



Australian Government

UETTDREL17A Operate asset inspection machinery and equipment near live electrical apparatus

Release: 2

UETTDREL17A Operate asset inspection machinery and equipment near live electrical apparatus

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

1) Scope:

1.1) Descriptor

This Competency Standard Unit covers the operation and routine maintenance of machinery and equipment used near live electrical apparatus. Also included is the preparation of risk assessment control measures that encompass job safety assessment. It also includes 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 use of equipment near live electrical and mechanical apparatus.

Application of the Unit

Application of the Unit 2)

This competency standards unit would be applied by asset inspectors engaged in the regular and methodical inspection and treatment poles and inspection of electrical apparatus in the transmission and distribution industry sector

Licensing/Regulatory Information

License to practice 3)

The skills and knowledge described in this unit may require a licence/registration to practice in the work place subject to regulations for undertaking of electrical work.

License to practice

3)

Practice in workplace and during training is also subject to regulations directly related to Occupational Health and Safety, electricity/telecommunications/gas/water industry safety and compliance, industrial relations, environmental protection, anti discrimination and training. Commonwealth, State/Territory or Local Government legislation and regulations may exist that limits the age of operating certain equipment.

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 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
UETTDREL14A	Working safe near live electrical apparatus as a non-electrical worker

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 3 Writing 3 Numeracy 3

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 to operate machinery and equipment near live electrical apparatus.	<table><tbody><tr><td>1.1</td><td>Works instructions are received, analysed and confirmed, if necessary by site inspection.</td></tr><tr><td>1.2</td><td>Relevant requirements and established procedures for the work are communicated to all personnel and identified for all work sites.</td></tr><tr><td>1.3</td><td>OHS policies and procedures related to requirements and established procedures for the operation of machinery and equipment near live electrical apparatus that are used on the poles are obtained and confirmed.</td></tr><tr><td>1.4</td><td>Work is prioritised and sequenced following consultation with others for completion within acceptable timeframes and in accordance with</td></tr></tbody></table>	1.1	Works instructions are received, analysed and confirmed, if necessary by site inspection.	1.2	Relevant requirements and established procedures for the work are communicated to all personnel and identified for all work sites.	1.3	OHS policies and procedures related to requirements and established procedures for the operation of machinery and equipment near live electrical apparatus that are used on the poles are obtained and confirmed.	1.4	Work is prioritised and sequenced following consultation with others for completion within acceptable timeframes and in accordance with
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1.4	Work is prioritised and sequenced following consultation with others for completion within acceptable timeframes and in accordance with								

ELEMENT

PERFORMANCE CRITERIA

established procedures.

- 1.5 Hazards are identified, OHS risks assessed and control measures are prioritised, implemented and monitored according to established procedures
- 1.6 Relevant work permits are obtained, where necessary, to access and perform work according to requirements and/or established procedures.
- 1.7 Resources including machinery, equipment, and personal protective equipment required for the job are obtained and, confirmed in working order.
- 1.8 Relevant person responsible for First Aid and related work safety procedures at the worksite is confirmed in accordance with established procedures to ensure safety measures are followed in the instance of an incident.
- 1.9 Liaison and communication issues with appropriate personnel, authorities, clients and land owners are resolved to carry out work where necessary.
- 1.10 Site is prepared according to the work schedule and to minimise risk and damage to property, commerce, and individuals in accordance with established procedures.
- 1.11 Personnel participating in the work are fully briefed and respective responsibilities confirmed in accordance with established procedures, where necessary.
- 1.12 Traffic management plan is identified and road signs, barriers and warning devices are positioned in accordance with requirements, where necessary.
- 1.13 Pre-operational checks are undertaken to confirm safe and correct operation of machinery and equipment for safe use near live electrical apparatus according to requirements and established procedures

ELEMENT	PERFORMANCE CRITERIA
2 Carry out the operation of machinery and equipment near live electrical apparatus	2.1 OHS and sustainable energy and environmental principles and practices to reduce the incidents of accidents and minimise waste are monitored and followed in accordance with requirements and established procedures.
	2.2 Machinery and equipment is selected appropriate to the task requirements, and used to produce desired outcome.
	2.3 Use of machinery and equipment, techniques and practices are safely followed in accordance with given instructions and according to requirements confirmed to eliminate the prospects of incidents.
	2.4 Essential knowledge and associated skills for the usage of machinery and equipment near live electrical apparatus to ensure completion in an agreed timeframe and, to quality standards with a minimum of waste according to requirements
	2.5 Hazard warnings and safety signs are recognised and hazards and identified and OHS risks are reported/ to the immediate appropriate personnel for directions according to established procedures.
	2.6 Machinery and equipment is safely operated near live electrical apparatus in accordance with the work schedule, requirements, given instructions and established procedures.
	2.7 Non-routine events are referred to the immediate appropriate personnel for directions according to established procedures.
	2.8 Problems associated with the operation of machinery and equipment near live electrical apparatus are attended to using acquired known solutions and skills related to routine procedures to ensure work instructions and established procedures are met.
	2.9 Unplanned events during the inspection and treatment of poles and structures are undertaken

ELEMENT

PERFORMANCE CRITERIA

		within the scope of established procedures.
	2.10	Known solutions to a variety of problems are applied using acquired knowledge and associated skills.
	2.11	On-going checks of quality of the work are undertaken in accordance with instructions and established procedures.
3 Complete the operation of machinery and equipment near live electrical apparatus	3.1	Work undertaken is checked against work schedule and anomalies reported to appropriate personnel in accordance with established procedures.
	3.2	Accidents and/or incidents are actioned and reported to appropriate personnel in accordance with established procedures
	3.3	Work site is rehabilitated, cleaned-up, sustainable energy principles and practices applied, and made safe in accordance with given instructions and established procedures or agreed standards.
	3.4	Machinery, equipment, tools and any surplus resources and materials are, where appropriate, cleaned, checked and returned to storage in accordance with established procedures.
	3.5	Appropriate personnel are notified of work completion according to established procedures.
	3.6	Post-operational checks, minor maintenance and/or relevant documentation of machinery and equipment are conducted according to requirements.
	3.7	Requirements for returning work permit(s) and/or access authorisation permits are confirmed, where applicable.
	3.8	Works completion records, 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 the operation of asset inspection machinery and equipment near live electrical apparatus.

