



**Australian Government**

# **UEENEEG165A Maintain and service traction lifts systems and equipment**

**Release: 2**

# UEENEEG165A Maintain and service traction lifts systems and equipment

## Modification History

Not applicable.

## Unit Descriptor

### Unit Descriptor

#### 1) Scope:

##### 1.1) Descriptor

This unit covers maintenance and servicing of traction lift systems and equipment. It encompasses working safely, conducting site cleaning, lubricating and painting lift equipment, inspecting of suspension, governors, compensators, floor selector and tappet switch ropes, and carrying out periodic testing on lift safety gear.

## Application of the Unit

### Application of the Unit 2)

This unit applies to any formal recognition for this standard at the aligned AQF 3 level or higher.

## Licensing/Regulatory Information

### License to practice 3)

The skills and knowledge described in this unit require a license to practice in the workplace where plant and equipment operate at voltage above 50 V a.c. or 120 V d.c. However other conditions may apply in some jurisdictions subject to regulations related to electrical work. Practice in the workplace and during training is also subject to regulations directly related to occupational health and safety and where applicable contracts of training such as apprenticeships.

## Pre-Requisites

**Prerequisite Unit(s)** 4)

**Competencies** 4.1)

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

UEENEEE1 01A	Apply Occupational Health and Safety regulations, codes and practices in the workplace
UEENEEE1 02A	Fabricate, dismantle, assemble of utilities components
UEENEEE1 04A	Solve problems in d.c circuits
UEENEEE1 05A	Fix and secure electrotechnology equipment
UEENEEE1 07A	Use drawings, diagrams, schedules, standards, codes and specifications
UEENEEG0 06A	Solve problems in single and three phase low voltage machines
UEENEEG0 33A	Solve problems in single and three phase electrical apparatus and circuits
UEENEEG0 63A	Arrange circuits, control and protection for general electrical installations
UEENEEG1 01A	Solve problems in electromagnetic devices and related circuits
UEENEEG1 02A	Solve problems in low voltage a.c. circuit
UEENEEG1 06A	Terminate cables, cords and accessories for low voltage circuits
UEENEEG1 08A	Trouble-shoot and repair faults in low voltage electrical apparatus and circuits

**Prerequisite Unit(s) 4)**

UEENEEG1 16A Diagnose and rectify faults in traction lift systems

**Literacy and numeracy skills 4.2)**

Participants are best equipped to achieve competency in 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 4      Writing 4      Numeracy 4

**Employability Skills Information****Employability Skills 5)**

This unit contains Employability Skills

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.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare to maintain and service lift equipment.	<p>1.1 OHS procedures for a given work area are identified, obtained and understood.</p> <p>1.2 OHS risk control measures and procedures in preparation for the work are followed.</p> <p>1.3 The likely extent of work to be undertaken is envisaged from maintain procedures or fault/breakdown reports and/or discussions with appropriate person(s).</p> <p>1.4 Advice is sought from the work supervisor to ensure the work is coordinated effectively with others.</p> <p>1.5 Tools, equipment and testing devices needed to carry out the work are obtained in accordance with established procedures and checked for correct operation and safety.</p>
2 Maintain and service lift equipment.	<p>2.1 OHS risk control measures and procedures for carrying out the work are followed.</p> <p>2.2 The need to test or measure live is determined in strict accordance with OHS requirements and when necessary conducted within established safety procedures.</p> <p>2.3 Circuits/machines/plant are checked as being isolated where necessary in strict accordance OHS requirements and procedures.</p> <p>2.4 Safety hazards resulting from the fault or breakdown are documented and risk control measured and devised and implemented in consultation with appropriate personnel.</p>
3 Completion and report of maintain and servicing activities	<p>3.1 OHS work completion risk control measures and procedures are followed.</p> <p>3.2 Reusable, faulty or worn components are tagged and dispatched for repair to maintain adequate spares.</p>

**ELEMENT****PERFORMANCE CRITERIA**

- 3.3 Maintenance work activities are documented in accordance with established procedures.

Note.

Examples of documentation are components fault reports, test results, authorisations, permits, parts/component dispatch and store records

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

8) This describes the essential skills and knowledge and their level, required for this unit.

Evidence shall show that knowledge has been acquired of safe working practices and maintaining and servicing traction lifts.

