



Australian Government

UEEDV0014 Test, report and rectify faults in data and voice installations

Release: 1

UEEDV0014 Test, report and rectify faults in data and voice installations

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 test, report and rectify faults in data and voice installations.

It includes working safely, conducting performance testing, applying fault-finding procedures, testing functionality of the network, conducting repairs and completing documentation.

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

UEECD0020 Fix and secure electrotechnology equipment

UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications

UEEDV0005 Install and maintain cabling for multiple access to telecommunication services

UEEDV0008 Install, modify and verify coaxial and structured communication copper cabling

UEEDV0006 Install and modify optical fibre performance data communication cabling
and

UEECD0043 Solve problems in direct current circuits

or

UEECD0044 Solve problems in multiple path circuits

UEECD0046 Solve problems in single path circuits

Competency Field

Data and Voice

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

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

1 Prepare to test, report and rectify faults

- 1.1** Work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures for a given work area are identified, obtained and applied
- 1.2** Testing is prepared in consultation with others affected by work and sequenced in accordance with workplace procedures
- 1.3** Scope of the work is determined from documentation and/or discussions with relevant person/s to establish the work to be undertaken
- 1.4** Advice is sought from relevant person/s to ensure work is coordinated effectively with others
- 1.5** Material needed for testing, reporting and rectifying work is obtained in accordance with workplace procedures and job requirements
- 1.6** Tools, equipment and testing devices required for work are obtained in accordance with workplace procedures and checked for correct operation and safety
- 1.7** Preparatory work is checked to ensure no damage has occurred in accordance with job requirements and workplace procedures

2 Test and rectify faults

- 2.1** WHS/OHS risk control measures and procedures for carrying out the work are followed
- 2.2** Tests are carried out in accordance with WHS/OHS requirements and workplace procedures
- 2.3** Tests are prepared and conducted in accordance with test equipment operating instructions and job requirements

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| | 2.4 | Cable performance tests are conducted and results documented in accordance with workplace procedures |
| | 2.5 | Causes of defects and/or faults indicated by test results are identified and rectified in accordance with workplace procedures |
| | 2.6 | Methods for dealing with unplanned situations are discussed with relevant person/s for approval and documented in accordance with workplace procedures |
| | 2.7 | Unplanned situations are dealt with safely and with the approval of relevant person/s |
| | 2.8 | Quality checks of the installed equipment are undertaken in accordance with workplace procedures |
| | 2.9 | Testing and rectifying faults is carried out without waste of materials or damage to equipment, circuits, surrounding environment or services using sustainable energy principles |
| 3 Document and verify installation performance | 3.1 | WHS/OHS work completion risk control measures and procedures are followed |
| | 3.2 | Worksite is cleaned and made safe in accordance with workplace procedures |
| | 3.3 | Service reports are completed as required in accordance with workplace procedures |
| | 3.4 | Documentation certifying system performance is issued to relevant person/s |

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.

Testing, reporting and rectifying faults in voice • two different items of customer premises

and data installations must include at least the following:

- equipment
• a local area network (LAN)

Unit Mapping Information

This unit replaces and is equivalent to UEENEEF111A Test, report and rectify faults in data and voice installations.

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 UEEDV0014 Test, report and rectify faults in data and voice installations

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 relevant work health and safety (WHS)/occupational health and safety (WHS/OHS) requirements, including using risk control measures
- carrying out work without waste of materials or damage to equipment, circuits, surrounding environment or services using sustainable energy principles
- completing documentation
- dealing with unplanned situations
- identifying defects/faults from test results
- interpreting test results
- obtaining and checking tools, equipment and testing devices for correct operation and safety
- preparing and conducting tests of faults
- preparing test reports
- rectifying faults
- undertaking quality checks in accordance with workplace procedures
- verifying installation performance.

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:

- causes of non-compliant test results
- networking fundamentals
- optical time domain reflectometer (OTDR) operating principles, applications and calibration procedures
- performance of copper cable measuring devices and techniques
- performance of optical fibre measuring devices and techniques
- performance parameters associated with copper cables, coaxial cables and optical cables
- recording, reporting and maintaining test results

- relevant industry standards
- relevant manufacturer specifications and operating instructions
- relevant job safety assessments or risk mitigation processes
- relevant tools, equipment and testing devices
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace quality, policies and procedures
- problem-solving techniques
- test results for compliance with required regulation, standards and/or codes for structured copper cables, coaxial and optical fibre cables
- testing and validation of a customer premises cabling installation.

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 and equipment currently used in industry
- resources that reflect current industry practices in relation to testing, reporting and rectifying faults in voice and data installations
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

Links

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