secured on self for ease of accessibility and lack of interference with mobility and dive equipment. 2.2 Material or base set out intended for explosive fasteners complies with detailed drawings and specifications. 2.3 EPT attachments are installed and EPT charges are chambered. 2.4 Work-safe area is established and the location and safety of divers is confirmed prior to commencing work task/s. 2.5 EPT are operated underwater ensuring management of their associated hazards. 2.6 EPT are cleared and rendered safe to evaluate the work task. 2.7 Fastener penetration is checked for angle, depth and integrity of base.
3. Conclude underwater EPT operations	3.1 Environmental impact arising from use of EPT is minimised and waste products are recovered. 3.2 EPT and protective equipment are de-serviced after use. 3.3 Explosive charge usage is documented.

Required Skills and Knowledge

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

Required Skills

- ability to dive
- correctly take care with and handle explosive charges
- employ EPT
- implement firing and misfiring drills

Required Knowledge

- dive equipment
- dive physics
- explosive hazards
- explosive power tool usage on land
- general occupational/diving safety awareness
- oceanography
- principles of operation
- relevant references and Australian Standards
- safety distances
- work hazards

Evidence Guide

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

Assessment must confirm the ability to attend to personal and collective safety; to consider the environmental impact as part of the dive plan; and to focus on the integrity of the fasteners in performing the intended role.

Consistency in performance

Competency should be demonstrated during a number of work tasks where the diver fires a minimum of two charges over, at a minimum, two underwater work tasks into concrete, masonry or steel.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed in the ocean supported by questioning on shore or aboard vessels.

When practicable, assessment should relate to the diver's vocational focus.

Assessment should be conducted over a time frame that allows for the safe demonstration of competency.

Specific resources for assessment

Access to a complete range of diving, safety and accessory equipment; EPT and charges.

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.

<i>Work task</i> may include:	fastening
<i>Worksite data</i> may include::	- composition of base (refer below for types of base) - condition of base - current - depth - gradient - hazards - obstacles
<i>EPT</i> may include:	- direct action - indirect action
<i>Protective equipment</i> may include:	- boots - ear protection - gloves
<i>Selecting, inspecting and preparing EPT, explosive charges and protective equipment</i> may include:	- date checks - reviewing equipment logs - visual inspection
<i>Action to remove/reduce the risk</i> may include:	- erecting signage - using patrol/sentry craft
<i>Material or base</i> may include:	- concrete - masonry - steel
<i>EPT attachments</i> may include:	- channel - rebate
<i>Operation of EPT</i> may include:	- loading - firing - misfire procedures
<i>Hazards</i> may include:	- fall zone of objects being worked on - impact of ept on dive equipment (e.g. hoses, gauges, communications) - operational zone and danger area of ept - release of fuels and associated chemical contaminants resident at the worksite
<i>Environmental impact</i> may include:	- contamination of surrounding water (e.g. leaking oil) - physical damage to reef and associated floor eco-systems (e.g. coral)

	• visual pollution of waste material (e.g. concrete and metal parts)
<i>De-servicing</i> may include:	• drying • logging work details into equipment logs • oiling/greasing • washing in fresh water

Unit Sector(s)

Not applicable.