



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **SISOSCB317A Complete a dive using Enriched Air Nitrox**

**Release: 1**

## SISOSCB317A Complete a dive using Enriched Air Nitrox

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit describes the performance outcomes, skills and knowledge required to plan and perform an EANx dive under supervision. This unit also focuses on disassembling and maintaining equipment used for EANx dives.</p> <p>No licensing, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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### Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to current or aspiring specialty SCUBA dive guides or instructors responsible for planning and performing controlled open water dives under supervision using enriched air nitrox (EANx). This may include those working for private dive schools or companies operating at coastal sites or through holiday resorts.</p> <p>This may also include those working for, volunteer organisations, not for profit organisations, government agencies, or group instructors in outdoor education programs.</p>
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### Licensing/Regulatory Information

Refer to Unit Descriptor

### Pre-Requisites

<b>Prerequisite units</b>	<ul style="list-style-type: none"><li>SISOSCB301A SCUBA dive in open water to a maximum depth of 18 metres</li></ul>

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## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

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.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan an EANx dive.	1.1. Identify the <b>requirements</b> of EANx use and associated <b>hazards</b> . 1.2. Prepare <b>EANx dive plan</b> according to <b>industry technical and safety criteria, relevant legislation and organisational policies and procedures</b> . 1.3. Select a suitable dive site according to industry technical and safety criteria, relevant legislation and organisational policies and procedures.
2. Select equipment.	2.1. Select <b>blend and equipment</b> according to industry technical and safety criteria. 2.2. Perform <b>pre dive checks</b> and <b>maintenance</b> of EANx equipment according to industry technical and safety criteria, manufacturer's recommendations and organisational policies and procedures.
3. Dive using EANx.	3.1. Complete EANx dive according to dive plan, EANx criteria and industry technical and safety criteria. 3.2. Monitor depth and time throughout dive. 3.3. Take remedial action to avoid hazards.
4. Disassemble and maintain equipment.	4.1. Maintain positive pressure in the cylinder to avoid entry of atmospheric air. 4.2. Disassemble regulators and gauges according to industry technical and safety criteria. 4.3. Undertake service and maintenance of equipment with parts compatible with elevated oxygen mix according to industry technical and safety criteria.
5. Evaluate EANx dive.	5.1. Evaluate <b>relevant aspects</b> of the EANx dive. 5.2. Identify improvements for future EANx dives.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

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

#### Required skills

- planning and organising skills to:
  - devise a suitable EANx dive plan

**REQUIRED SKILLS AND KNOWLEDGE**

- check, maintain and disassemble equipment
- self management and observation skills to:
  - perform pre dive checks and maintenance of EANx equipment
  - monitor depth and time throughout dive
- problem-solving skills to:
  - anticipate and eliminate potential hazards associated with EANx diving
  - calculate gas mixtures
  - develop and make decisions regarding gas plan
- numeracy skills to calculate safe blends and percentages of oxygen and nitrogen
- first aid and emergency response skills appropriate to the site to enable initial response to EANx emergencies and personal health care.

**Required knowledge**

- legislation, organisational policies and procedures, industry standards and industry technical and safety criteria to enable safe conduct of EANx diving activities
- equipment types, characteristics and technology used for EANx diving, the advantages and disadvantages of the range of equipment and factors affecting appropriate selection
- principles of mixing gas, the different types of gas and its application in EANx diving
- requirements and hazards associated with EANx diving and how to negotiate these
- no decompression limits for EANx diving
- emergency, first aid and rescue procedures appropriate to the location to ensure risk minimisation to self and group.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
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.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• applies relevant process to plan for EANx diving, complete safety checks and maintain and disassemble EANx equipment</li> <li>• calculates gas mixtures and no decompression limits according to industry technical and safety criteria, relevant legislation and organisational policies and procedures</li> <li>• determines and negotiates specific EANx requirements, hazards and factors affecting diving with EANx</li> <li>• evaluates and reflects on own EANx diving performance to identify strengths, weaknesses and areas that need improvement.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure participation in multiple EANx diving activities to demonstrate competency and consistency of performance.</p> <p>Assessment must also ensure access to:</p> <ul style="list-style-type: none"> <li>• resources and information to plan and select appropriate equipment for EANx diving</li> <li>• an open water site suitable for EANx diving</li> <li>• a suitable diving boat, if required</li> <li>• SCUBA equipment and specific EANx diving equipment.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• oral or written questioning to assess knowledge of EANx requirements, gas mixtures, and hazards associated with diving using EANx</li> <li>• observation of safe participation and handling of EANx equipment throughout diving process</li> <li>• third-party reports from a supervisor detailing performance.</li> </ul>

