



Australian Government

**Assessment Requirements for UEEEL0004
Carry out basic repairs to electrical
components and equipment**

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
- carrying out basic repairs to electrical apparatus, including:
 - following manufacturer service instructions for access to components
 - removing at least three different types of components specified in the work instructions
 - replacing components to manufacturer requirements
 - terminating internal wiring correctly
 - reassembling the apparatus correctly
 - testing apparatus operation
 - dealing with unplanned events in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- completing and reporting repair work activities
- implementing WHS/OHS workplace procedures and practices
- preparing to test and repair electrical apparatus
- repairing electrical apparatus in accordance with workplace procedures.

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:

- basic cable and conductor terminations, including:
 - application of connecting devices for conductors and terminals
 - continuity through connections and insulation resistance testing
 - general aspects and soldering involving pins on electronic components and stranded conductors carrying current up to 25 amperes (A)

- insulation removal and replacement
- stress release on cables/conductors
- electrical workshop and metal cutting
- electrical workshop machines, including:
 - drilling operations
 - fixed position power tools
 - off-hand grinding safety and machine set-up
 - tooling used on drilling machines
 - twist drills features, sharpening and faults
- principles of metal cutting, including:
 - effects of coolants and cutting fluids
 - effects of cutting tool geometry
 - factors influencing the action of cutting tools
 - principles of chip formation
- selection of cutting tools, including:
 - cutting tool materials
 - factors influencing tool selection
 - identification and selection of carbides
 - milling cutting tool design
 - principles of chip control
 - turning cutting tool design
- metal cutting conditions, including:
 - conditions under which tools cut best
 - determining cutting data
- cutting tool defects, including:
 - causes of tool failure
 - identification of types of tool failures
- overcoming causes of tool failure
- relevant job safety assessments or risk mitigation processes
- relevant manufacturer specifications
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies and procedures
- selection of cutting tools.

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>