



Australian Government

**DEFWDV022 Dive using closed-circuit
breathing apparatus (HeO₂) in open water
to a maximum depth of 60 metres**

Release: 1

DEFWDV022 Dive using closed-circuit breathing apparatus (HeO2) in open water to a maximum depth of 60 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 closed-circuit breathing apparatus (CCBA) (HeO2) in an open water environment to a maximum depth of 60 metres.

It includes operating the HeO2 compressor or hand-booster pump, inspecting and operating CCBA (HeO2) equipment, and conducting CCBA (HeO2) specific contingency drills.

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

This unit applies to persons working as Defence Divers but could also apply to others working as work divers.

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

Elements describe the essential outcomes.

1 Operate an HeO2 compressor or hand-booster pump

PERFORMANCE CRITERIA

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

- 1.1** Inspect compressor and associated equipment for serviceability and correct gas make-up in accordance with dive brief
- 1.2** Fit appropriate protective equipment in accordance with organisational procedures
- 1.3** Charge HeO2 gas cylinders to maximum working pressure and record details in relevant logs in accordance with organisational procedures
- 1.4** Conduct operator level maintenance on HeO2 compressor and report faults, as required, in accordance with organisational procedures
- 1.5** Undertake compressor post-activity serviceability checks in accordance with manufacturer specifications and report defects, as required, in accordance with operational requirements

2 Conduct dive operations

- 2.1** Select, inspect and fit CCBA (HeO2), and conduct apparatus test as part of dive preparations prior to entering water and in-water, in accordance with dive plan
- 2.2** Undertake dive activities using CCBA (HeO2) and demonstrate relevant dive contingencies in accordance with organisational procedures and dive plan
- 2.3** Maintain situational awareness of other divers during dive operations
- 2.4** Conduct a mid-water casualty handover between an HeO2 standby diver and a breathing gas standby diver, in accordance with dive plan
- 2.5** Undertake CCBA HeO2 equipment post-dive activity serviceability checks in accordance with manufacturer specifications and report defects, as required, in accordance with operational 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 DEFWDV007 Dive using closed-circuit breathing apparatus (HeO2) in open water to a maximum depth of 60 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 DEFWDV022 Dive using closed-circuit breathing apparatus (HeO2) in open water to a maximum depth of 60 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:

- applying relevant industry standards, and organisational policies and procedures
- conducting closed-circuit breathing apparatus (CCBA) (HeO2) dive operations in a range of sub-surface conditions during the day or night according to relevant industry standards
- conducting unconscious companion diver drills in accordance with dive plan
- identifying changes in divers, including distress and illness at depth
- inspecting and preparing CCBA (HeO2) equipment
- maintaining records according to organisational policies and procedures
- monitoring CCBA (HeO2) equipment and gauges
- operating an HeO2 compressor or hand-booster pump in accordance with manufacturer specifications.

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 includes knowledge of:

- CCBA (HeO2) dive equipment specifications, characteristics and limitations
- CCBA (HeO2) maintenance and servicing recording requirements
- dive physics
- dive physiology and medicine, including:
 - compression illnesses
 - decompression illnesses
 - heat and cold illnesses
- diving descent and ascent techniques
- general diving safety awareness, including:
 - diving in harbours
 - diving in tidal waters, currents and tides
 - entrapment/foul lines

- lost/separated
- marine animal threats
- hazards of Heliox
- organisational policies and procedures
- relevant diving safety awareness
- relevant industry standards
- safe operating ranges for gas mixtures
- standby diver responsibilities.

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>