



Australian Government

UEENEEG166A Install and maintain escalators, moving walks and treadways

Release: 2

UEENEEG166A Install and maintain escalators, moving walks and treadways

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

1) Scope:

1.1) Descriptor

This unit covers installation and maintenance of escalators, moving walks and treadways. It encompasses working safely, installing and maintaining escalators, moving walks and tread ways such as repair or replacement of escalator handrails, cleaning, lubricating, replacement and adjustment of escalator/moving walk/tread way mechanical components and/or the installation and commissioning of escalators/moving walks/tread ways.

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

License to practice**3)**

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	Terminate cables, cords and accessories for

Prerequisite Unit(s) 4)

06A	low voltage circuits
UEENEEG1 08A	Trouble-shoot and repair faults in low voltage electrical apparatus and circuits
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 install and maintain of escalators, moving walks and treadways.	1.1 OHS procedures for a given work area are identified, obtained and understood.
	1.2 OHS risk control measures and procedures in preparation for the work are followed.
	1.3 The likely extent of work to be undertaken is envisaged from maintain procedures or plans/specifications and/or discussions with appropriate person(s).
	1.4 Advice is sought from the work supervisor to ensure the work is coordinated effectively with others.
	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.
2 Install and maintain escalators, moving walks and/or treadways	2.1 OHS risk control measures and procedures for carrying out the work are followed.
	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.
	2.3 Circuits/machines/plant are checked as being isolated where necessary in strict accordance OHS requirements and procedures.
	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.
	2.5 Established methods for dealing with unexpected situations are discussed with appropriate person or persons and documented.
	2.6 Unexpected situations are dealt with safely and with the approval of an authorised person.
	2.7 Ongoing checks of the quality of installed/maintain apparatus are undertaken in

ELEMENT	PERFORMANCE CRITERIA
3 Completion and report of install and maintain activities	accordance with established procedures.
	2.8 Apparatus installation/maintenance is carried out efficiently without unnecessary waste of materials or damage to apparatus, circuits, the surrounding environment or services and using sustainable energy principles.
	3.1 OHS work completion risk control measures and procedures are followed.
	3.2 Reusable, faulty or worn components are tagged and dispatched for repair to maintain adequate spares.
	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
	3.4 Final checks are made to that the installed/maintained apparatus conforms to requirements.
	3.5 'As-installed' apparatus and associated equipment is documented and an appropriate person or persons notified in accordance with established procedures.

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 installing and maintenance of escalators, moving walks and treadways.

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

KS01-EG166A mechanics

Escalators, moving walk and treadway

Evidence shall show an understanding of installing and maintaining escalators, moving walks and tread ways to an extent indicated by the following aspects:

T1 Escalators and moving walks components encompassing:

- Machine Brakes
- Controller
- Safety devices
- Balustrade lighting
- Steps/pallets/belts
- Hand rail
- Drive chain
- Truss
- Track systems
- Step/pallet chains
- Rollers, Tension carriage
- Hand rail earthing

T2 Lubricant selection for escalator components encompassing:

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

T3 Lubricant application for escalator components encompassing:

- Hand, Grease guns,
- Oil cans,
- Pressure lubricators,
- Oil misters,
- Level indicators,

REQUIRED SKILLS AND KNOWLEDGE

- Estimating quantities,
- Lubrication points
- Automatic lubricators

T4 Escalators basic principles encompassing:

- Statutory and enterprise requirements: Lift Code, OHS, emergency stop, danger signage, barriers and running clearances
- Purpose of controller, safety devices, chain/steps and hand rail
- Techniques for repair of steps/belts/pallets, combs, guards, balustrades, Newel rollers, balustrade lighting and hand rails
- Adjustments of chains, hand rail, brake, steps and safety devices

T5 Escalator safe working procedures encompassing:

- Removing steps/pallets
- Working in motor room/pit
- Cleaning/lubricating
- Guards
- Hand rails remove/refit

T6 Escalator installation and commissioning encompassing:

- Aligning
- Testing
- Handling
- Running clearances

T7 Escalator types to suit applications encompassing:

- Factors
- volume of people
- Gradient
- Multi floor use

T8 Moving walks encompassing:

- Types; Continuous belts and palletised types
- Statutory requirements: OHS, Lift Code
- Comparison with escalator

T9 Tread Ways encompassing:

- Belt and palletised types
- Statutory requirements, OHS, Lift Code

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**

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, policies and workplace procedures
- Demonstrated consistent performance across a representative range of contexts from the prescribed items below:
 - Install and maintenance of escalators, moving walks and treadways as described in 8) and including:
 - A Escalators.
 - B Moving walks.
 - C Treadways.
 - D 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 installation and maintenance of escalators, moving walks and treadways.

**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 installing and maintaining at least one of the following:

- Escalators (single or multiple units)
- Moving walks (single or multiple units)
- Treadways (belt or pallet type)
- At least five of the following:
 - Handrails
 - Steps
 - Pallets
 - Step-chains and associated driving equipment
 - Chains
 - Combs
 - Guards
 - Balustrades
 - Step rollers
 - Newel rollers
 - Motors
 - Controllers
 - Safety devices

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

