



Australian Government

DEFWDV025 Dive using self-contained underwater breathing apparatus in open water to a maximum depth of 30 metres

Release: 1

DEFWDV025 Dive using self-contained underwater breathing apparatus in open water to a maximum depth of 30 metres

Modification History

Release 1. This is the first release of this unit of competency in the DEF Defence Training Package.

Application

This unit describes the performance outcomes, skills and knowledge required to dive using self-contained underwater breathing apparatus (SCUBA) in an open water environment to a depth of 30 metres.

It includes planning the dive (including using decompression tables); selecting, inspecting and preparing equipment; entering the water from a range of platforms; conducting descent to, and servicing time at, the required depth. It also includes ascending (including using decompression techniques), exit from the water to the original platform, and removing and refurbishing equipment.

This unit relates, in part, to existing standards in the Australian Diver Accreditation Scheme (ADAS).

This unit was developed for Defence divers but may be applicable to anyone in this field.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies, dive plan and procedures must be consulted and adhered to.

Persons undertaking this unit work independently and perform specific tasks in a range of contexts that could be unpredictable.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Defence Work Diving.

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Prepare for a SCUBA diving operation

- 1.1** Follow a dive plan using industry approved decompression tables and obtain supervisor's clearance in accordance with organisational procedures
- 1.2** Select, prepare and test equipment in accordance with manufacturer specifications and organisational policies and procedures
- 1.3** Inspect equipment for serviceability, quarantine any unserviceable equipment and report defects to dive supervisor
- 1.4** Confirm independent safety check of fit and function of equipment

2 Enter and exit the water

- 2.1** Position markers in the water to identify presence of divers
- 2.2** Conduct in-water leak test at the surface to ensure the integrity and functionality of equipment
- 2.3** Perform entry and exit techniques at the assigned entry and exit points

3 Descend to, and ascend from, depths ranging from zero to 30 metres

- 3.1** Complete pre-dive buoyancy checks
- 3.2** Maintain measured and controlled breathing and finning
- 3.3** Implement dive descent, decompression and dive ascent techniques in accordance with dive plan and safety procedures
- 3.4** Maintain awareness of, and distance from, surface and sub-surface hazards
- 3.5** Ensure minimal disturbance to bottom to enable maximum visibility and a safe work environment

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| | 3.6 | Undertake checks to ensure safety to surface |
| 4 Identify and manage dive-specific emergencies and problems | 4.1 | Monitor relevant risk factors throughout dive to manage threats and personal safety in accordance with risk assessment |
| | 4.2 | Recognise signs and symptoms of compression and/or decompression related problems in self and others |
| | 4.3 | Implement compression and/or decompression immediate corrective action in accordance with dive plan and safety procedures |
| | 4.4 | Recognise and manage temperature related hazards in self or others and implement appropriate controls in accordance with risk assessment |
| | 4.5 | Recover spatial awareness when balance is lost under conditions of zero visibility |
| | 4.6 | Recover any lost and/or separated diver |
| 5 Communicate underwater | 5.1 | Inspect electronic communications device and accessories for serviceability and fit |
| | 5.2 | Transmit and receive messages using electronic communications devices and communication protocols |
| | 5.3 | De-service and stow electronic communications device and accessories in accordance with manufacturer specifications |
| 6 Perform a simple navigation leg underwater | 6.1 | Maintain compass bearing underwater |
| | 6.2 | Estimate and maintain distance for a constant swim rate underwater |

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| 7 React to individual and group contingencies and/or emergencies | 7.1 | Clear flooded face mask and blocked mouthpiece and refit |
| | 7.2 | Resolve failed primary breathing system and manage irrecoverable malfunctions in accordance with dive plan |
| | 7.3 | Manage lost and severed safety lines |
| | 7.4 | Manage significant systemic failures through ditching drill and emergency surfacing drill in accordance with dive plan and safety procedures |
| 8 Operate, inspect and maintain SCUBA breathing gas and personal dive equipment | 8.1 | Inspect and maintain equipment in accordance with manufacturer specifications |
| | 8.2 | Conduct post-activity serviceability tests and re-stow dive and communications equipment in accordance with manufacturer specifications, dive standards and organisational policy and procedures |
| | 8.3 | Quarantine and tag unserviceable equipment and report defects in accordance with organisational procedures |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the DEF Defence Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to DEFWDV001 Dive using self-contained underwater breathing apparatus in open water to 30 metres.

Links

Companion Volume Implementation Guides are found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6bdbab1e-11ed-4bc9-9cba-9e1a55d4e4a9>

Assessment Requirements for DEFWDV025 Dive using self-contained underwater breathing apparatus in open water to a maximum depth of 30 metres

Modification History

Release 1. This is the first release of this unit of competency in the DEF Defence Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and include:

- acting as a relay between two callsigns
- applying relevant legislation, and organisational policies and procedures
- communicating verbally by radio and diving communication devices and non-verbally through signalling methods
- complying with assigned callsigns
- conducting decompression stops and requirements
- conducting unplanned decompression procedures arising from the onset of compression related problems in operations and in simulated emergency drills
- demonstrating situational awareness of position and orientation, equipment (including depth, time and breathing gas gauges), and other divers
- implementing emergency surfacing
- maintaining records according to organisational policies and procedures
- managing hazards during dives
- managing medical complications during dives and recognising these in self and others
- navigating underwater, using a compass only, a complete triangle of side length not less than 30m (way-points only to be distinguishable within 8m)
- switching from primary to secondary breathing system
- taking necessary corrective action/s and managing a range of individual and group contingencies and/or emergencies.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and include knowledge of:

- decompression calculations
- decompression tables to determine decompression times and depths for a range of dive profiles
- decompression techniques

- dive equipment capabilities and limitations
- dive physics
- dive physiology and medicine, including:
 - decompression illnesses
 - hypothermia and hyperthermia compression illnesses
- diving descent and ascent techniques
- general diving safety awareness, including:
 - diving in harbours
 - diving in tidal waters, currents and tides
 - diving on and/or near a ship's hull
 - entrapment/foul lines
 - lost/separated
 - marine animal threats
 - pollution/weeds
 - working in confined spaces
- general precautions to be taken against a range of hazards
- handling procedures for malfunctioning items
- line signals
- marine animal threats
- navigation theory
- oceanography
- organisational policies and procedures
- principles of underwater communication systems and diver intercom systems, and their limitations
- radio frequency hazards
- radio telephone procedures (RTP)
- relevant hand signals
- relevant legislation and industry standards
- safe operating ranges for breathing gas supplies
- SCUBA equipment maintenance and servicing recording requirements
- self-contained underwater breathing apparatus (SCUBA) dive equipment specifications, characteristic and limitations
- surfacing procedures, including awareness of surface and sub-surface hazards.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- applicable documentation, including legislation, regulations, codes of practice, workplace procedures and operation manuals
- documentation specific to the dive operation, including dive plan and risk assessment
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry.

Links

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<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6bdbab1e-11ed-4bc9-9cba-9e1a55d4e4a9>