



Australian Government

Department of Education, Employment and Workplace Relations

UETTDRC34A Undertake release and rescue from a tree near live electrical apparatus

Release: 1

UETTDRVC34A Undertake release and rescue from a tree near live electrical apparatus

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

1) Scope:

1.1) Descriptor

This competency standard covers the process of release and rescue of a tree climber working near live electrical apparatus, where an injured or unconscious tree climber is safely brought to the ground from a tree. Rescue and release safe working procedures requires hazard identification, basic first aid and emergency procedures, and tree climbing techniques. Release and rescue is likely to be undertaken in emergency situations with little or no supervision. Discretion and judgement is required in the selection of equipment, organisation of rescue, and associated actions. Competency is demonstrated by the application of knowledge and skills to a range of rescue tasks and roles usually within established enterprise guidelines.

It includes safely accessing trees from above ground level to install restraints/slings, removing tree limbs in a safe manner and, clearing debris from the felling site to eliminate the occurrence of electrical incidents. It DOES NOT include entry of persons, mobile plant, equipment, and/or specialised tools into to the safe approach distance (SAD) as defined.

Also included is the preparation of risk assessment control measures that encompass job safety assessment. All work and zones are in compliance with relevant State or Territory regulatory agencies/bodies, local government legislation, industry bi-partite body – Guidelines/Codes of Practices or other related requirements for safe work and access near live electrical and mechanical apparatus.

Application of the Unit

Application of the Unit 2)

This unit shall apply to Transmission, Distribution, Rail Traction, Telecommunications and Vegetation Management Control industry sectors.

Licensing/Regulatory Information

License to practice 3)

The skills and knowledge described in this unit may only be practiced under the regulations pertaining to each State and Territory for the safe planning and removal of vegetation around live powerlines up to the live work zone including near live electrical apparatus, and regulations that directly relate to Occupational Health and Safety and/or contracts of training where they apply.

Pre-Requisites

Prerequisite Unit(s) 4)

Competencies 4.1)

Granting of competency in this unit shall be made only after competency in the following unit(s) has/have been confirmed.

Where pre-requisite pathways have been identified. All competencies in the Common Unit Group must be have been completed.

Common Unit Group

Unit Code	Unit Title
UEENEEE101A	Apply Occupational Health and Safety regulations, codes and practices in the workplace
UETTDREL13A	Comply with sustainability, environmental and incidental response policies and procedures

Prerequisite Unit(s) 4)

UETTDREL14A	Working safely as a non electrical worker near live electrical apparatus
UETTDRCVC23A	Plan the removal of vegetation up to vegetation exclusion zone near live electrical apparatus
UETTDRCVC27A	Monitor safety compliance for vegetation work near live electrical apparatus

Literacy and numeracy skills 4.2)

Participants are best equipped to achieve this unit if they have reading, writing and numeracy skills indicated by the following scales. Description of each scale is given in Volume 2, Part 3 “Literacy and Numeracy”

Reading 2 Writing 2 Numeracy 2

Employability Skills Information

Employability Skills 5)

The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary of the qualification in which this unit of competency is packaged will assist in identifying Employability Skill requirements.

Elements and Performance Criteria Pre-Content

6) Elements describe the essential outcomes of a competency standard unit	Performance Criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare for release and rescue from a tree near live electrical apparatus.	1.1 OHS policies and procedures to be followed for the work to be performed are received and confirmed.
	1.2 Relevant requirements and established procedures to be followed for the work to be performed in accord with the aerial rescue are discussed with all personnel to establish and confirm the work schedule.
	1.3 Identify enterprise electrical apparatus, voltages and determine safe working clearances and conductive path.
	1.4 Rescue equipment and first aid kit are checked to ensure they are complete and placed within easy access.
	1.5 Resources including, equipment, tools, approved platforms and personal protective equipment (PPE) required for the job are selected, checked in working order and maintained according to established procedures.
	1.6 Emergency communication system used to summon emergency services is checked according to manufacturer's specifications and enterprise work procedures.
	1.7 Emergency plan is confirmed and clarified with work team prior to work being undertaken.
	1.8 Hazards are identified, OHS risks associated with working near live electrical apparatus are identified and reported according to established procedures.
	1.9 Scope of responsibility under the relevant work permit(s)/access authorisation(s) identified according to requirements and established procedures with relevant personnel.
	1.10 Relevant responsibility associated with First Aid, working aloft, and/or other related work safety procedures at the worksite are confirmed in

