



**Australian Government**

# **UEEEEC0057 Repair predictable faults in general electronic apparatus**

**Release: 1**

# UEEEEC0057 Repair predictable faults in general electronic apparatus

## Modification History

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 repair predictable faults in general electronic apparatus.

It includes preparing to repair electronic apparatus, finding and repairing faults, and completing and reporting on repair activities.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

## Pre-requisite Unit

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

UEECD0019 Fabricate, assemble and dismantle utilities industry components

UEEEEC0060 Repairs basic electronic apparatus faults by replacement of components

UEEEEC0075 Troubleshoot single phase input d.c power supplies

UEEEEC0069 Troubleshoot digital sub-systems

UEEEEC0066 Troubleshoot amplifiers in an electronic apparatus

UEEEEC0028 Fault find and repair complex power supplies

## Competency Field

Electronics and Communications

## Unit Sector

Electrotechnology

## Elements and Performance Criteria

### ELEMENTS

### PERFORMANCE CRITERIA

Elements describe the essential    Performance criteria describe the performance needed to

outcomes.

demonstrate achievement of the element.

## **1 Prepare to repair electronic apparatus**

- 1.1** Work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures for relevant work area are identified, obtained and applied
- 1.2** Risk control measures are applied in accordance with workplace procedures prior to commencing work
- 1.3** Nature of the fault is obtained from documentation or relevant person/s to determine scope of work
- 1.4** Instructions for coordinating work with others are obtained from relevant person/s and applied
- 1.5** Materials required for the work are determined in accordance with workplace procedures
- 1.6** Tools, equipment and testing devices required for work are obtained in accordance with workplace procedures and checked for correct operation and safety

## **2 Find and repair faults**

- 2.1** Workplace risk control measures and procedures are applied
- 2.2** Need to test and measure live work is determined in accordance with WHS/OHS requirements and workplace procedures
- 2.3** Apparatus is checked and isolated, as required, in accordance with WHS/OHS requirements and workplace procedures
- 2.4** Fault finding is undertaken methodically applying electronic apparatus and circuit principles using measured and calculated values of apparatus parameters in accordance with manufacturer instructions, including block and schematic diagrams
- 2.5** Apparatus components are dismantled, where necessary, and parts stored to protect against loss or damage
- 2.6** Faulty components are rechecked and their fault status confirmed
- 2.7** Repairs are undertaken in accordance with manufacturer instructions and instructions from relevant person/s
- 2.8** Apparatus is reassembled and tested for safety and

functionality in preparation for return to the customer

**2.9** Unplanned situations are dealt with safely and with the approval of relevant person/s

**2.10** Repairs are conducted efficiently without waste of materials, damage to apparatus, the surrounding environment or services applying sustainable energy practices

### **3 Complete and report repair activities**

**3.1** Workplace risk control measures and procedures are applied

**3.2** Work area is cleaned and made safe in accordance with workplace procedures

**3.3** Justification is provided for repairs to apparatus in the required format

**3.4** Work completion reporting is completed and relevant 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.

- Carrying out repairs of predictable faults must include at least the following:
- two different general electronic apparatus for a given representative range, examples of which include:
    - data capture devices
    - security panels
    - fire protection panels
    - industrial control apparatus
    - instrumentation electronics

## Unit Mapping Information

This unit replaces and is equivalent to UEENEEH107A Repair predictable faults in general electronic apparatus.

## 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 UEEEC0057 Repair predictable faults in general electronic apparatus

## 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:

- applying methodical fault-finding techniques
- applying relevant risk identification, assessment, reporting and control requirements
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including the use of risk control measures
- applying sustainable energy principles and practices
- coordinating work with relevant person/s
- dealing effectively with unplanned events
- determining live testing/measurement requirements
- determining scope of repair work
- finding faults efficiently
- identifying and accessing materials, tools, apparatus and testing devices
- isolating circuits/machines/systems
- providing justification for the repairs
- replacing components without damage.

## 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:

- carrying out repairs of predictable faults in general electronic apparatus, including:
  - general electronic apparatus fault finding and repair:
    - block and schematic diagram sub-system components (i.e. functional blocks) and their operating parameters
    - common faults, their symptoms and cause
    - fault location procedures and testing points
    - component repair/replacement
    - device adjustments

- technical manuals and catalogues:
  - how to read and apply information
  - typical format
- relevant manufacturer specifications
- relevant safe work method statements (SWMS)/job safety assessments or risk mitigation processes
- relevant industry standards, codes and regulations
- 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 simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- resources that reflect current industry practices in relation to carrying out repairs of predictable faults in general electronic apparatus
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

## Links

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