



Australian Government

Department of Education, Employment and Workplace Relations

SISOSCB307A Inspect and fill SCUBA cylinders

Release: 2

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Modification History

Not Applicable

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to conduct visual inspections of SCUBA cylinders and fill SCUBA diving cylinders.

Application of the Unit

This unit applies to current or aspiring SCUBA dive guides or instructors who are responsible for the maintenance of SCUBA cylinders. 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

Nil

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. Conduct inspection of a SCUBA cylinder.

- 1.1. Undertake ***exterior inspection*** and ***interior inspection*** of a SCUBA cylinder according to ***industry technical and safety criteria, relevant legislation, organisational policies and procedures*** and ***Australian Standards***.
- 1.2. Apply re-valving, cleaning and drying procedures.
- 1.3. ***Document*** cylinder owner and inspection station details according to industry technical and safety criteria.
- 1.4. Establish parameters for failure according to Australian Standards.

2. Fill a SCUBA cylinder.

- 2.1. Determine ***operation and maintenance*** procedures according to manufacturer's specifications.
- 2.2. Identify complying and non-complying cylinders prior to filling.
- 2.3. Operate and maintain a high pressure compressor according to industry technical and safety criteria and manufacturers specifications.
- 2.4. Test air purity regularly, ensuring air purity meets or exceeds industry standards.
- 2.5. Handle, store and restrain cylinders according to industry criteria.
- 2.6. Open the cylinder valves and begin filling the cylinder to correct capacity according to manufacturer's specifications and Australian Standards.
- 2.7. Perform leak testing and complete documentation according to Australian Standards.

Required Skills and Knowledge

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

Required skills

- problem-solving skills to:
 - conduct exterior and interior inspections of a SCUBA cylinder
 - determine procedures for maintenance and parameters for failure or non compliance
- numeracy skills to ensure tanks are filled to correct capacity according to manufacturer's specifications and Australian Standards
- literacy skills to:
 - access and interpret information about maintenance history, cylinder owner and inspection station details
 - document procedures and information relating to the completion of inspections and filling of SCUBA cylinders
- planning and organising skills to:
 - conduct thorough external and internal inspections of SCUBA cylinders
 - handle and manoeuvre SCUBA cylinders safely
 - work through operation and maintenance procedures.

Required knowledge

- legislation, organisational policies and procedures and industry technical and safety criteria to enable safe and legal conduct of inspecting and filling of SCUBA cylinders
- Australian and Industry Standards related to inspecting and filling SCUBA cylinders and testing air purity to ensure risk minimisation
- operation and maintenance procedures for using high pressure gas compressors
- safe handling and storage of SCUBA cylinders
- procedures for determining complying and non complying cylinders.

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:

- conducts detailed exterior and interior inspections of SCUBA cylinders to determine condition and detect any damage
- fills SCUBA cylinders to correct capacity according to Australian Standards, industry technical and safety criteria, relevant legislation and organisational policies and procedures
- documents details of air purity and leakage tests, inspections and cylinder filling, including details of compliance or non compliance.

Context of and specific resources for assessment

Assessment must ensure inspecting and filling SCUBA cylinders on sufficient occasions to demonstrate competency and consistency of performance.

Assessment must also ensure access to:

- a variety of SCUBA cylinders in various conditions
- SCUBA cylinder inspection equipment such as vice or clamp and spanners
- resources and equipment to conduct inspections and fill SCUBA cylinders
- maintenance history of SCUBA tank.

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:

- oral or written questioning to assess knowledge of exterior and interior inspection techniques and procedures used to fill SCUBA cylinders
- observation of safe operation, maintenance and handling of high pressure gas compressors and SCUBA cylinders
- documentation, records and reports outlining details of inspection and filling of SCUBA tank
- third-party reports from a supervisor detailing performance.

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

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.

Exterior inspection may include:

- attachments
- compliance or non-compliance
- LAB number
- paint condition
- approved marks
- surface damage
- corrosion
- pass or fail.

Interior inspection may include:

- valve removal
- interior inspection equipment
- reference documents
- interior condition
- cleaning
- drying
- recording results.

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.

Organisational policies and procedures may include:

- occupational health and safety
- documentation
- compliance or non compliance
- manufacturer's recommendations
- industry criteria and standards.

Australian Standards may include:

- filling SCUBA cylinders
- inspecting and testing SCUBA cylinders.

Document may include:

- check sheets
- rule procedures
- records
- drawings
- Quality Assurance documentation
- maintenance plans, procedures and reports

Operation and maintenance may include:

- scheduling documents
- budgets
- reports
- submissions.
- compressor installation
- air intake
- drive unit
- lubricants
- filter materials
- run-up procedures
- guarding
- isolation
- over-pressure devices
- safety to users and members of the public.

Unit Sector(s)

Outdoor Recreation

Competency Field

SCUBA