ELEMENT	PERFORMANCE CRITERIA
2 Carry out the release and rescue from a tree near live electrical apparatus.	accordance with requirements and established procedures to ensure safety measures are followed in the instance of an incident.
	1.11 Road signs, barriers and warning devices are obtained and positioned in accordance with given instructions and requirements.
	1.12 Pre-operational checks are undertaken to confirm safe and correct operation of tools and equipment for safe use near live electrical apparatus according to requirements and established procedures
	2.1 OHS and sustainable energy principles and practices to reduce the incidents of accidents and minimise waste are followed in accordance with given instructions, requirements and/or established procedures.
	2.2 Lifting, climbing, working aloft, and use of tools/equipment, techniques and practices are safely followed in accordance with given instructions and, according to requirements confirmed to eliminate the prospects of incidents.
	2.3 Operational knowledge for the release and rescue from a tree near electrical apparatus is confirmed according to requirements and established procedures.
	2.4 Emergency situation is assessed and emergency management plan activated according to enterprise requirements, established procedures.
	2.5 Assistance requested from work team and/or public according to requirements and enterprise procedures.
	2.6 Hazard warnings and safety signs are recognised and hazards and assessed OHS risks are monitored and suitable controls implemented/reported/referred to the immediate authorised personnel for directions according to established procedures.
	2.7 Appropriate access equipment to effect rescue is

ELEMENT	PERFORMANCE CRITERIA
	identified according to enterprise standards.
	2.8 Nature of the injury is assessed according to established procedures.
	2.9 Casualty and rescuer are safely secured according to enterprise standards .
	2.10 Injuries are assessed to determine whether or not to move casualty based on standard first aid procedures and risk assessment.
	2.11 Casualty with possible neck or spinal injuries is supported (but not moved) to await expert medical treatment.
	2.12 First aid able to be performed above ground is applied, as required, in line with standard procedures.
	2.13 Instructions to ground staff and climbers are communicated clearly and concisely according to established procedures.
	2.14 Casualty is prepared for descent according to first aid and risk assessments.
	2.15 Casualty is lowered safely to the ground with support of rescuer.
	2.16 Non-routine events are referred to the immediate authorised personnel for directions according to established procedures.
3 Complete the release and rescue from a tree near live electrical apparatus.	3.1 First aid is applied on the ground according to need and industry standard procedures.
	3.2 Emergency assistance is obtained as per emergency plan.
	3.3 Accidents and/or incidents are actioned and reported to authorised personnel in accordance with established procedures.
	3.4 Work site is rehabilitated, cleaned-up, sustainable energy principles and practices applied, and made safe in accordance with given instructions and established procedures or an agreed standard.

ELEMENT

PERFORMANCE CRITERIA

- 3.5 Tools, equipment and any surplus resources and materials are, where appropriate, cleaned, checked and returned to storage in accordance with established procedures.
- 3.6 Appropriate personnel are notified of work completion according to established procedures.
- 3.7 Post-operational checks, minor maintenance and/or relevant documentation of equipment and tools/platform are conducted according to requirements.
- 3.8 Works completion records of release and rescue, report forms/data sheets are completed accurately in accordance with given instructions and established procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

8) Essential Knowledge and Associated Skills (EKAS): This describes the essential skills and knowledge and their level, required for this unit.

Evidence shall show that knowledge has been acquired of releasing and rescuing near live electrical apparatus.

All knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies.

KS01-TVC34A ESI vegetation control release and rescue from a tree

Evidence shall show an understanding of undertaking a release and rescue from a tree near live electrical apparatus to an extent indicated by the following aspects:

T1 Climbing techniques encompassing:

