



Australian Government

DEFWDV035 Perform underwater rigging work

Release: 1

DEFWDV035 Perform underwater rigging work

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 complete underwater rigging work.

It includes securing and moving submerged loads by employing blocks and tackle, chains, slings and cordage. It also includes establishing secure lift points, setting rigging equipment between load and lifting platform, and controlling the conduct of the lift.

This unit applies to persons working as Defence 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.

PERFORMANCE CRITERIA

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

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|---|---|
| 1 Prepare for underwater rigging operation | 1.1 Identify load metrics and worksite data to meet task requirements |
| | 1.2 Develop work plan consistent with dive plan in accordance with organisational procedures and task requirements |
| | 1.3 Select, inspect and prepare rigging gear in accordance with safe lifting weight limits and work plan |
| | 1.4 Secure rigging gear for safe transport to and from dive site |
| | 1.5 Identify obstructions and other lift hazards to determine risks and to manage risk control measures in accordance with dive plan |
| 2 Lift and handle submerged objects using mechanical advantage | 2.1 Determine a safe work area and confirm location of other divers and nearby surface vessels and/or structures prior to commencing lift in accordance with work plan |
| | 2.2 Identify lift points to secure object to lifting device in accordance with safe lifting weight limits |
| | 2.3 Ensure lifting devices are anchored off raised objects in accordance with operational and safety procedures |
| | 2.4 Operate lifting devices within accepted load tolerances |
| 3 Complete underwater rigging operations | 3.1 Minimise environmental impact arising from work task and recover waste products |
| | 3.2 Complete disassembly and post-dive serviceability checks in accordance with manufacturer specifications, report defects, as required, return and restow equipment in accordance with organisational requirements |
| | 3.3 Complete required documentation and records 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 DEFWDV016 Perform underwater rigging work.

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 DEFWDV035 Perform underwater rigging work

Modification History

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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:

- analysing constraints of object to be lifted to determine technique
- applying relevant legislation, standards, and organisational policies and procedures
- applying underwater risk control measures and work plan requirements
- calculating load parameters
- conducting one vertical lift to the surface with mechanical devices
- constructing rigs, including:
 - assembling equipment to ensure load can be lifted with available equipment
- determining load capacity of components
- developing underwater rigging work plan
- maintaining records according to organisational policies and procedures
- planning underwater rigging work
- preparing accurate reports and required documentation
- rigging load within safe lifting weight limits.

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:

- determination of mass of submerged objects
- dive equipment
- dive physics
- dive physiology and medicine, including:
 - compression illnesses
 - decompression illnesses
 - heat and cold illnesses
- diving descent and ascent techniques
- equipment inspection and checking specifications
- general diving safety awareness, including:

- diving in harbours
- diving in tidal waters, currents and tides
- diving on and/or near a ship's bottom
- entrapment/foul lines
- lost/separated
- marine animal threats
- pollution/weeds
- working in confined spaces
- lifting and rigging equipment calculations, techniques and specifications
- oceanography
- organisational policies and procedures
- relevant legislation and standards
- relevant safe lifting weight limits
- relevant risk mitigation organisational procedures, including:
 - relevant marine hazards and risk control measures
 - relevant rigging workplace hazards
- self-contained underwater breathing apparatus (SCUBA), surface-supplied and/or closed-circuit breathing apparatus (CCBA) operating techniques.

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.

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