



Australian Government

ICTTEN311 Inspect, clean and handle optical fibre cable and connectors

Release: 1

ICTTEN311 Inspect, clean and handle optical fibre cable and connectors

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package version 3.0.

Application

This unit describes the skills and knowledge required to inspect and clean optical fibre connectors and to follow handling and placement practices for optical fibre patch leads and cables. It relates to practices necessary in the installation and patching of fibre for new or replacement cables in switching, transmission and fixed and mobile radio networks.

It applies to linesworkers, technicians or jointers working for carriers, or other service providers. It also applies to work performed under direction of the relevant authority.

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

Unit Sector

Telecommunications – Telecommunications networks engineering

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for fibre patching	1.1 Obtain relevant legislation, codes, regulations and standards for the given work 1.2 Obtain the design schematics and cut over sequence for fibre patching 1.3 Discuss and record details of activities and work schedule with the relevant authority 1.4 Work safely according to relevant safety legislation and company work practices, identifying hazards, including laser safety,

ELEMENT	PERFORMANCE CRITERIA
	dangerous materials handling and using personal protective equipment 1.5 Ensure all tools and materials required for patching are available and in good condition 1.6 Undertake an impact risk assessment, including customer impact risk and work health and safety (WHS) guidelines for the fibre patching requirements, and prepare any necessary notifications
2. Prepare each connector and bulkhead for patching	2.1 Place fibre patch leads in support pathways avoiding pressure points, crushing and excess bending 2.2 Identify appropriate connector and lead type 2.3 Ensure connectors match bulkhead connectors 2.4 Remove connector dust cover and inspect connecting surface for dust or damage using the correct optical scope 2.5 Clean connector, if necessary, with the recommended cleaning materials and tools and re-inspect 2.6 Insert connector and label in accordance with client practices 2.7 Secure cables according to manufacturer's instructions and client practices 2.8 Escalate any hardware replacement problems with the relevant authority 2.9 Test replacement hardware to ensure satisfactory functionality
3. Clean up worksite and complete administrative work	3.1 Remove waste and debris from worksite and dispose of according to environmental requirements 3.2 Recover faulty equipment and return to appropriate point for disposal or refurbishment 3.3 Complete documentation, update fault records and make recommendations according to client practices 3.4 Notify appropriate person at the relevant authority of job completion and obtain sign-off

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance	Description
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	Criteria	
Reading	1.1, 1.2, 1.3, 1.4, 1.6, 2.7, 2.8, 3.3	Recognises and interprets technical, regulatory and enterprise documentation
Writing	1.3, 1.6, 2.6, 3.3, 3.4	Uses clear, specific and industry related terminology to complete and update workplace documentation
Oral Communication	1.3, 2.8, 3.4	- Liaises with a range of personnel about technical and operational requirements using specific and relevant language - Uses listening and questioning techniques to confirm understanding
Navigate the world of work	1.1, 1.4, 1.5, 1.6, 2.6, 2.7, 3.2, 3.3	Complies with policies, procedures and legislative requirements relevant to own role
Interact with others	1.3, 2.8, 3.4	Uses appropriate practices and protocols to communicate effectively with a range of personnel
Get the work done	1.1, 1.2, 1.5, 1.6, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 3.3, 3.4	- Plans, sequences and carries out tasks to meet required outcomes - Implements actions according to a predetermined plan making adjustments if necessary - Analyses task requirements to make routine decisions, taking some situational factors into account - Anticipates potential problems and prepares contingency plans - Follows required procedures when responding to problems - Understands purpose and some specific functions of common digital tools used in work contexts

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTTEN311 Inspect, clean and handle optical fibre cable and connectors	Not applicable	New unit to address industry skills need.	No equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTTEN311 Inspect, clean and handle optical fibre cable and connectors

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Performance Evidence

Evidence of the ability to:

- interpret, discuss and confirm required work
- obtain and check documentation, equipment and hardware for required work
- complete an impact risk assessment
- inspect fibre connectors using inspection scopes
- clean connectors using approved methods
- handle optical fibre cable and connectors to prevent damage
- complete patching as per patching schedule and under the direction of the relevant authority
- follow work health and safety (WHS) requirements and anti-static precautions
- follow required practices or contingency plan if hardware replacement is unsuccessful
- update fault records and complete required documentation
- restore site to required condition
- liaise with appropriate personnel for information and reporting purposes.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- explain application of direct current (DC) and alternating current (AC) electrical principles to required work
- describe static electricity and its importance in testing and working with telecommunications equipment
- outline performance testing and fault finding techniques of telecommunications networks
- describe the operation and purpose of testing equipment

- describe behaviour of faulty network elements including symptoms and impact on network
- summarise common telecommunications hardware and network structures
- list types of power sources used in telecommunications networks.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances should be typical of those experienced in the telecommunications networks engineering field of work and include access to:

- a suitable site to replace telecommunications network hardware
- a range of hardware currently used in industry
- a range of general and test equipment required for testing telecommunications network hardware.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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