



Australian Government

UEEEEC0030 Fault find and repair electronic medical 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.

Application

This unit involves the skills and knowledge required to fault find and repair electronic medical equipment.

It includes preparing to find and repair faults, finding and repairing faults, and completing and reporting on fault-finding and repair activities.

Permits may be required for some work environments, such as confined spaces, working aloft, near live electrical apparatus and site rehabilitation.

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

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

UEEEEC0019 Develop software solutions for microcontroller-based systems

UEEEEC0028 Fault find and repair complex power supplies

and

UEECD0043 Solve problems in direct current circuits

or

UEECD0044 Solve problems in multiple path circuits

UEECD0046 Solve problems in single path circuits

and

UEEEEC0074 Troubleshoot resonance circuits in an electronic apparatus

UEEEEC0065 Solve problems in basic electronic circuits

or

UEEEL0020 Solve problems in low voltage a.c. circuits

UEEEL0019 Solve problems in direct current (d.c.) machines

UEEEL0021 Solve problems in magnetic and electromagnetic devices

Competency Field

Electronics and Communications

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to find and repair faults

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 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** Risks/hazards are identified, assessed and reported to relevant person/s, and control measures implemented
- 1.4** Extent of faults is determined from reports, other relevant documentation and discussions with relevant person/s
- 1.5** Relevant person/s is consulted to ensure the work is coordinated effectively with others
- 1.6** Tools, equipment and testing devices required to diagnose faults 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 workplace 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 Circuits/machines/plant are isolated, as necessary, in accordance with WHS/OHS requirements and workplace procedures
 - 2.4 Logical diagnostic methods are applied to diagnose electronic medical equipment faults employing measurements and estimations of system operating parameters referenced to system operational requirements
 - 2.5 Suspected fault scenarios are tested as being the source of system problems
 - 2.6 Source of the fault is identified and appropriately qualified person/s engaged to rectify the fault where it is outside the scope of capability in accordance with workplace procedures
 - 2.7 Faults in electronic components are rectified to raise electronic medical equipment to its operation standard
 - 2.8 System is tested to verify that it operates as intended and to specified requirements
 - 2.9 Decisions for dealing with unexpected situations are made based on job specifications, work requirements and discussions with relevant person/s
 - 2.10 Methods for dealing with unplanned situations are selected on the basis of safety and specified work outcomes
 - 2.11 Diagnosis and rectification activities are carried out efficiently without waste of materials, damage to apparatus, the surrounding environment or services applying sustainable energy practices
- 3 Complete and report fault-finding and repair activities**
- 3.1 Workplace risk control measures and workplace procedures are applied
 - 3.2 Worksite is made safe in accordance with workplace procedures
 - 3.3 Rectification of faults is reported in accordance with workplace procedures

- 3.4** Relevant person/s is notified that the system faults have been rectified 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.

Fault finding and repairing faults in electronic medical equipment must include at least the following:

- two system faults in two different types of electronic medical equipment

Unit Mapping Information

This unit replaces and is equivalent to UEENEEH134A Fault find and repair electronic medical equipment.

Links

Companion Volume implementation guides are found in VETNet - -

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