



Australian Government

**Assessment Requirements for UEEEL0046
Find and repair faults in LV d.c. electrical
apparatus and circuits**

Release: 1

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Modification History

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, 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, including using of risk control measures
- applying sustainable energy principles and practices
- completing repairs, and reporting fault-finding and repair activities
- finding and repairing faults in direct current (d.c.) electrical apparatus and circuits, including:
 - determining the likely extent of work from fault/breakdown reports and discussions with appropriate person/s
 - using methodical fault-finding techniques
 - finding faults efficiently
 - rectifying faults effectively
 - completing documentation correctly
 - dealing with unplanned events in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- implementing WHS/OHS requirements and workplace procedures
- preparing to find and rectify faults.

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:

- d.c. motor control methods
- d.c. machines, including:
 - connection arrangements
 - installation and starting/running requirements and limitations
 - operating principles
 - purpose, types and applications

- typical fault symptoms and related conditions
- d.c. motor starters and their operating principles, including:
 - back emf
 - electronic controllers
 - series-lockout
 - timed starters
- power and control connection arrangements, including:
 - built-in stop/start control
 - interlocking with other starters and controls
 - overload protection
 - remote stop/start control
- braking methods, including:
 - dynamic
 - plugging
 - electromechanical
 - regenerative
- speed control methods, including:
 - field control
 - rheostatic control
 - voltage control
- protection of d.c. motors
- relevant manufacturer specifications
- relevant job safety assessments or risk mitigation processes
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies and procedures.

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
- 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>