



Australian Government

UEEEL0026 Align and install traction lift equipment

Release: 2

UEEEL0026 Align and install traction lift 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 align and install traction lift mechanical and electrical equipment.

It includes planning, aligning and installing lift mechanical and electrical equipment by working safely in alignment of lift structures such as measuring, marking out and aligning of lift installations, including machine room equipment, lift well equipment, the lift car and associated equipment and landing door frames and doors. It also includes setting out of multiple lift wells in varying configurations and the installations of well and pit equipment, lift car equipment, superstructure and counterweights, machine room equipment, landing, door frames and door, landing buttons and indicator boxes; and completing workplace reporting 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

UEECD0046 Solve problems in single path circuits

UEECD0044 Solve problems in multiple path circuits

Competency Field

Electrical

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to install 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 site plans, drawings, specifications and/or discussions with appropriate person/s
- 1.4** Advice is sought from work supervisor to ensure work is

- coordinated effectively with others
- 2 Align and install lift equipment**
- 1.5** Tools, equipment and alignment devices needed to carry out work are obtained in accordance with workplace procedures and checked for correct operation and safety
- 2.1** WHS/OHS risk control measures and workplace procedures for carrying out 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** Equipment is installed straight and square in the required locations and within acceptable tolerances
- 2.5** Equipment is aligned and installed in accordance with manufacturer specifications and regulatory requirements
- 2.6** Existing safe work methods for dealing with unplanned situations are discussed with appropriate person/s and documented in accordance with workplace procedures
- 2.7** Unplanned situations are responded to in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- 2.8** Checks of the quality of installed equipment are undertaken in accordance with workplace procedures
- 2.9** Equipment installation is carried out efficiently without unnecessary waste of materials or damage to apparatus, circuits or the surrounding environment using sustainable energy practices
- 3 Complete and report alignment and installation activities**
- 3.1** WHS/OHS work completion risk control measures and workplace procedures are followed
- 3.2** Worksite is cleaned and made safe in accordance with workplace procedures
- 3.3** Final checks are made to ensure that the installed equipment conforms to job specifications and workplace

requirements

- 3.4** 'As-installed' equipment is documented and an appropriate person/s notified 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.

Aligning and installing must include at least the following:

- two of the following alignments:
 - lift car alignment
 - lift well alignment
 - machine room alignment
- two of the following types of equipment:
 - lift cars
 - lift well equipment
 - machine room equipment

Unit Mapping Information

This unit replaces and is equivalent to UEENEEG167A Align and install traction lift 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 UEEEL0026 Align and install traction lift equipment

Modification History

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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:

- aligning and installing traction lift equipment
- 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
- carrying out alignment functions
- completing and reporting alignment and installation work activities
- dealing with unplanned events in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- planning to align and install traction lift equipment.

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:

- alignment equipment, including rail gauges, straight edges, shims/packers and lasers
- car operating devices, including slowdown switch, limits, inductors, door locks, vanes and shaft information
- current industry practices, workplace procedures and technologies
- equipment layout, including specifications, clearances, 3-D impact on layout and lift code
- fixing devices and methods, including inserts and expansion and chemically bonded anchors
- installation and alignment of hydraulic equipment, including ram/cylinder, hydraulic lines and bleeding hydraulic system
- lift car alignment, including superstructure, frames and doors
- lift well alignment, including guides and brackets, trimmer beams, buffers, compensators, landing doors and locks

- lift well/s, including lift well alignment
- multiple lift wells, including:
 - corrective action and setting of well templates
 - plumb charts analysis for 3-D impact
 - use of theodolite, centre line/datum, survey information and layouts
- single lift wells, including:
 - purpose and need for accuracy, including identification of clearances
 - modification of errors, including adjustment and use of template
 - use of plumb lines and weights
 - measuring and marking out lift wells and machine room, where appropriate
 - plumbing chart and use of laser level
- machine room alignment, including machine and fixings, diverter, governor and tensioning sheaves, counterweight centre lines and roping system
- relevant job safety assessments or risk mitigation processes
- relevant manufacturer specifications and relevant industry standards, including:
 - traction lift mechanical equipment
 - traction lift electrical equipment
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies, procedures and instructions
- running clearances requirements, including safety gear, car sill and door operator
- 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 aligning and installing lift equipment

- applicable documentation, including workplace procedures, equipment specifications, regulations, relevant industry standards, codes of practice and operation manuals.

Links

Companion Volume implementation guides are found in VETNet - -

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