



Australian Government

Department of Education, Employment and Workplace Relations

UEENEEF011B Test, report and rectify faults in voice and data installations

Release: 1

UEENEEF011B Test, report and rectify faults in voice and data installations

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

1)

1.1) Descriptor

This unit covers testing for certification finding and repairing faults in telecommunication installations and local area networks. The unit encompasses working safely, reading cabling diagrams, performance testing, applying logical fault finding procedures, testing functionality of the network, conducting repairs and completing the necessary documentation.

Application of the Unit

Application of the Unit 4)

This unit is intended for competency development in entry-level employment based programs incorporated in approved contracts of training

Licensing/Regulatory Information

1.2) License to practice

The skills and knowledge described in this unit require a registration to practise in the workplace subject to requirements set out ACMA 'Open' Cabling Provider Rule. Practice in workplace and during training is also subject to regulations directly related to occupational health and safety and where applicable contracts of training such as apprenticeships.

Note:

1. Compliance with permits may be required in various jurisdictions and typically relates to the operation of plant, machinery and equipment such as elevating work platforms, powder operated fixing tools, power operated tools, vehicles, road signage and traffic control and lifting equipment. Permits may also be required for some work environments such as confined spaces, working aloft, near live electrical communications equipment and site rehabilitation.
2. Compliance may be required in various jurisdictions relating to currency in First Aid, confined space, lifting and risk safety measures.

Pre-Requisites

Prerequisite Unit(s) 2)

2.1) Competencies

Granting competency in this unit shall be made only after competency in the following unit(s) has/have been confirmed.

UEENEEF004B Install and modify performance data communication structured cabling

UEENEEF005B Install and modify performance data communication optical fibre cabling

For the full prerequisite chain details for this unit please refer to Table 2 in Volume 1, Part 2

Employability Skills Information

Employability Skills	3) The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary of the qualification in which this unit of competency is packaged will assist in identifying Employability Skill requirements.
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Elements and Performance Criteria Pre-Content

6) Elements describe the essential outcomes of a unit of competency	Performance criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare to test, report and rectify faults.	1.1 OHS procedures for a given work area are identified, obtained and understood. 1.2 Health and safety risks are identified, and established risk control measures and procedures in preparation for the work are followed. 1.3 Safety hazards that have not previously been identified are noted, and established risk control measures are implemented. 1.4 Testing is prepared in consultation with others affected by the work and sequenced appropriately. 1.5 The nature and location of the work is determined from documentation or in discussion with appropriate person(s) to establish the scope of work to be undertaken.

ELEMENT**PERFORMANCE CRITERIA**

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| | 1.6 | Advice is sought from appropriate persons to ensure the work is coordinated effectively with others. |
| | 1.7 | Material needed for the testing, reporting and rectifying work is obtained in accordance with established procedures and checked against job requirements. |
| | 1.8 | Tools, equipment and testing devices needed to for the work are obtained in accordance with established procedures and checked for correct operation and safety. |
| | 1.9 | Preparatory work is checked to ensure no damage has occurred and that it complies with requirements. |
| 2 | Test and rectify faults | |
| | 2.1 | OHS risk control measures and procedures for carrying out the work are followed. |
| | 2.2 | Tests are carried out in strict accordance with OHS established safety procedures. |
| | 2.3 | Tests are prepared and conducted in accordance with test equipment operating instructions and requirements. |
| | 2.4 | Cable performance tests are conducted accurately and results documented in accordance with established procedures. |
| | 2.5 | Causes of defects or faults indicated by test results are identified and rectified in accordance with established procedures. |
| | 2.6 | Established methods for dealing with unexpected situations are discussed with appropriate person(s) and documented. |
| | 2.7 | Unexpected situations are dealt with safely and with the approval of an authorised person. |
| | 2.8 | Ongoing checks of the quality of installed equipment are undertaken in accordance with established procedures. |

ELEMENT	PERFORMANCE CRITERIA
	2.9 Testing and rectifying faults is carried out efficiently without waste of materials or damage to equipment, circuits, the surrounding environment or services and using sustainable energy principles.
3 Document and verify installation performance.	3.1 OHS work completion risk control measures and procedures are followed.
	3.2 Work site is cleaned and made safe in accordance with established procedures.
	3.3 Service reports are completed, when necessary in accordance with established procedures.
	3.4 Documentation certifying system performance is issued to an appropriate person(s).

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

7) This describes the essential skills and knowledge and their level, required for this unit.

Evidence shall show that knowledge has been acquired of safe working practices and testing, reporting and rectifying faults in voice and data installations.

All knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies.

The extent of the essential knowledge and associated skills (EKAS) required is given in Volume 2 - Part 2.2 EKAS. It forms an integral part of this unit.

- 2.4.3.2 Networking fundamentals
- 2.11.5 Basic electrical testing and measuring devices and techniques
- 2.11.8 Data and voice cabling testing and testing devices

Evidence Guide

EVIDENCE GUIDE

9) This provides essential advice for assessment of the unit and must be read in conjunction with the performance criteria and the range statement of the unit and the Training Package Assessment Guidelines.

The Evidence Guide forms an integral part of this unit. It must be used in conjunction with all parts of the unit and performed in accordance with the Assessment Guidelines of this Training Package.

