



Australian Government

SISOCVE004 Descend and ascend single ropes in caves

Release: 1

SISOCVE004 Descend and ascend single ropes in caves

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to use single rope techniques to descend and ascend ropes in a caving environment.

It applies to leaders, guides or instructors, who use these skills when leading participants during caving activities. Leadership skills are provided in complementary units.

This unit applies to any type of organisation that delivers outdoor recreation activities including commercial, not-for-profit and government organisations.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Caving

Unit Sector

Outdoor Recreation

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes

1. Prepare for the single rope descent or ascent.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1. Select clothing, footwear and personal protective equipment suitable for the caving activity and conditions.
- 1.2. Confirm activity safety and emergency response procedures to ensure compliance during activities.
- 1.3. Identify position of fixed rope in relation to natural features to account for obstacles, hazards and techniques.
- 1.4. Attach and adjust belay equipment to self and tie knots suitable for the established belay system.
- 1.5. Complete equipment safety checks prior to descent or

- ascent.
2. Descend and ascend a pitch using single rope techniques.
- 2.1. Descend and ascend a fixed rope efficiently, using and adjusting techniques suitable for circumstances.
 - 2.2. Safely approach, avoid or negotiate hazards to descend and ascend in a controlled manner.
 - 2.3. Utilise techniques and equipment to adjust the single rope rig.
 - 2.4. Choose optimum position and complete safe and efficient changeovers between descending and ascending.
 - 2.5. Use descending and ascending equipment for redirections and re-belays.
 - 2.6. Use techniques that minimise damage to equipment and the cave environment during activities.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS	DESCRIPTION
Reading skills to:	interpret detailed and familiar organisational safety and emergency response procedures.
Numeracy skills to:	visually estimate angles, estimate load on ropes to determine appropriate tension for ascents and descents.
Planning and organising skills to:	manage own timing to complete activities within planned timeframes.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume Implementation Guides -

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

Assessment Requirements for SISOCVE004 Descend and ascend single ropes in caves

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:

- complete the following activities in natural caves using single rope techniques:
 - three descents
 - three ascents
- during the descents and ascents collectively use the following single rope techniques:
 - changeovers from descending to ascending
 - changeovers from ascending to descending
 - redirections and re-belays
 - changeover to another system while suspended on a rope
- during each activity, consistently:
- connect self to belay system and anchors using appropriate device and or knots
 - follow safety procedures and safely negotiate hazards to descend and ascend in a controlled manner by both:
 - bypassing obstacles
 - raising body weight.

Knowledge Evidence

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

- organisational safety and emergency response procedures for caving activities
- purpose, features, and correct fit for safety, of personal protective equipment for cavers to include:
 - clothing
 - footwear
 - gloves
 - caving helmets
 - headlamps
 - harnesses of different types, advantages and disadvantages
- features, functions and operation of equipment used for single rope descents and ascents in caves:

- carabiners
- maillon rapides
- static and dynamic rope and when each might be used
- tape
- sewn sling
- personal attachment systems, including cow's tails
- Prusik cord
- foot loops
- mechanical ascenders
- descending devices:
 - assisted locking
 - inline
 - plate
 - figure 8
 - tubular
 - improvised
- belay systems:
 - top rope top belay
 - bottom brake
 - self-belay
- belay devices:
 - assisted locking
 - inline
 - plate
 - figure 8
 - tubular
 - improvised
- types of equipment and knots used, and how to tie them, when:
 - attaching self to belay system
 - attaching self to anchor
- safety requirements at the pitch head including use of personal attachment systems
- types of personal and equipment safety checks completed prior to descents and ascents
- how to care for equipment during caving activities to avoid damage, and promote long lifespan
- techniques used to adjust the rope rig to include those for changing:
 - cord length
 - types of descenders and ascenders
 - type of ascending action used
- single rope techniques used in caves to:
 - descend and ascend a fixed rope

- lock off during descent
- changeover from descending to ascending
- changeover from ascending to descending
- complete redirections and re-belays
- changeover to another system while suspended on a rope
- avoid obstacles and rope knots during descents and ascents including bypassing and by raising body weight
- typical hazards associated with single rope descents and ascents in caves, and techniques used to safely negotiate these:
 - water pools, streams and seepage
 - falling rocks, water, debris, gear
 - abrasion points
 - sharp edges
 - vertical squeezes and overhangs
 - strong cave breezes
 - darkness
 - rising waters
 - tangled rope
- techniques used to minimise damage to the cave environment when descending and ascending single ropes.

Assessment Conditions

Skills must be demonstrated in a natural cave where single rope descents and ascents are used as part of recreational caving activities.

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:
 - gloves
 - caving helmets
 - headlamps
 - harnesses
- anchors which can include:
 - fixed artificial
 - naturally occurring
 - artificial removable

- single rope abseiling equipment:
 - carabiners
 - maillon rapides
 - rope which can include static and or dynamic rope
 - rope protectors
 - tape or sewn sling
 - personal attachment systems, including cow's tails
 - Prusik cords
 - foot loops
 - mechanical ascenders
 - descending devices
 - belay devices
- template safety checklists
- organisational safety and emergency response procedures for caving activities.

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 caving leader, guide or instructor, 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

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