



Australian Government

**Assessment Requirements for
SISOCLM006 Establish belays for single
pitch climbing 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 suitable for single pitch climbs on natural surfaces for three different pitches
- collectively set up the following types of systems:
 - top rope top belay
 - top rope bottom 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 climbing routes for natural surfaces:
 - season of operation, weather and environmental conditions
 - participant characteristics including age, size, weight, fitness and climbing skill level
 - group objectives and size
- environmental hazards specific to climbing on natural surfaces and how these affect:
 - safe access to and egress from the pitch
 - choice of ascent routes for safety of climber
 - positioning of top or bottom belay systems for safety of belayer
- features, functions, advantages and disadvantages of different types of anchors used for climbing on natural surfaces:
 - fixed artificial:

- threads
- bolts
- chains
- concrete bollards
- naturally occurring:
 - trees
 - boulders
 - knobs of rock
- 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 climbing and belaying, and how to calculate load on anchors and ropes for these circumstances:
 - top rope top belay
 - top rope bottom belay
 - climber ascending and lowering under control
 - climber fall
 - belayer arresting falls

- features, functions, advantages and disadvantages of the following climbing and belay equipment used on natural surfaces:
 - belay systems:
 - top rope top belay
 - top rope bottom belay
 - self belay
 - 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 climbing ability
 - belayer to climber weight ratio
 - cumulative load for group size and number of climbs
 - climbing techniques to be used
- manufacturers' specifications for equipment use
- techniques used to establish belay systems for safety of belayer:
 - rigging belays 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 climbing equipment when rigging to avoid damage, and promote long lifespan
- potential environmental impacts of rigging for climbs on natural surfaces and techniques used to minimise damage.

Assessment Conditions

Skills must be demonstrated in an outdoor environment where rigging is completed for single pitch climbs on natural 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
- anchors to include:
 - fixed artificial
 - naturally occurring
 - artificial removable
- climbing equipment to include:
 - carabiners
 - rope which can include static and or dynamic rope
 - rope protectors
 - tape or sewn sling
 - Prusik cords
 - 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 a climbing 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>