



Australian Government

Department of Education, Employment and Workplace Relations

ICTCBL2135A Joint metallic conductor cable in access network

Release: 1

ICTCBL2135A Joint metallic conductor cable in access network

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to joint metallic conductor cable on the service provider side of the network boundary in communications applications. All customer cabling work in the telecommunications, fire, security and data industries must be performed by a registered cabler. All cablers are required to register with an Australian Communications and Media (ACMA)-accredited registrar.
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Application of the Unit

Application of the unit	Technical staff who joint metallic conductor cable for indoor and outdoor installation apply the skills and knowledge in this unit. They may be required to do new installations, cable upgrades and maintain infrastructure in domestic, commercial and industrial situations for service providers and asset owners. Communications applications include digital and analog, telephony, data, video, digital broadcasting, computer networks, local area networks (LAN) wide area networks (WAN) and multimedia.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	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

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for jointing metallic conductor cable for Access Network	1.1. Prepare for given work according to relevant legislation, codes, regulations and standards 1.2. Arrange access to the site according to required procedure 1.3. Inform appropriate personnel of existing and potential hazards on worksite 1.4. Review site plans and documentation 1.5. Select cable type and appropriate connectors for cable joint 1.6. Set up tools and equipment , and materials required for safe work practice 1.7. Obtain information on location of other services from relevant authorities
2. Joint metallic conductor cable for Access Network	2.1. Joint metallic cable following occupational health and safety (OHS) and environmental requirements 2.2. Perform relevant cable tests to ensure joint complies with site specifications, manufacturer's specifications, and relevant legislation, codes, regulations and standards 2.3. Rectify any cable faults 2.4. Record cable tests and any modifications required 2.5. Label and tag the cable joint according to enterprise guidelines and industry practice
3. Protect and alarm cable	3.1. Pressurise cable and check for any leakage 3.2. Reconnect alarms, if applicable, according to enterprise guidelines 3.3. Remove waste and debris from work site and disposed of according to environmental requirements and to maintain safe worksite conditions
4. Complete records and clean up site	4.1. Complete required records including alterations and notify customer 4.2. Reinststate site according to customer and company requirements 4.3. Present all records to customer and obtain sign off

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- communication skills to liaise with internal and external personnel on technical and operational matters
- literacy skills to interpret technical documentation, such as equipment manuals, specifications and requirements for jointing metallic conductor cable
- numeracy skills to take and analyse measurements
- planning and organisational skills to organise and maintain equipment
- problem solving skills to solve equipment and logistics problems
- safety awareness skills to:
 - apply precautions and required action to minimise, control or eliminate hazards that may exist during work activities
 - select and use required personal protective equipment conforming to industry and OHS standards
 - work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- task management skills to work systematically with required attention to detail and adherence to all safety requirements
- technical skills to:
 - perform fault clearance
 - use diagnostic equipment
 - use hand and power tools

Required knowledge

- ACMA Competency Requirements for Telecommunications Cabling Provider Rules 2000
- features and operating requirements of test equipment
- information required to operate equipment according to a test specification
- legislation, codes of practice and other formal agreements that impact on the work activity
- manufacturer's requirements for safe operation of equipment
- safety precautions when working with cables
- specific OHS requirements relating to the activity and site conditions
- test methods and performance requirements
- typical issues and challenges that occur on site

Evidence Guide

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.

Overview of assessment

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

Evidence of the ability to:

- joint cable with appropriate connectors and according to specifications
- perform relevant cable tests to comply with site specifications and industry standards
- rectify any cable faults.

Context of and specific resources for assessment

Assessment must ensure:

- sites where jointing metallic conductor cable may be conducted
- use of cable testing equipment currently used in industry
- relevant regulatory and equipment documentation that impact on cable jointing activities.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- review of a hands-on project completed by the candidate
- review of an oral and written report with test results
- direct observation of the candidate jointing metallic conductor cable.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- ICTCBL2133A Construct underground telecommunications infrastructure
- ICTCBL3067A Modify and cut over cable.

Aboriginal people and other people from a non-English speaking background may have second language issues.

Access must be provided to appropriate learning and

EVIDENCE GUIDE

	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 required knowledge. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. Where applicable, physical resources should include equipment modified for people with special needs.
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Range Statement**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.

Relevant legislation, codes, regulations and standards may include:

- appropriate licences:
 - crane
 - forklift
 - winch
- AS Communications Cabling Manual (CCM) Volume 1
- AS/NZS 3000:2007
- AS/NZS 3080:2003
- AS/NZS 3084:2003
- AS/NZS 3085.1:2004
- AS/NZS IEC 61935.1:2006
- AS/NZS IEC 61935.2:2006

RANGE STATEMENT	
	• AS/NZS ISO/IEC 14763.3:2007 • AS/NZS ISO/IEC 15018:2005 • AS/NZS ISO/IEC 24702:2007 • Australian Construction Industry Forum (ACIF) standards and codes • cabling security codes and regulations • Environmental Protection Acts • OHS Acts • road and traffic control legislation and codes • technical standards AS/ACIF S008:2006 and AS/ACIF S009:2006.
Hazards may include:	• building debris • glass fibre • live power lines • manual handling • mud and water • natural gas and other gas build up • needle stick injury • vermin.
Plans and documentation may include:	• access location • cable coding system and identifiers • cable plan.
Cable joint may involve:	• jointing enclosures • joints due to: • access points requirements • additional service points for connection • cable damage • fault rectification • long cable runs • stub joints • underground pits.
Tools and equipment may include:	• hand tools: • crowbar • glue • hammers • pick • saws • shovels • mechanical equipment:

RANGE STATEMENT	
	• auger • backhoe • borer • concrete gutter • ditch witch • excavators • mole plough • trenching machine.
Relevant authorities may include:	• cable location services (Dial Before you Dig) • environment protection • local government • private owners • utility providers such as: • electricity • fire services • gas • telecommunications providers • water.
OHS and environmental requirements may relate to:	• identifying other services, including power and gas • need for decommissioning and isolating worksite and lines prior to commencement • safe working practices, such as the safe use and handling of: • asbestos • chemicals • materials • tools and equipment • work platforms • safety equipment: • flashing lights • gas and other hazard detection equipment • safety barriers • trench guards • warning signs and tapes • witches hats • special access requirements • suitable light and ventilation

RANGE STATEMENT

	• environmental considerations: • clean-up protection • noise, dust and clean-up management • stormwater protection • waste management.
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Unit Sector(s)

Unit sector	Telecommunications
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Co-requisite units

Co-requisite units		

Competency field

Competency field	Cabling
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