



Australian Government

**Assessment Requirements for SISOABS006
Establish ropes for single pitch abseiling on
natural surfaces**

Release: 1

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Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- select and set up belay systems and ropes suitable for single pitch abseils at three different natural pitches
- collectively set up the following types of systems:
 - single rope
 - releasable abseil line
 - rope systems suitable for single rope techniques
 - top rope top belay
 - bottom brake belay
 - self-belay
- collectively select and use these different types of anchors:
 - fixed artificial
 - naturally occurring
 - artificial removable
- collectively select and tie at least four different types of knots suitable for the system type established, and appropriate for the intended load and function
- identify and tag three different types of faulty equipment.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- organisational procedures for safety and serviceability checks
- how the following factors affect selection of descent and ascent routes for natural surfaces including:
 - season of operation, weather and environmental conditions
 - participant characteristics including age, size, weight, fitness and abseiling skill level
 - group objectives and size
- environmental hazards specific to abseiling on natural surfaces and how these affect:
 - safe access to and egress from the pitch
 - choice of descent and ascent routes for safety of abseiler

- positioning of top or bottom belay systems for safety of belayer
- features, functions, advantages and disadvantages of different types of anchors used for abseiling on natural surfaces including:
 - fixed artificial:
 - threads
 - bolts
 - chains
 - concrete bollards
 - naturally occurring:
 - trees
 - boulders
 - artificial removable:
 - spring loaded camming devices
 - nuts, wires and hexes
 - pitons
- issues that are assessed when selecting anchors and likely impacts of poor condition on performance under load:
 - wear and abrasion due to age and use
 - corrosion
 - decay
 - dislodgment
 - underlying stability of structural features and presence of:
 - cracks
 - deformities
 - fissures
- meaning of the following terms, and principles which apply when rigging anchors and ropes:
 - equalisation of load
 - single point of failure
 - anchor redundancy
 - angle of separation
 - shock loading
 - cross loading and cyclical loading of carabiners
 - mis-alignment of carabiners
 - closing the system, including advantages, disadvantages and methods used
- types of forces (upwards, downwards) generated during abseiling and belaying, and how to calculate load on anchors and ropes for these circumstances:
 - top rope top belay
 - bottom brake belay
 - self-belay

- abseiler descending under control
- abseiler fall
- belayer arresting falls
- the effects of rope stretch during operations and implications if not minimised:
 - abrasions
 - rope bounce
 - undue stress on the anchor system
 - potential for abseiler to impact with hazards, or become entangled
- features, functions, advantages and disadvantages of the following abseiling and belay equipment used on natural surfaces:
 - abseiling and belay systems for:
 - single rope
 - releasable abseil line
 - rope systems suitable for single rope techniques
 - top rope top belay
 - bottom brake belay
 - self-belay
 - descending devices:
 - assisted locking
 - inline
 - plate
 - figure 8
 - tubular
 - improvised
 - belay devices:
 - assisted locking
 - inline
 - plate
 - figure 8
 - tubular
 - improvised
 - carabiners
 - harnesses of different types
 - static and dynamic rope and when each might be used
 - rope protectors
 - tape
 - sewn sling
 - Prusik cord
- how the following factors affect the selection and rigging of above equipment:
 - site characteristics including position of rub points

- weather and environmental conditions
- participant size, weight, and abseiling ability
- cumulative load for group size and number of abseils
- abseiling techniques to be used
- distance, height and angle of anchor relative to top edge of abseil
- manufacturers' specifications for equipment use
- techniques used to establish belay systems for safety of belayer:
 - rigging belays for performance of rescues
 - attaching to anchor or self belay safety system
- situations requiring back up belay systems
- when different knots are used, advantages and disadvantages, and how to tie them:
 - fixed eye
 - mid line tied in the bight
 - end to end joining
 - termination
 - load control hitches
 - slide and grip hitches
- types of safety checks completed for rigging of equipment
- how to care for abseiling equipment when rigging to avoid damage, and promote long lifespan
- potential environmental impacts of rigging for abseils on natural surfaces including cliff faces and techniques used to minimise damage.

Assessment Conditions

Skills must be demonstrated in an outdoor environment where rigging is completed for recreational single pitch abseils on natural surfaces. Pitches can feature:

- undercut edges
- low anchors at start
- vertical and near vertical surfaces.

The following resources must be available to replicate industry conditions of operation:

- first aid equipment
- communication equipment for emergency response
- rescue equipment.

Assessment must ensure use of:

- personal protective equipment to include:
 - abseiling or climbing helmets
 - harnesses

- gloves, as required
- anchors to include:
 - fixed artificial
 - naturally occurring
 - artificial removable
- abseiling equipment to include:
 - carabiners
 - rope which can include static and or dynamic rope
 - rope protectors
 - tape or sewn sling
 - Prusik cords
 - descending devices
 - belay devices
- template safety checklists
- organisational procedures for safety and serviceability checks.

Assessors must satisfy the Standards for Registered Training Organisations requirements for assessors, and:

- have a collective period of at least three years' experience as an abseiling activity leader or rigger, where they have applied the skills and knowledge covered in this unit of competency; the three years' experience can be part time or full time experience.

Links

Companion Volume Implementation Guides -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1ca50016-24d2-4161-a044-d3faa200268b>