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

#### KS01-EG165A

#### Lift systems - lift component

Evidence shall show an understanding of the maintenance and servicing of traction lifts to an extent indicated by the following aspects:

T1 Lubricant selection for lift components encompassing:

- Corrosion protection
- Friction reduction
- Cooling
- Viscosity
- Lubricant loss and loss estimation
- Suitable oils, greases, coolants, rust preventatives and solvents for particular devices

T2 Lubricant application for lift components encompassing:

- Hand, Grease guns,
- Oil cans,
- Pressure lubricators,
- Oil misters,
- Level indicators,
- Estimating quantities,
- Lubrication points
- Automatic lubricators

T3 Lift systems single and multiple wrap roping, types of ropes and their attachments encompassing:

- Hoisting
- Governor
- Tappet
- Compensator
- Selector
- Normal lay rope
- Langs lay rope
- Standard ends attachments
- Splices

## REQUIRED SKILLS AND KNOWLEDGE

- Wedge sockets
- Talurit fitting
- Babbit sockets
- Secon fitting

T4 Lift systems basic rope inspection encompassing: Lift systems basic rope inspection encompassing:

- Requirements of Lift Code/enterprise
- Purpose
- Wear
- Broken strands
- Diameter
- Deformation
- Corrosion
- Lubrication
- Tension

T5 Rope stretch encompassing:

- Requirements of Lift Code/enterprise
- Counterweight clearance
- Compensatory equipment

T6 Inspection of rope attachments encompassing:

- Requirements of Lift Code/enterprise
- Rope anchor rods
- Castings, Springs
- Wedges
- Swaging
- Checking for fracturing
- Deformation
- Remedial action

T7 Inspection of sheaves encompassing:

- Groove condition
- Rifling
- Ropes down in sheaves
- Maintenance records

T8 Maintenance, replacement and adjustment of mechanical lift components encompassing:

- Door locks
- Air cords
- Selectors



## REQUIRED SKILLS AND KNOWLEDGE

- Bearings; roller, sleeve, guide shoes, and slipper
- Door guides
- Landing doors
- Car doors
- Tapes/chains
- Motor room equipment
- Well equipment
- Pit equipment

## Evidence Guide

### EVIDENCE GUIDE

9) The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

The Evidence Guide forms an integral part of this unit. It must be used in conjunction with all 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 accordance with industry and regulatory policy.

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. Sources of evidence need to be 'rich' in nature 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 practised. 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 – UEE11'. Evidence shall also comprise:

- A representative body of work performance 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 statement
  - Apply sustainable energy principles and practices as specified in the performance criteria and range statement
  - Demonstrate an understanding of the essential knowledge and associated skills as described in this unit. It may be required by some jurisdictions that RTOs provide a percentile graded result for the purpose of regulatory or licensing requirements.
  - Demonstrate an appropriate level of skills enabling employment

- Conduct work observing the relevant Anti Discrimination legislation, regulations, polices and workplace procedures
- Demonstrated consistent performance across a representative range of contexts from the prescribed items below:
  - Maintain and service traction lifts as described as described in 8) and including:
    - A Conduct site cleaning, lubricating and painting of lift equipment.
    - B Inspect lift ropes.
    - C Maintain electro-hydraulic lift equipment.
    - D Carry out lift safety gear periodic testing.
    - E Dealing with unplanned events by drawing on essential knowledge and skills to provide appropriate solutions incorporated in the holistic assessment with the above listed items.

Note:

Successful completion of relevant vendor training may be used to contribute to evidence on which competency is deemed. In these cases the alignment of outcomes of vendor training with performance criteria and critical aspects of evidence shall be clearly identified

**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 undertake actual work as prescribed by this unit.

These should be part of the formal learning/assessment environment.

Note:

Where simulation is considered a suitable strategy for assessment, conditions must be authentic and as far as possible reproduce and replicate the workplace and be consistent with the approved industry simulation policy.

The resources used for assessment should reflect current industry

practices in relation to maintaining and servicing traction lifts.

**Method of  
assessment**

**9.4)**

This 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 unit applies. This requires assessment 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 skills described in this unit.

**Concurrent  
assessment and  
relationship with  
other units**

**9.5)**

There are no concurrent assessment recommendations for this unit.

## Range Statement

### RANGE STATEMENT

**10)** This relates to the 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.

- Competency shall be demonstrated in relation to maintaining and servicing at least two of the lift equipment as following:
  - Geared traction drive
  - Gearless traction drive
  - Drum drive
  - Suspended electro-hydraulic drive
- At least two of the roping systems as following:
  - Single or double wrap
  - Single or multiple fall
  - Side slung or underslung
  - Overhead or basement drive
  - Drum drive.
- And at least two of the components as following:
  - Suspension ropes
  - Governor ropes
  - Tappet ropes
  - Compensator ropes
  - Floor selector tapes/ropes
- All safety gear periodic tests as following:
  - Governor type A
  - Governor type B
  - Governor type C

Generic terms used throughout this Vocational Standard shall be regarded as part of the Range Statement in which competency is demonstrated. The definition of these and other terms that apply are given in Volume 2, Part 2.1.

### Unit Sector(s)

Not applicable.

## Competency Field

Competency Field      11)  
                                 Electrical