



Australian Government

Department of Education, Employment and Workplace Relations

SISOSCB305A Complete underwater search and recovery dives

Release: 2

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Modification History

Not Applicable

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to complete underwater search and recovery dives. This includes planning underwater searches and recovering an object that weighs between 6 and 45 kilograms.

Application of the Unit

This unit applies to current or aspiring SCUBA dive guides or instructors specialising in search and recovery diving in controlled open water environments to a maximum depth of 18 metres. This may include those working for private dive schools or companies operating at coastal sites or through holiday resorts.

Licensing/Regulatory Information

No licensing, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

SISOSCB301A SCUBA dive in open water to a maximum depth of 18 metres

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the Evidence Guide.

1. Plan for and perform an underwater search.

- 1.1. Identify the need for an ***underwater search*** and make suitable arrangements according to ***industry technical and safety criteria, relevant legislation and organisational policies and procedures***.
- 1.2. Determine ***factors*** affecting selection of search techniques.
- 1.3. Navigate underwater search according to industry technical and safety criteria.
- 1.4. Identify and mark location of found object.

2. Recover object that weighs between 6 and 45 kilograms.

- 2.1. Plan recovery exercise according industry technical and safety criteria.
- 2.2. Determine suitable recovery methods according to size, depth and weight of object to be recovered.
- 2.3. Negotiate ***risks and hazards*** associated with underwater lifting techniques.
- 2.4. Demonstrate displacement and lift calculations according to industry technical and safety criteria.
- 2.5. Tie ***knots*** underwater according to the characteristics of the object and chosen recovery method.
- 2.6. Raise object to the surface using lifting equipment according to industry technical and safety criteria, relevant legislation and organisational policies and procedures.

3. Evaluate search and recovery dive.

- 3.1. Evaluate ***relevant aspects*** of the search and recovery exercise.
- 3.2. Identify improvements for future search and recovery dives.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication and teamwork skills to:
 - inform progress during search
 - interact with buddy via underwater hand signals
 - recover and lift an object weighing up to 45 kilograms to the surface
- problem-solving skills to:
 - determine factors affecting search, underwater navigation and appropriate recovery methods according to depth, size and weight of object
- tie knots to secure load for safe lifting
- numeracy skills to calculate weight of load and determine suitable lifting method
- first aid and emergency response skills appropriate to the site to enable initial response to emergencies and personal health care.

Required knowledge

- legislation, organisational policies and procedures and industry technical and safety criteria to enable safe conduct of all deep water SCUBA diving activities
- selection, use and maintenance of SCUBA and lifting equipment, characteristics and technology, the advantages and disadvantages of the range of equipment
- weather and environmental information to interpret conditions and their effect on the search and recovery dive
- hazards and risks commonly associated with open water search and recovery techniques to a depth of 18 metres
- underwater search patterns, such as linear and circular searches to find an object
- navigation techniques to search for an object under water
- knots and lifting techniques suitable to the depth, size and weight of the object
- underwater communication systems such as signs and signals used to communicate with buddy
- emergency, first aid and rescue procedures appropriate to the location to ensure risk minimisation to self and group
- minimal impact interactions and techniques to minimise negative impact on aquatic animal and plant life.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

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

Evidence of the following is essential:

- applies a range of underwater search techniques, such as circular and U pattern searches, to locate objects of different size and weight
- applies processes to recover various objects weighing between 6 and 45 kilograms, using knots and safe lifting techniques according to industry technical and safety criteria, relevant legislation and organisational policies and procedures
- negotiates hazards and risks, and minimises negative impact on aquatic animal and plant life throughout search and recovery
- evaluates and reflects on search and recovery performance to identify strengths, weaknesses and areas that need improvement.

Context of and specific resources for assessment

Assessment must ensure participation in search and recovery diving activities that are of sufficient breadth and duration to demonstrate competency and consistency of performance.

Assessment must also ensure access to:

- a suitable open water SCUBA dive site
- a buddy to participate in search and recovery dive
- a suitable diving boat, if required
- SCUBA, navigation and recovery equipment and an object weighing between 6 and 45 kilograms to recover.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of the planning and review process
- oral or written questioning to assess knowledge of factors affecting selection of search and recovery techniques in open water
- observation of safe participation and communication with buddy throughout search and recovery dives
- written and or verbal self evaluation

- third-party reports from a supervisor detailing performance.

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SISOSCB309A Complete dives off boats.

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, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

- Underwater search*** may include:
- linear
 - circular
 - U pattern
 - jack stay
 - expanding square.
- Industry technical and safety criteria*** may include:
- British Sub-Aqua Club (BSAC)
 - Professional Association of Diving Instructors (PADI)
 - SCUBA Schools International (SSI).
- Relevant legislation*** may include:
- occupational health and safety
 - permits or permission for access
 - environmental regulations
 - marine regulations.
- Organisational policies and procedures*** may include:
- occupational health and safety
 - communication protocols
 - code of ethics
 - manufacturer's recommendations.
- Factors*** may include:
- bottom topography
 - water movement
 - depth
 - visibility.
- Risks and hazards*** may include:
- slipping knots
 - runaway ascent
 - load dislodgment
 - entanglement
 - hypothermia
 - cramps
 - exhaustion
 - stings or bites
 - Decompression Illness (DCI).
- Knots*** may include:
- bowline
 - half hitch
 - sheet bend.

Relevant aspects may include:

- objectives
- planning process
- activity site
- weather
- equipment selection
- clothing selection
- food selection
- instructional content
- instructional technique
- assessment technique
- group feedback
- directing techniques
- rescue techniques employed.

Unit Sector(s)

Outdoor Recreation

Competency Field

SCUBA