- Commonwealth, State and local government legislation, standards, codes, supply authority regulations and or enterprise requirements including relevant certification and licensing applicable to climbing for the purpose of vegetation control
- Items/structures that are and are not permissible to climb for vegetation control
- Safety precautions which are specific to climbing structures for the control of vegetation - safe working practices and procedures, Occupational Health and Safety hazards and precautions, identification of OHS hazards, assessment and control of OHS risks, types, selection, maintenance, storage and use of personal protective equipment including harnesses, dangers of climbing in confined spaces and at heights, permit to work systems and isolation procedures/protocols, safe working policies, procedures and practices when climbing, emergency response and rescue including First Aid etc.
- Techniques in rigging - safety procedures including safety ropes and lines, checking and setting up equipment, load calculations/estimations, techniques in using rigging equipment, determining the serviceability of ropes and other lowering devices.
- Load charts - safe working load estimates — field formulas, branch and trunk calculations, mathematical calculations and use of technology related to loads, slings, weights, and height
- Tree climbing and pruning practices - safe climbing with ropes and harnesses, methods of ensuring operation of safety lines and ropes, roping techniques, load bearing equipment and lifts, purposes of restraints, straps, slings, bends and hitches, purposes of pulleys, maillon rapides, lowering drum, T-bar flying capstan.

T2 Basic emergency procedures in releasing a person from an energised position encompassing:

- Commonwealth, State and local government legislation, standards, codes, supply authority regulations and or enterprise requirements including relevant certification and licensing applicable to the requirements of releasing a person from energised situation
- Comprehension of EC24 Release and Rescue - detail a range of emergency situations that may arise during climbing operations, detail of resources available

REQUIRED SKILLS AND KNOWLEDGE

at the worksite, determining climber position with respect to live power lines in an emergency, assess response requirements, determining the appropriate personal protective equipment to be used.

- Techniques in undertaking emergency response procedures for the release of a climber - assessment of priorities of procedures to follow including isolation of supply, procedures for contacting emergency services and power supply company/asset owners, assessing the possibility of safe rescue of the climber and the factors to consider, assessing the best approach to rescuing the climber, determining appropriate personal protective equipment.
- Techniques in climbing tree or structure
- Techniques in safely removing climber from energised and/or de-energised supply
- Techniques to the application of First Aid procedures including CPR
- Techniques in lower climber to the ground
- Techniques in First Aid procedures when climber is on the ground

Evidence Guide

EVIDENCE GUIDE

9) This provides essential advice for assessment of the unit of competency and must be read in conjunction with the Performance Criteria and the Range Statement of the unit of competency and the Training Package Assessment Guidelines.

The Evidence Guide forms an integral part of this Competency Standard Unit and shall be used in conjunction with all component parts of this unit and, performed in accordance with the Assessment Guidelines of this Training Package.

Overview of Assessment

9.1)

Longitudinal competency development approaches to assessment, such as Profiling, require data to be reliably gathered in a form that can be consistently interpreted over time. This approach is best utilised in Apprenticeship programs and reduces assessment intervention. It is the Industry's preferred model for apprenticeships. However, where summative (or final) assessment is used it is to include the application of the competency in the normal work environment or, at a minimum, the application of the competency in a realistically simulated work environment. It is recognised that, in some circumstances, assessment in part or full can occur outside the workplace. However, it must be in accord with Industry and, Regulatory policy in this regard. Methods chosen for a particular assessment will be influenced by

various factors. These include the extent of the assessment, the most effective locations for the assessment activities to take place, access to physical resources, additional safety measures that may be required and the critical nature of the competencies being assessed.

The critical safety nature of working with electricity, electrical equipment, gas or any other hazardous substance/material carries risk in deeming a person competent. Hence, sources of evidence need to be 'rich' in nature so as to minimise error in judgment. Activities associated with normal every day work have a bearing on the decision as to how much and how detailed the data gathered will contribute to its 'richness'. Some skills are more critical to safety and operational requirements while the same skills may be more or less frequently practiced. These points are raised for the assessors to consider when choosing an assessment method and developing assessment instruments. Sample assessment instruments are included for Assessors in the Assessment Guidelines of this Training Package.

**Critical aspects
of evidence
required to
demonstrate
competency in
this unit** **9.2)**

Before the critical aspects of evidence are considered all prerequisites shall be met.

