



Australian Government

Department of Education, Employment and Workplace Relations

SISOABA405A Establish ropes for multi pitch abseiling on artificial surfaces

Release: 2

SISOABA405A Establish ropes for multi pitch abseiling on artificial surfaces

Modification History

Not Applicable

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to independently select anchors and rig ropes for multi pitch abseiling on artificial surfaces. These anchors are to be used in establishing belay systems and rope pitches, and must be able to accommodate different belayer and abseiler abilities in multi pitch contexts.

Application of the Unit

This unit applies to those required to establish ropes for multi pitch abseiling activities. This may include those working as abseiling guides or assistant guides in a range of artificial conditions.

This unit may also apply to leaders working for outdoor education or adventure providers; volunteer groups; not-for-profit organisations or government agencies.

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. Select suitable equipment for belay system.

- 1.1. Select a ***belay system*** according to ***contextual issues*** of the activity.
- 1.2. Identify and select ***equipment*** according to ***relevant legislation*** and ***organisational policies and procedures***.
- 1.3. Select ***anchors*** that meet the requirements of the abseil and abilities of the ***participants***.
- 1.4. Assess ***condition of the anchors***, including performance under ***likely load***.
- 1.5. Choose a ***belay device*** that is suitable to the ***artificial surface conditions*** and belayer's ability.
- 1.6. Complete all necessary ***safety checks***, and action unsafe equipment according to organisational policies and procedures.

2. Set up belay system.

- 2.1. Rig anchors, ensuring equalisation and minimal shock loading in the event of a failure.
- 2.2. Tie ***knots*** and rig ropes suitable for the type of belay system established.
- 2.3. Establish a belay from which the belayer is able to escape and safely perform a rescue.
- 2.4. Avoid or remove belay ***hazards***, to maintain ***safety of belayer***.
- 2.5. Complete all necessary ***safety checks*** and action unsafe equipment according to organisational policies and procedures.

3. Rig rope pitches.

- 3.1. Identify safe access to and egress from the site according to relevant legislation.
- 3.2. Identify descent route appropriate to context.
- 3.3. Select and tie knots suitable for the type of system established and for potential retrieval or rescue situations.
- 3.4. Minimise the risk of cross loading and cyclical loading of karabiners.

Required Skills and Knowledge

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

Required skills

- problem-solving skills to select appropriate anchors and belay systems for the context and conditions of the abseiling activity
- rope handling and knot tying skills to rig ropes and anchors safely
- first aid and emergency response skills appropriate to the location to enable initial response to emergencies and personal health care.

Required knowledge

- relevant legislation and organisational policies and procedures to enable safe conduct of multipitch abseiling activities
- equipment types, characteristics and technology used to establish belays for multi pitch abseiling on artificial surfaces
- care and maintenance of equipment to ensure prolonged life span and safety requirements, as advised by the manufacturer's specifications and recommendations for equipment use
- belay and anchor systems appropriate for multi pitch abseiling on artificial surfaces
- technical abseiling and equipment knowledge to establish appropriate belay systems
- types of knots, their advantages and disadvantages and their impact on roping activities
- emergency procedures, potential hazards and obstacles relevant to the location to ensure safety of self and others.

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:

- independently selects appropriate equipment and carries out safety checks to ensure effective working order
- uses discretion and judgement to determine belay system required for abseiling in multi pitch contexts and differentiates between the types of belay systems, anchors and knots and their suitability to different rigging situations
- determines the need for, and establishes, belay systems to ensure safety of self and other participants.

Context of and specific resources for assessment

Assessment must ensure participation in rigging of anchors and equipment that is of sufficient breadth to demonstrate competency and consistency of performance.

Assessment must also ensure access to:

- resources and information regarding abseiling and belaying equipment
- suitable artificial multi pitch abseiling sites with fixed anchors and varying qualities and features that allow participant to demonstrate rigging skills
- equipment such as anchors, harnesses, belay systems, descending devices, slings, ropes, karabiners and first aid equipment.

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 relevant legislation and organisational policies and procedures to ensure safe and appropriate use of all abseiling equipment
- observation of safe participation and demonstration of setting up belay systems suitable to different contexts and participants
- observation of dealing with contingencies, such as equipment misuse

- third-party reports from a leader detailing performance.

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

- SISOVTR301A Perform vertical rescues
- SISOABA303A Establish ropes for abseiling on artificial surfaces

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.

Belay system may include:

- top belay
- self belay
- bottom brake.

Contextual issues may include:

- weather conditions, including times
- season
- transport
- location
- trip distance and duration
- group objectives
- group size.

Equipment may include:

- ropes
- tape slings
- rope protectors
- karabiners
- belay devices.

Relevant legislation may include:

- occupational health and safety
- permits or permission for access
- environmental regulations.

Organisational policies and procedures may include:

- occupational health and safety
- use and maintenance of equipment
- emergency procedures
- code of ethics.

Anchors may include:

- bolts
- chains
- bollards
- eyelets
- U bolts
- beams
- poles
- wire cables.

Participants may include:

- experienced
- inexperienced
- adults
- children

- Condition of the anchors*** may include:
- tourists, club members, clients, school or youth groups.
 - age
 - location
 - wear
 - decay
 - corrosion
 - environmental stress
 - insect damage.
- Likely load*** may include:
- group size
 - set up
 - type of abseil conducted
 - abseiler ability
 - technique
 - possible forces generated during a fall.
- Belay device*** may include:
- plate devices
 - auto-locking devices
 - tubular devices
 - prusik cord and suitable friction hitch.
 - Figure 8
 - Inline device
- Artificial surface conditions*** may include:
- portable or fixed walls or towers
 - fixed towers or bridges
 - indoor or outdoor
- Safety checks*** may include:
- Certification of anchor points
 - Angles at focal point
 - No slack loading
 - No single point at failure
 - Minimum of two failsafe anchor points
- Knots*** may include:
- knots that have at least 50% of the static strength of the original
 - end-of-rope knots
 - mid-rope knots
 - rope joining knots
 - tape knot.
- Hazards*** may include:
- temperature extremes of surfaces
 - slippery surfaces
 - dangerous animals and insects
 - group management hazards.
- Safety of belayer*** may include:
- attachment to anchor or alternate safety system

- positioning out of direct line of equipment fall
- minimising movement of the belayer in the event of a fall.

Unit Sector(s)

Outdoor Recreation

Competency Field

Abseiling artificial surface