Australian Government

Department of Education, Employment and Workplace Relations

SISOVTR301A Perform vertical rescues

Release: 2

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Modification History

Not Applicable

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to use single rope techniques and mechanical advantage systems to perform self-rescues and the rescues of others in uncomplicated single pitch vertical contexts. It does not include the selection or assessment of the anchor.

Application of the Unit

This unit applies to those working as outdoor guides in a range of controlled activity-specific contexts in the fields of roping.

This unit also applies to outdoor recreation 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. Prepare for vertical rescue.	1.1. Select ***equipment*** and resources to ascend and descend a rope pitch. 1.2. ***Rig*** a rope to minimise the ***effects of rope stretch*** and ***significant rub points*** and to allow for efficient ascent and descent. 1.3. Establish ***personal safety systems*** and use equipment in a safe manner according to the nature of the rescue, manufacturer's specifications, ***relevant legislation*** and ***organisational policies and procedures***. 1.4. Identify immediate ***hazards*** and assess ***risks*** to self and others.
2. Ascend and descend rope pitch.	2.1. Ascend a fixed rope in a time efficient manner, demonstrating the ability to ***tune*** the ***single rope technique rig*** according to rescue requirements and organisational policies and procedures. 2.2. Descend a fixed rope, using appropriate technique according to the situation requirements. 2.3. Maintain personal safety while performing changeovers from ascending to descending and descending to ascending.
3. Perform self rescues.	3.1. Assess the situation and identify suitable ***obstacle avoidance or extrication procedures*** according to organisational policies and procedures. 3.2. Carry out self rescue and negotiate ***simple obstacles*** while maintaining personal safety according to organisational policies and procedures.
4. Use mechanical advantage systems.	4.1. Identify ***contexts*** requiring the use of ***mechanical advantage systems***. 4.2. Determine the type of system required according to contextual issues. 4.3. Establish operational systems to raise and lower a

ELEMENT	PERFORMANCE CRITERIA
	person or equipment, ensuring the safety of operators, rescuee and others.
	4.4. Use system equipment according to manufacturer's recommendations and organisational policies and procedures, to ensure that design limits are not exceeded.
5. Undertake vertical rescues.	5.1. Identify an appropriate rescue method with relevant techniques to assist abseiler according to rescue circumstances.
	5.2. Demonstrate an escape from a belay.
	5.3. Establish rescue system efficiently and inform other group members of their roles.
	5.4. Construct and use an improvised ***harness*** in a rescue situation.
	5.5. Operate a rescue system, demonstrating lowering and raising procedures to recover a conscious person in a single pitch situation, with assistance.
6. Conclude rescue operations.	6.1. Check and store equipment according to organisational policies and procedures and manufacturer's guidelines.
	6.2. Evaluate rescue activity and identify improvements for future vertical rescues.

Required Skills and Knowledge

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

Required skills

- problem-solving skills to:
  - determine the most appropriate rescue method to use according to the situation
  - anticipate and mitigate hazards, obstacles and risks
  - establish rescue ropes that allow for efficient ascent and descent
- communication skills to:
  - inform progress
  - interact with other personnel and rescuee throughout the rescue process
- teamwork skills to support other personnel in the rescue operation, including lowering and raising procedures to recover a conscious person in a single pitch situation
- methods of ascending and descending a fixed rope and the ability to change over
- planning and organising skills to select relevant equipment and resources
- first aid and emergency response skills appropriate to the location to enable initial response to emergencies.

Required knowledge

- legislation and organisational policies and procedures to enable safe conduct of vertical rescue activities
- hazards, obstacles and risks associated with vertical rescues to minimise risk to those involved
- rigging of rescue ropes to minimise the effects of rope stretch and significant rub points and to allow for efficient ascents and descents
- equipment and resource types, characteristics and technology to enable appropriate selection and use of equipment
- principles and techniques for using belay systems and devices, anchors, knots and ropes
- principles of mechanical advantage systems and contexts in which they are used
- methods of removing rescuee or equipment from vertical single pitch, including lowering and raising procedures
- safety systems and emergency procedures relevant to the location and situation to ensure safety of self and other personnel.

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:

- selects rescue equipment according to rescue circumstances and rigs ropes to allow for safe ascents and descents
- ascends and descends ropes in a safe and efficient manner and identifies and negotiates hazards, obstacles and risks to self and others
- performs self-rescue in routine activity-specific situations while maintaining personal safety
- uses mechanical advantage systems to raise and lower a conscious person and or equipment in a controlled manner with assistance from others where required, according to contextual issues.

Context of and specific resources for assessment

Assessment must ensure participation in multiple vertical rescue activities in single pitch contexts to demonstrate competency and consistency of performance.

Assessment must also ensure access to:

- a suitable single pitch, above or below ground, in activity specific contexts such as abseiling, canyoning, caving and or climbing
- personnel for team based rescues
- rescue, safety, roping and activity-specific equipment according to rescue circumstances.

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:

- observation of selecting equipment and rigging ropes for safe ascents and descents
- oral or written questioning to assess knowledge of single pitch vertical rescue procedures and potential hazards, obstacles and risks
- observation of performing safe and efficient self rescues and rescues of others using mechanical advantage systems
- third-party reports from a supervisor detailing performance.

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

- Activity-specific units from the Fields of roping such as abseiling, canyoning, caving, climbing.

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.

Equipment may include:

- Prusik cords
- foot loops
- tape
- mechanical ascenders
- descending devices
- karabiners
- maillon rapids
- belay devices
- rope
- helmet
- harness
- rescue pulleys
- knife
- slings
- first aid equipment
- personal protective equipment.

Relevant legislation may include:

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

Organisational policies and procedures may include:

- occupational health and safety
- use, maintenance and storage of equipment
- communication protocols
- access to medical personnel
- removal of casualties
- minimal impact codes
- code of ethics.

Rig may include:

- natural anchors
- fixed anchors.

Effects of rope stretch may include:

- abrasions
- rope bounce
- undue stress on the anchor system.

Significant rub points may include:

- at the pitch head
- large protrusions

	• change in slope of the pitch • change in the direction of the pitch.
Personal safety systems may include:	• belays • self belays.
Hazards may include:	• temperature extremes • slippery or unstable terrain • dangerous animals and insects • stinging trees and nettles • dense vegetation • group management hazards.
Risks may include:	• hypothermia • heat exhaustion • injuries • exhaustion • lost part or party member • equipment failure.
Tune may include:	• change cord length • change types of ascenders and descenders • change type of prusiking action used.
Single rope technique rig may include:	• cows tails • harnesses • safety cords • ascenders • descenders • foot loops.
Obstacle avoidance or extrication procedures may include:	• by-passing obstacle • raising body weight • changeovers to another system while suspended on a rope.
Simple obstacles may include:	• knots • rope pads and protectors • traverses • other pitch users.
Contextual issues may include:	• weather conditions, including times • season • transport • trip distance and duration • group activities • group size.
Mechanical advantage systems	• simple pulley systems with one moving pulley • compound pulley systems with more than one

may include:	moving pulley • assisted or unassisted hoist by the participant.
Harness may include:	• sit • chest.

Unit Sector(s)

Outdoor Recreation

Competency Field

Vertical Rescues