



Australian Government

Department of Education, Employment and Workplace Relations

ICTTC104D Maintain an electronic system

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit applies to all telecommunications applications including telephony, data, video and multi media.

This unit relates to the periodic testing of systems and equipment on-site (not at the depot) and from remote locations.

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

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Application of the Unit

Not applicable.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Nil

Nil

Employability Skills Information

This unit contains employability skills.

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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where **bold italicised** text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

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Elements and Performance Criteria

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Element	Performance Criteria
1 Undertake on-site electronic routines	1.1 Where equipment is located on premises not owned by enterprise, appropriate consultation with customer or property owner is undertaken in accordance with enterprise policy 1.2 Power equipment is monitored for voltage within manufacturer's stated limits and site power routine performed in accordance with enterprise guidelines 1.3 Ensure alarms operate in accordance with manufacturer's specifications and enterprise guidelines 1.4 All monitoring points are checked against installation records 1.5 If faults are detected, corrective action is taken in accordance with enterprise guidelines and manufacturer's specifications 1.6 Warranties and service agreements are checked to establish if any identified repair / alteration requirement is covered by such documents 1.7 Existing electronic configuration is copied and stored in accordance with enterprise guidelines

2 Undertake remote electronic routines

- 2.1 Signal is generated to test for continuity and operation in accordance with manufacturer's specifications
- 2.2 Readings are taken from each significant portion of line to test for continuity and operation in accordance with manufacturer's specifications
- 2.3 Ensure alarms operate in accordance with manufacturer's specifications and enterprise guidelines
- 2.4 All monitoring points are checked against system records
- 2.5 If faults are detected, corrective action is taken in accordance with enterprise guidelines and manufacturer's specifications

3 Update records

- 3.1 Results of routine tests are detailed on system records
- 3.2 Records are stored in accordance with enterprise guidelines

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Select from the following list to suit the learning and assessment context

Codes refer to the Skills and Knowledge Register in Volume 3 of this Training Package that has detailed content guidelines for each code outlined.

CA375 Cable Installation Practices for CAN

CI310 Communication 3

EN310 Enterprise Policy and Practice 3

EN320 Enterprise Information Systems 3

MA210 Basic Telecommunications Mathematics

OH310 Occupational Health and Safety 3

PS310 Plans and Specifications 3

RA420 Radio Frequency Theory and Hazards 4

RE235 Regulations for CAN

RE310 Working on Non-enterprise Land 3

SU210 Basic Supervision

TE310 Basic Telephony 3

TF310 Test Equipment 3

TF320 Test Analysis and Diagnosis 3

TO310 Use of Tools 3

TO320 Anti-static Procedures 3

Required knowledge

The relevant required knowledge is articulated in the above guidelines contained in the Skills and Knowledge Register included in this Training Package.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

Identification of maintenance required.

Conduct and interpret tests including:

Equipment and facilities checks

Test of backup equipment such as batteries

Filters

System backup and alarms

Repair of faults/problems in system, equipment and facilities either hardware or software.

Completion of documentation including: warranty details, system log books, pricing and billing forms.

Safe use of any specialised hand or power tools and/or equipment and application of all related OHS requirements and work practices.

Correct interpretation and application of regulations and standards related to the maintenance.

Communication of maintenance details with customers and work associates.

Context of and specific resources for assessment

Assessment must ensure:

A workplace conducting the operations covered by this competency unit, equipment and resources relevant to the context of the work (See Range Statement) and support from a competent supervisor or mentor.

OR

A simulated environment with similar provisions which conforms to the Assessment Guidelines.

Guidance information for assessment

Access must be provided to appropriate learning and assessment support when required.

Assessment processes and techniques must be culturally appropriate, and appropriate to the oral communication skill level, and language and literacy capacity of the candidate and the work being performed.

In all cases where practical assessment is used it will be combined with targeted questioning to assess underpinning knowledge.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Bold italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Cable

May include: copper, coaxial, optic fibre, aluminium, wave guides

Consultation regarding maintenance procedures	May include discussions regarding: time, location, duration, nature of works, access arrangements
Corrective action	May include: electronic or physical adjustment or repair, replacement of parts or equipment, organising warranty replacement from manufacturer
Equipment	May include: line conditioning, optic transceiver, multiplexer, concentrator, antenna, radio system, transmission equipment, switching equipment, satellite receiver
Records	May be stored on either enterprise or customer premises and at equipment site or central enterprise location
System records	May be stored: on site, on paper / cards, electronically, at central recording point
Relevant legislation, codes, regulations and standards may include:	Australian Standards Australian Building Codes and regulations Occupational Health and Safety Environmental Protection Heritage legislation

Unit Sector(s)

Not applicable.