



Australian Government

UEEEL0052 Maintain and service traction lift systems and equipment

Release: 2

UEEEL0052 Maintain and service traction lift systems and equipment

Modification History

Release 2. Minor change. Typographic error in prerequisites corrected.

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package

Application

This unit involves the skills and knowledge required to maintain and service traction lift systems and equipment.

It includes planning, maintaining and servicing lift system and equipment by working safely; conducting site cleaning; lubricating and inspecting suspension, governors, compensators, floor selector and tappet switch ropes. It also includes carrying out periodic testing on lift safety gear, and completing and reporting service activities.

The skills and knowledge described in this unit require a licence or permit to practice in the workplace where work is carried out on electrical installations which are designed to operate at voltages greater than 50 volt (V) alternating current (a.c.) or 120 V direct current (d.c.).

Competency development activities in this unit are subject to regulations directly related to licensing. Where a licence or permit to practice is not held, a relevant contract of training, such as an Australian Apprenticeship, may be required.

Additional and/or 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 work health and safety (WHS)/occupational health and safety (OHS) regulations.

Pre-requisite Unit

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

UEECD0019 Fabricate, assemble and dismantle utilities industry components

UEECD0020 Fix and secure electrotechnology equipment

UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications

UEEEL0003 Arrange circuits, control and protection for general electrical installations

UEEEL0020 Solve problems in low voltage a.c. circuits

UEEEL0023 Terminate cables, cords and accessories for low voltage circuits

UEEEL0045 Diagnose and rectify faults in traction lift systems

UEEEL0019 Solve problems in direct current (d.c.) machines

UEEEL0021 Solve problems in electromagnetic devices

UEEEL0014 Isolate, test and troubleshoot low voltage electrical circuits

UEEEL0008 Evaluate and modify low voltage heating equipment and controls

UEEEL0009 Evaluate and modify low voltage lighting circuits, equipment, and controls

UEEEL0010 Evaluate and modify low voltage socket outlets circuits

UEEEL0024 Test and connect alternating current (a.c.) rotating machines

UEEEL0025 Test and connect transformers

and

UEECD0043 Solve problems in direct current circuits

or

UEECD0044 Solve problems in multiple path circuits

UEECD0046 Solve problems in path circuits

Competency Field

Electrical

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare service lift equipment

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1** WHS/OHS requirements and workplace procedures for a given work area are identified and applied
- 1.2** WHS/OHS risk control measures and workplace procedures in preparation for the work are followed
- 1.3** Scope of work to be undertaken is identified from maintenance workplace procedures or fault/breakdown reports and/or discussions with appropriate person/s
- 1.4** Advice is sought from work supervisor to ensure work is coordinated effectively with others

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|---|------------|---|
| | 1.5 | Tools, equipment and testing devices needed to carry out service work are obtained in accordance with workplace procedures and checked for correct operation and safety |
| 2 Service lift equipment | 2.1 | WHS/OHS risk control measures and procedures for carrying out service work are followed |
| | 2.2 | Need to test or measure live electrical work is determined in accordance with WHS/OHS requirements and conducted in accordance with workplace safety procedures |
| | 2.3 | Circuits/machines/plant are checked and isolated in accordance with WHS/OHS requirements and workplace procedures |
| | 2.4 | Safety hazards resulting from fault/s or breakdown are documented on job safety assessments, risks assessed and risk control measures implemented in consultation with appropriate person/s |
| 3 Complete and report service activities | 3.1 | WHS/OHS work completion risk control measures and workplace procedures are followed |
| | 3.2 | Reusable, faulty or worn components are inspected, tagged and despatched for repair to maintain adequate spares in accordance with workplace procedures |
| | 3.3 | Maintenance work activities are documented in accordance with workplace procedures |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Maintaining and servicing lift systems must include at least the following:

- two of the following lift equipment:
 - geared traction drive

- gearless traction drive
- drum drive
- suspended electro-hydraulic drive
- two of the following roping systems:
 - single or double wrap
 - single or multiple fall
 - side slung or underslung
 - overhead or basement drive
 - drum drive
- two of the following components:
 - suspension ropes
 - governor ropes
 - tappet ropes
 - compensator ropes
 - floor selector tapes/ropes
- all of the following safety gear periodic tests:
 - governor type A
 - governor type B
 - governor type C

Unit Mapping Information

This unit replaces and is equivalent to UEENEEG165A Maintain and service traction lifts systems and equipment.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>

Assessment Requirements for UEEEL0052 Maintain and service traction lift systems and equipment

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least two separate occasions and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures and practices, including using of risk control measures
- applying sustainable energy principles and practices
- completing and reporting lift system servicing activities
- maintaining and servicing traction lift equipment, including:
 - carrying out lift safety gear periodic testing
 - conducting site cleaning and lubricating of lift equipment
 - dealing with unplanned events in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
 - inspecting lift ropes
 - maintaining electro-hydraulic lift equipment
- planning to maintain and service lift systems.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- lubricant selection for lift components, including:
 - cooling and viscosity
 - corrosion protection and friction reduction
 - lubricant loss and loss estimation
 - suitable oils, greases, coolants, rust preventatives and solvents for particular devices
- lubricant application for lift components, including hand grease guns, oil cans and misters, pressure and automatic lubricators, lubrication points, level indicators and estimating

quantities

- lift systems: single and multiple wrap roping; types of ropes and their attachments, including hoisting, governor, tappet, compensator, selector, normal and Langs lay rope, standard ends attachments, splices, wedge sockets, Talurit fitting, Babbit sockets and Secon fitting
- lift system rope inspection, including:
 - corrosion, lubrication and tension
 - lift systems basic rope inspection
 - purpose
 - rope stretch
 - wear, broken strands, diameter and deformation
- rope stretch, including counterweight clearance and compensatory equipment
- inspection of rope attachments, including:
 - deformation and remedial action
 - rope anchor rods, castings and springs
 - wedges, swaging and checking for fracturing
- inspection of sheaves, including groove condition, rifling, ropes down in sheaves and maintenance records
- maintenance, replacement and adjustment of mechanical lift components, including:
 - air cords, selectors and tapes/chains
 - bearings: roller, sleeve, guide shoes and slipper
 - car and landing doors, locks and guides
 - well, pit and motor room equipment
- relevant job safety assessments or risk mitigation processes
- relevant manufacturer specifications
- relevant requirements of lift code/enterprise
- relevant WHS/OHS legislated requirements
- relevant workplace documentation including authorisations permit parts/component, components fault report/s, despatch and store records, and test results
- relevant workplace policies and procedures
- sustainable energy principles and practices.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in suitable workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in suitable simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy

requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, facilities, equipment and personal protective equipment (PPE) currently used in industry
- resources that reflect current industry practices in relation to maintaining and servicing traction lifts
- applicable documentation, including workplace procedures, equipment specifications, regulations, relevant industry standards, codes of practice and operation manuals.

Links

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<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>