



Australian Government

Assessment Requirements for UEEEL0044 Diagnose and rectify faults in complex lift systems

Release: 2

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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.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- releasing passengers from a lift which has become immobilised
- diagnosing and repairing faults in lift circuits and associated components for at least three types of lift circuits/components, including:
 - governors
 - brakes
 - safety gear
 - safety devices
 - lift machines
 - door components
 - controllers
- replacing and/or adjusting lift equipment in at least three types of lift equipment as described below:
 - electro-hydraulic lift
 - electric traction lift
 - passenger lift
 - goods lift
- dealing with unplanned events
- applying relevant industry standards
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including using risk control measures
- diagnosing and rectifying faults, including:
 - inspecting, testing and measuring live electrical work
 - obtaining and checking tools, equipment, resources and testing devices
 - using diagnostic methods
- following workplace procedures and instructions
- reporting fault diagnosis and rectification activities, including:

- completing documentation.

Knowledge Evidence

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

- lift components and systems - electrical/electronic, including:
 - traction lifts encompassing:
 - lift control circuits (relay logic only): floor selector circuitry
 - machine room control (selector) and well control (transducer) circuitry - direction slowing and stopping, re-levelling, door operator, acceleration, button, indicator/lantern, lights and emergency lights, travelling cables, key switch circuits, fans, main supply and power circuits
 - safety circuits encompassing:
 - type, operation and actuation
 - landing door locks, car door locks, emergency stop, pit switch, car trap-door switch, fire service, car top switch, tappet switch, governor switch, and safety gear switch, reverse phase relay, phase failure relay and limit switches
 - maintenance, replacement and adjustment encompassing:
 - electrical and electronic lift components - travelling cables, tachometers, selectors, encoders and transducers
 - safety devices: overloads, circuit breakers, limit switches, terminal stopping, door protection, governors and safety gear/switches
 - electrical layout/drawings and special requirements encompassing:
 - lift code and AS/NZS 3000 Electrical installations (known as the Australian/New Zealand Wiring Rules) requirements
 - specific lift symbols
 - conduits
 - trailing cable
 - troughing
 - colour coding and labelling
 - segregation low voltage (LV)/extra-low voltage (ELV)
 - telephone and communication cabling
 - regulatory requirements and door lock wiring
 - safety drive adjustment encompassing:
 - emergency stop button
 - speed governor
 - reverse phase protection
 - broken chain/step switch
 - broken main drive switch
 - drive access switch

- start pressure switch and landing guards/barriers
- lift components – electronic encompassing:
 - encoders
 - transducers
 - electronic boards
 - selectors
 - rectifiers
 - capacitors
 - resistors
 - processor board
 - input/output (I/O) board
- drives - types, construction and operation encompassing:
 - traction
 - gearless types:
 - speed/load characteristics, efficiency, application, brakes and electric prime mover (motor types and control)
 - geared types:
 - speed/load characteristics, efficiency, application, brakes and electric prime mover (motor types and control)
 - other types of lifts (drum, rack and pinion, chain and screw)
- fault finding encompassing:
 - visual inspection
 - performance checks and application of fault-finding principles
- relevant diagnostic methods
- relevant fault scenarios
- relevant industry standards
- relevant job safety assessments or risk mitigation processes
- relevant manufacturer specifications and operating instructions for tools and equipment
- relevant rectification activities and procedures
- relevant tools, equipment and testing devices
- relevant WHS/OHS legislated requirements
- relevant workplace documentation, including fault reports, test results, authorisations, permits, parts/components, despatch and store records
- relevant workplace policies, procedures and instructions.

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 simulated suitable 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 simulations
- relevant and appropriate materials, tools, facilities, equipment and personal protective equipment (PPE) currently used in industry
- 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>