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

KS01-TEL17A Asset inspection plant, machinery and equipment

Evidence shall show an understanding of asset inspection plant, machinery and equipment to an extent indicated by the following aspects.

T1 Assets inspection safety requirements encompassing:

- The legal requirements covering OHS in the work place
- Requirements for personal safety in the workplace
- Standards, codes, legislation, supply authority regulations and or enterprise requirements associated with safe use of enterprise vehicles
- Working safely with electrical tools and equipment near electrical apparatus
- Identification of Hazards and risks associated with working on / near live electrical apparatus
- Use and application of Personal Protective Equipment (PPE), selecting and using Personal Protecting Equipment (PPE)
- Safe work practices and procedures

T2 Asset inspection machinery and equipment encompassing:

- Reading and following information on standard operating procedures
- Following verbal instructions
- Selecting machinery and equipment appropriate to the task
- Identifying machinery and equipment defects
- Maintaining machinery and equipment using appropriate techniques
- Safe use of enterprise vehicles
- Operation of machinery and equipment - pre-operational checks, safe use of machinery and equipment, safe transporting and storage procedures according to manufacturers' / standard operating procedures
- Adjustments/alignments to a range of machinery and equipment
- Common faults and/or defects found in a range of machinery and equipment
- Procedures for marking unsafe or faulty machinery and equipment for repair
- Procedures for the safe use of hand and power tools
- Routine maintenance requirements of a range of machinery, equipment and hand and power tools
- Storage location and procedures for a range of machinery and equipment
- Hazards/control measures associated with the use of a range machinery and

REQUIRED SKILLS AND KNOWLEDGE

equipment

Evidence Guide

EVIDENCE GUIDE

9) This provides essential advice for assessment of the competency standard unit and must be read in conjunction with the Performance Criteria and the range statement of the competency standard unit 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**

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 operational knowledge associated with the operation of control machinery and equipment near live electrical apparatus in all of the following:	Recognition of aerial voltage systems. Identification of Low Voltage Aerial Circuits. Identification of High Voltage Aerial Circuits. Safe approach distance so defined by relevant authorities. Use of technical standards, acts, regulations, codes /guidelines and established/enterprise/asset owner's procedures. System Control – Information required and functions. Vicinity Permit – Information required and functions. Confirm environmental principals and procedures
B	Confirm safe practices associated with the operation of control machinery and equipment near live electrical apparatus in all of the following:	OHS safety practices and procedures. Electric shock and resuscitation. Events constituting an incident. Procedures in the event of/responding to,

		incidents. Methods of identifying hazards. Risk assessment procedures. Selection of the best position for monitoring and controlling work. 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
C	Confirm the safe operation of machinery and equipment in varying conditions and weather near live electrical apparatus and undertake pre and post operational checks, inspections in at least 4 of the following:	Chainsaws, Brush Cutters, Power Pruners, Powered Drills, *Augers, Air Compressors, Generators, Jack Hammers, Demolition saws, Measuring devices, Extendable mounted cameras (* Must do)
D	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.
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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 work near live electrical apparatus

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 Industry to which this Competency Standard Unit applies. 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 is not recommended to be assessed concurrently with any

other unit.

Range Statement

RANGE STATEMENT

10) This relates to the competency standard unit 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.

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

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:

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| Machinery, equipment may include: | <ul style="list-style-type: none">• Power operated tools such as chainsaws, brush cutters, power pruners, powered drills, augers, air compressors, generators, jack hammers, demolition saws, measuring devices, extendable mounted cameras• Excludes machinery and equipment that encompass driving and associated licenses, such as slashers, boom-operated insulated elevating work platforms, excavator, back hoes and the like. |
| Tools may include (but not limited to): | <ul style="list-style-type: none">• Hand tools such as hacksaws, hammers, screwdrivers, sockets, wrenches, scrapers, chisels, files, tape measures, bolt cutters, knives and other related associated |
| Near Live electrical apparatus may include(but not limited to): | <ul style="list-style-type: none">• Single Wire Earth Return (SWER), High Voltage (HV) and Low Voltage (LV) overhead conductors and cables, underground cables (as attached to the poles) and overhead transition points, conductor terminations, insulators, conductor ties, cross arms, cross arm mountings and brackets, switches, HV fuses and fuse carriers, pole mounted transformers, sub stations, air-break switches, surge diverters, auto reclose relays, possum guards, earth guards, angle of the pole, lights, bolts and associated pole fixings.• Excludes any work that is or may be performed by other competent and / or licensed operatives |
| OHS policies and procedures may include: | <ul style="list-style-type: none">• The preparation of risk assessment control measures that encompass job safety assessment and includes traffic control measures and 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 use of equipment near live electrical apparatus. |
| Permits may include: | <ul style="list-style-type: none">• Safe Approach Distances Zones / Safe Working Clearance, Work Permit(s) and/or Access Authorisation Permits and those required under Technical standards and Industry |

RANGE STATEMENT

Guidelines.

Unit Sector(s)

Not applicable.

Competency Field

Competency Field 11)

Entry Level – Cross Discipline Units.