Evidence for competence in this unit shall be considered holistically. Each Element and associated Performance Criteria shall be demonstrated on at least two occasions in accordance with the "Assessment Guidelines – UET12". Evidence shall also comprise:

- A representative body of Performance Criteria demonstrated within the timeframes typically expected of the discipline, work function and industrial environment. In particular this shall incorporate evidence that shows a candidate is able to:
 - Implement Occupational Health and Safety workplace procedures and practices including the use of risk control measures as specified in the Performance Criteria and range; and
 - Apply sustainable energy principles and practices as specified in the Performance Criteria and range; and
 - Demonstrate an understanding of the essential knowledge and associated skills as described in this unit to such an extent that the learner's performance outcome is reported in

accordance with the preferred approach; namely a percentile graded result, where required by the regulated environment; and

- Demonstrate an appropriate level of employability skills; and
- Conduct work observing the relevant Anti Discrimination legislation, regulations, policies and workplace procedures; and
- Demonstrated performance across a representative range of contexts from the prescribed items below:

Range of tools/equipment/materials/procedures/workplaces/other variables		
Group No	The minimum number of items on which skill is to be demonstrated	Item List
A	Confirm all of the following	OHS safety practices and procedures. Basic first aid , electric shock and resuscitation. Procedures in the event of/responding to, incidents. Constant analysis and decision making relevant to the safety of the work, taking into account prevailing site conditions (lay of the land) and on-going weather conditions.
B	Given a rescue situation, confirm the selection of the relevant rescue equipment from the following.	First aid kit Emergency contact numbers Harness Lifeline prussik loop karabiners climbing spurs flipline/polestrap pulleys tube tape.

C	Given a rescue situation, confirm the selection of the required safety equipment from the following.	Pedestrian barriers Traffic barriers Warning signs Road signs Danger signs Flashing lights Traffic bollards Safety mesh Witches hats.
D	Given a rescue situation, confirm the selection of the personal protective equipment (PPE) from the following.	Steel cap boots Six point safety helmet Ear protection Eye protection Cut resistant trousers or chaps Hi Vis Clothing Close fitting work clothes Gloves
E	Confirm emergency communication systems used to summon emergency services using the following.	Checked for good working order and adequate battery power/within range for: mobile phone landline two-way radio
F	Confirm an emergency plan is put into action dealing with the following	The location and selection of the appropriate emergency contact numbers for: ambulance, medical centre police, fire brigade and/or electrical company. The site location details such as: grid reference, first aiders, and procedures..
G	Confirm how a casualty response maybe determined incorporating all of	Casualty response: verbal/nonverbal communication. observation.

	the following.	Observation noted: Patient conscious. Extent of patient injuries. Patient ability to assist in their rescue.
H	Identify hazards associated with rescue that need to be assessed from all of the following.	Hazards: electrical wires, energised trees and equipment, unstable branches or structures, insect swarm, climbing, fatigue, moving vehicles and equipment, heat and cold, manual handling, presence of blood and other bodily fluids.
I	Assess controls are implemented to minimise the risk of OHS hazards from all of the following.	Implementation of: The enterprise OHS policies and procedures. The securing of the site. The appropriate use of PPE. The appropriate use of safety equipment such as signage and protective barriers; The safe operation of tool, equipment and machinery. The correct manual handling The basic first aid available on site. The process and procedures in reporting problems to supervisors/emergency services. The availability of

		drinking liquids, and warm clothing.
J	Determine the selection and use of appropriate access equipment required to effect rescue using the following	Climbing spikes. Ropes. Climbing harness. Safety lines. Aerial lifts. Ladder. Crane or elevating work platform (EWP).
K	Demonstrate how the casualty will be prepared for descent incorporating the following	Immobilising the head and neck. Setting life lines. Use of slings. Harnesses and pulleys. Releasing the flip line. Use of rescue stretcher.
L	Demonstrate the following	Perform a release and rescue according to requirements and established procedures.
M	Confirm the completion of the appropriate records for the release and rescue operations incorporating all of the following.	Accident/Incident reports. Workcover forms. Risk assessment details. PPE issue and replacement dates. Equipment maintenance checklists. Safety audits.
N	At least one occasion	Dealing with an unplanned event by drawing on essential knowledge and associated skills to provide appropriate solutions incorporated in the holistic assessment with the above listed items.

Context of and specific resources for assessment **9.3)**

This unit should be assessed as it relates to normal work practice using procedures, information and resources typical of a workplace. This should include:

- OHS policy and work procedures and instructions.
- Suitable work environment, facilities, equipment and materials to safely undertake actual cutting/pruning of vegetation above ground up to the vegetation exclusion zone near live electrical apparatus using the climbing technique.

