



Australian Government

Assessment Requirements for SISOCLM005 Establish belays for single pitch climbing on artificial 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 artificial surfaces for three different pitches
- collectively set up the following types of systems:
 - top rope bottom belay
 - automatic belay
- collectively select and use at least three different types of anchors
- 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 artificial surfaces:
 - season of operation, weather and environmental conditions for outdoor climbs
 - participant characteristics including age, size, weight, fitness and climbing skill level
 - group objectives and size
- hazards specific to climbing on artificial surfaces and how these affect:
 - safe access to and egress from the pitch
 - choice of ascent routes for safety of climber
 - positioning of belay systems for safety of belayer
- features, functions, advantages and disadvantages of different types of anchors applicable to fixed or portable artificial climbing structures:
 - bolts
 - chains
 - bollards
 - eyelets
 - U bolts

- beams
- poles
- wire cables
- 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
- 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
- types of forces (upwards, downwards) generated during climbing and belaying, and how to calculate load on anchors and ropes for these circumstances:
 - top rope bottom belay
 - automatic 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 artificial surfaces:
 - belay systems:
 - top rope bottom belay
 - automatic belay
 - dynamic and static belays
 - belay devices:
 - automatic 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 for outdoor climbs on artificial surfaces
 - participant size, weight, and climbing ability
 - belayer to climber 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 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 climbing equipment when rigging to avoid damage, and promote long lifespan.

Assessment Conditions

Skills may be demonstrated in an indoor or outdoor environment where rigging is completed for single pitch climbs on artificial surfaces. Artificial surfaces can be fixed or portable structures.

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
- established anchors for the artificial structure
- climbing equipment to include:
 - carabiners
 - rope which can include static and or dynamic rope
 - tape or sewn sling
 - Prusik cords
 - chalk bag and chalk
 - 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>