



Australian Government

MEAAVI0043 Terminate and repair aircraft optical fibre cable

Release: 1

MEAAVI0043 Terminate and repair aircraft optical fibre cable

Modification History

Release 1. Application changed. Elements and Performance Criteria changed. Foundation Skills made explicit. Range of Conditions removed, and relevant information moved to Assessment Requirements. Assessment Requirements clarified. Supersedes and is equivalent to MEA266 Terminate and repair aircraft optical fibre cable.

Application

This unit describes the skills and knowledge required to apply hand skills and knowledge of aircraft optical fibre cable termination and repair methods in aircraft maintenance hangars and workshops during scheduled or unscheduled maintenance. Work may be performed individually or as part of a team.

The unit is used in workplaces that operate under the airworthiness regulatory systems of the Civil Aviation Safety Authority (CASA) and the Defence Aviation Safety Authority (DASA).

Any other relevant legislation, industry standards and codes of practice within Australia must be applied.

Competency Field

Aviation maintenance

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 terminate or repair aircraft optical fibre cable	1.1 Isolate system and confirm optical source is not transmitting 1.2 Confirm requirement to terminate or replace an existing termination from maintenance data 1.3 Inspect cable to identify extent of damage 1.4 Assemble equipment required for compliance with work health and safety (WHS) requirements and required personal protective equipment (PPE), and ensure PPE is worn during termination and/or repair activities 1.5 Assemble required tools, optical connectors, materials and test equipment ready for use
2. Terminate aircraft optical fibre cable	2.1 Prepare optical fibre cable for termination in accordance with maintenance data or manufacturer's instructions

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	2.2 Fit specified optical connector in accordance with maintenance data or manufacturer's instructions
3. Repair aircraft optical fibre cable	3.1 Confirm extent of damage to optical fibre cable and assess for repair or for cable replacement 3.2 Determine repair method from maintenance data for damage within specified limits 3.3 Perform repair, including splicing, in accordance with repair method while observing all applicable WHS requirements
4. Remove fibre hazards from work area	4.1 Clean work area and pack and dispose of all waste materials in accordance with WHS requirements and standard enterprise procedures
5. Test terminated or repaired optical fibre cable	5.1 Test terminated or repaired fibre optic cable for loss and strength of light transmission in accordance with maintenance data or manufacturer's specifications 5.2 Connect optical fibre cable to light transmitter and optical receiver in accordance with manufacturer's specifications

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

- Reading skills to interpret maintenance manuals.
- Numeracy skills to interpret technical information.

Other foundation skills essential to performance are explicit in the performance criteria of this unit.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEA266 Terminate and repair aircraft optical fibre cable.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ce216c9c-04d5-4b3b-9bcf-4e81d0950371>

Assessment Requirements for MEAAVI0043 Terminate and repair aircraft optical fibre cable

Modification History

Release 1. Application changed. Elements and Performance Criteria changed. Foundation Skills made explicit. Range of Conditions removed, and relevant information moved to Assessment Requirements. Assessment Requirements clarified. Supersedes and is equivalent to MEA266 Terminate and repair aircraft optical fibre cable.

Performance Evidence

There must be evidence the candidate has completed all the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to:

- terminate and repair aircraft optical fibre cable on at least two occasions, including:
 - termination of optical fibre cable using a range of connector types
 - repair of optical fibre cable
- clean and polish optical connectors
- repair optical fibre cable by splicing.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- types of optical connector
- materials and procedures for cleaning and polishing optical connectors
- tools and materials used for fitting optical connectors
- optical fibre cable construction and characteristics, including:
 - strain relief and bend radius
 - cable installation precautions
- methods of splicing optical fibre cable
- light transmission methods and applications
- types of optical receiver
- test equipment, including:
 - calibrated light source and light receiver
 - power meter
 - optical time domain reflectometers
- cable inspection and testing
- relevant specifications, standards and maintenance data, including:
 - ARINC Specification 801 Fibre Optic Connectors
 - ARINC Specification 802 Fibre Optic Cables
 - ARINC Specification 805 Fibre Optic Test Procedures
 - ARINC Specification 806 Fibre Optic Installation and Maintenance Procedures

- AS/NZS 2211:2006 Safety of laser products (Parts 1 and 2)
- CASA AC21-99 - Aircraft Wiring and Bonding, Section 2 Chapter 19 0 - Fibre Optics
- work health and safety (WHS) procedures associated with optical fibre cable termination and repair, including laser safety procedures
- personal protective equipment (PPE) required for optical fibre termination and repair
- maintenance manuals for optical fibre cable termination and repair
- relevant regulatory requirements and standard procedures.

Assessment Conditions

The following conditions of assessment represent the requirements of the regulators (DASA and CASA) and maintenance stakeholders and must be rigorously observed.

Skills must have been demonstrated under routine supervision in the workplace or in a simulated environment that reflects workplace conditions and contingencies encountered in terminating and repairing aircraft optical fibre cable. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - workplace procedures, manufacturing specifications, codes, standards, manuals, and reference materials relevant to terminating and repairing aircraft optical fibre cable
 - tools and equipment specified in the aircraft maintenance manuals
 - general and special-purpose test equipment found in most routine situations.

Evidence of tasks demonstrating competency must be recorded in a log of industrial experience and achievement.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ce216c9c-04d5-4b3b-9bcf-4e81d0950371>