In addition to the resources listed above, in Context of and specific resources for assessment, evidence should show demonstrated competency working below ground, in limited spaces, with different structural/construction types and method and in a variety of environments.

Method of assessment **9.4)**

This Competency Standard Unit shall be assessed by methods given in Volume 1, Part 3 “Assessment Guidelines”.

Note:

Competent performance with inherent safe working practices is expected in the Transmission, Distribution and Rail Traction Industry. This requires that the specified essential knowledge and associated skills are assessed in a structured environment which is primarily intended for learning/assessment and incorporates all necessary equipment and facilities for learners to develop and demonstrate the essential knowledge and associated skills described in this unit.

Concurrent assessment and relationship with other units **9.5)**

For optimisation of training and assessment effort, competence in this unit may be assessed concurrently with the following units:

RTF2027A Undertake standard climbing techniques

Range Statement

RANGE STATEMENT

10) This relates to the unit of competency as a whole providing the range of contexts and conditions to which the Performance Criteria apply. It allows for different work environments and situations that will affect performance.

This Competency Standard Unit shall be demonstrated in relation to the release and rescue of personnel from a tree near live electrical apparatus as defined for both Authorised and Instructed Persons in the industry guidelines associated with live electrical apparatus.

Utilisation of climbing techniques in conjunction with aerial emergency rescue procedures and, inspection and preparation of climbing equipment with recommendations for corrective action being referred to appropriate authorities
Aerial work is conducted using regulator and/or industry approved climbing technique and includes height fall protection emergency rescue near live electrical apparatus
Safety practices include: the safe use of appropriate/specialised tools and equipment, the safe use of vegetation climbing equipment and techniques and may include safely accessing trees to install restraints/slings, removing tree limbs in a safe manner, clearing debris from the felling site to eliminate the occurrence of electrical incidents and reparation of risk assessment control measures that encompass job safety assessment. It also includes working safely up to the defined “ordinary person zone” near energised electrical apparatus (inc. electrical powerlines) for non-electrical worker/ordinary persons and risk assessment control measures that encompass job safety assessment.

Excludes entry of persons, mobile plant, equipment, and/or specialised tools into to the safe approach distance (SAD) as defined.

Work and zones is in compliance with relevant State or Territory regulatory agencies/bodies, local government legislation, Industry bi-partite body– Guidelines/Codes of Practices or other related requirements for safe work and access near live electrical and mechanical Apparatus

Excludes any work that is or may be performed by other competent operatives within the defined “live work zone”

Electricity supply infrastructure assets condition – sagging, swaying, ties, cross arms, poles, insulators, conductors, service wires, electrical apparatus/equipment, etc.

Safe approach distances zones/Safe Working Clearance

Other areas which may need to be taken into consideration are: work permit(s) and/or access authorisation permits, technical standards and Industry Guidelines, rural applications, inclement weather, ground configuration and access – undulations, uneven ground, soft ground, damp, road construction, pavements, etc, feeder route plans and the use of technology and mathematical calculations

Equipment and specialised tools for use in electrical environments and loading and slinging techniques

Vegetation control includes: site rehabilitation, horticultural vegetation cutting and pruning techniques to minimise regrowth - chemicals and physical cutting and pruning tools/equipment, concerns for vegetation type/species and significance – heritage, significant, urban/rural; vegetation fire prone areas and areas of particular significance.

RANGE STATEMENT

The following constants and variables included in the Element/Performance Criteria in this unit are fully described in the Definitions Section 1 of this volume and form an integral part of the Range Statement of this unit:

- Appropriate and relevant persons (see Personnel)
- Appropriate authorities
- Appropriate work platform
- Assessing risk
- Assessment
- Authorisation
- Documenting detail work events, record keeping and or storage of information
- Drawings and specifications
- Emergency
- Environmental and sustainable energy procedures
- Environmental legislation
- Established procedures
- Fall prevention
- Hazards
- Identifying hazards
- Inspect
- Legislation
- MSDS
- Notification
- OHS practices
- OHS issues
- Permits and/or permits to work
- Personnel
- Quality assurance systems
- Requirements
- Work clearance systems

Unit Sector(s)

Not applicable.

Competency Field

Competency Field 11)

Vegetation Units