Overview of Assessment

9.1)

Longitudinal competency development approaches to assessment, such as Profiling, require data to be reliably gathered in a form that can be consistently interpreted over time. This approach is best utilised in Apprenticeship programs and reduces assessment intervention. It is the industry-preferred model for apprenticeships. However, where summative (or final) assessment is used it is to include the application of the competency in the normal work environment or, at a minimum, the application of the competency in a realistically simulated work environment. It is recognised that, in some circumstances, assessment in part or full can occur outside the workplace. However, it must be in accordance with industry and regulatory policy.

Methods chosen for a particular assessment will be influenced by various factors. These include the extent of the assessment, the most effective locations for the assessment activities to take place, access to physical resources, additional safety measures that may be required and the critical nature of the competencies being assessed.

The critical safety nature of working with electricity, electrical equipment, gas or any other hazardous substance/material carries risk in deeming a person competent. Sources of evidence need to be 'rich' in nature to minimise error in judgment.

Activities associated with normal everyday work have a bearing on the decision as to how much and how detailed the data gathered will contribute to its 'richness'. Some skills are more critical to safety and operational requirements while the same skills may be more or less frequently practised. These points are raised for the assessors to consider when choosing an assessment method and developing assessment instruments.

Sample assessment instruments are included for Assessors in the Assessment Guidelines of this Training Package.

EVIDENCE GUIDE

Critical aspects of evidence required to demonstrate competency in this unit

9.2)

Before the critical aspects of evidence are considered all prerequisites shall be met.

Evidence for competence in this unit shall be considered holistically. Each element and associated performance criteria shall be demonstrated on at least two occasions in accordance with the 'Assessment Guidelines - UEE07'. Evidence shall also comprise:

- A representative body of work performance demonstrated within the timeframes typically expected of the discipline, work function and industrial environment. In particular this shall incorporate evidence that shows a candidate is able to:
 - Implement Occupational Health and Safety workplace procedures and practices, including the use of risk control measures as specified in the performance criteria and range statement
 - Apply sustainable energy principles and practices as specified in the performance criteria and range statement
 - Demonstrate an understanding of the essential knowledge and associated skills as described in this unit. It may be required by some jurisdictions that RTOs provide a percentile graded result for the purpose of regulatory or licensing requirements.
 - Demonstrate an appropriate level of skills enabling employment
 - Conduct work observing the relevant Anti Discrimination legislation, regulations, polices and workplace procedures
- Demonstrated consistent performance across a representative range of contexts from the prescribed items below:
 - Test, report and rectify faults in voice and data installations as described in 8) and including:
 - A Reading and interpreting drawings and schedules of the installation
 - B Preparing and conducting appropriate test accurately
 - C Interpreting test results correctly
 - D Identifying defects/faults from test results

EVIDENCE GUIDE

- E Rectifying faults effectively
- F Completing the required documentation accurately.
- G Dealing with unplanned events by drawing on essential knowledge and skills to provide appropriate solutions incorporated in a holistic assessment with the above listed items

Context of and specific resources for assessment

9.3)

This unit should be assessed as it relates to normal work practice using procedures, information and resources typical of a workplace. This should include:

- OHS policy and work procedures and instructions.
- Suitable work environment, facilities, equipment and materials to undertake actual work as prescribed by this unit.

These should be used in the formal learning/assessment environment.

Note:

Where simulation is considered a suitable strategy for assessment, conditions must be authentic and as far as possible reproduce and replicate the workplace and be consistent with the approved industry simulation policy.

The resources used for assessment should reflect current industry practices in relation to testing, reporting and rectifying faults in voice and data installations

Method of assessment

9.4)

This unit shall be assessed by methods given in Volume 1, Part 3 'Assessment Guidelines'.

Note:

Competent performance with inherent safe working practices is expected in the Industry to which this competency standard unit applies. This requires assessment in a structured environment which is primarily intended for learning/assessment and incorporates all necessary equipment and facilities for learners to develop and demonstrate the essential knowledge and skills described in this unit.

Concurrent assessment and relationship with

9.5)

For optimisation of training and assessment effort, competency development in this unit may be arranged concurrently with

EVIDENCE GUIDE

other units

unit:

UEENEEF004B Install and modify performance data communication structured cabling

UEENEEF009B Install and connect voice and data communications equipment

Range Statement

RANGE STATEMENT

8) This relates to the unit as a whole providing the range of contexts and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

This unit shall be demonstrated in relation to testing, reporting and rectifying faults in voice and data installations comprising two different items of customer premises equipment and a local area network.

Generic terms used throughout this Vocational Standard shall be regarded as part of the Range Statement in which competency is demonstrated. The definition of these and other terms that apply are given in Volume 2, Part 2.1.

Unit Sector(s)

Not Applicable

Competency Field

2.2) Literacy and numeracy skills

Participants are best equipped to achieve competency in this unit if they have reading, writing and numeracy skills indicated by the following scales. Description of each scale is given in Volume 2, Part 3 'Literacy and Numeracy'

Reading	3	Writing	3	Numeracy	3
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Custom Content Section

Competency Field 5)

Data and Voice Communications