EVIDENCE GUIDE	
	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.
Guidance information for assessment	

## Range Statement

RANGE STATEMENT	
<p>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.</p>	
<b><i>Requirements</i></b> may include:	<ul style="list-style-type: none"> <li>• approved cylinders</li> <li>• colour coding</li> <li>• dive planning</li> <li>• stamping</li> <li>• compliance</li> <li>• adequate filtering</li> <li>• compatible equipment and materials.</li> </ul>
<b><i>Hazards</i></b> may include:	<ul style="list-style-type: none"> <li>• hypothermia</li> <li>• group management hazards</li> <li>• equipment contamination</li> <li>• oxygen toxicity</li> <li>• explosion risk</li> <li>• decompression illness</li> <li>• EANx blend analysis.</li> </ul>
<b><i>EANx dive plan</i></b> may include:	<ul style="list-style-type: none"> <li>• objectives</li> <li>• date, time and duration of dive</li> <li>• site, equipment and resources</li> <li>• safety and emergency procedures</li> <li>• experience and or expertise of dive team</li> <li>• buoyancy</li> <li>• dive log</li> <li>• no-decompression limits</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• gas plan</li> <li>• calculation of partial oxygen to determine oxygen</li> <li>• risk management plan.</li> </ul>
<b>Industry technical and safety criteria</b> may include:	<ul style="list-style-type: none"> <li>• British Sub-Aqua Club (BSAC)</li> <li>• Professional Association of Diving Instructors (PADI)</li> <li>• SCUBA Schools International (SSI).</li> </ul>
<b>Relevant legislation</b> may include:	<ul style="list-style-type: none"> <li>• occupational health and safety</li> <li>• permits or permission for access</li> <li>• environmental regulations</li> <li>• marine regulations.</li> </ul>
<b>Organisational policies and procedures</b> may include:	<ul style="list-style-type: none"> <li>• occupational health and safety</li> <li>• communication protocols</li> <li>• EANx dive and gas plans</li> <li>• code of ethics</li> <li>• manufacturer's recommendations</li> <li>• minimal impact codes</li> <li>• EANx criteria.</li> </ul>
<b>Blend and equipment</b> may include:	<ul style="list-style-type: none"> <li>• cylinder</li> <li>• regulator</li> <li>• gauges and accessories</li> <li>• valves</li> <li>• oxygen compatibility or clean</li> <li>• labelling</li> <li>• blend analysis.</li> </ul>
<b>Pre dive checks</b> may include:	<ul style="list-style-type: none"> <li>• dive and gas plans</li> <li>• the maximum depth for the breathing gas and loss of breathing gas procedures</li> <li>• buddy separation procedures.</li> </ul>
<b>Maintenance</b> may include:	<ul style="list-style-type: none"> <li>• cylinder specifications</li> <li>• coding</li> <li>• stamping</li> <li>• safety log</li> <li>• oxygen cleaning of equipment.</li> </ul>
<b>Relevant aspects</b> may include:	<ul style="list-style-type: none"> <li>• objectives</li> <li>• planning process</li> <li>• activity site</li> <li>• weather</li> </ul>



**RANGE STATEMENT**

	<ul style="list-style-type: none"><li>• equipment selection</li><li>• clothing selection</li><li>• food selection</li><li>• instructional content</li><li>• instructional technique</li><li>• assessment technique</li><li>• group feedback</li><li>• directing techniques</li><li>• rescue techniques employed.</li></ul>
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**Unit Sector(s)**

<b>Unit sector</b>	Outdoor Recreation
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**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
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