



Australian Government

MEAAVI0034 Fabricate aircraft electrical looms and harnesses

Release: 1

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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 MEA239 Fabricate aircraft electrical looms and harnesses.

Application

This unit describes the skills and knowledge required to apply hand skills and use maintenance publications to fabricate aircraft electrical looms and harnesses for general use in electrical systems in aircraft hangars and workshops under the guidance of qualified persons during scheduled or unscheduled maintenance. Work may be performed individually or as part of a team.

Components or parts not covered in this unit include data bus cables, co-axial cables, fibre optic cables, fire detection/extinguishing systems, oxygen systems, fuel tanks and integrated hardware.

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.

Pre-requisite Unit

MEA107 Interpret and use aviation maintenance industry manuals and specifications

MEA154 Apply work health and safety practices in aviation maintenance

MEA155 Plan and organise aviation maintenance work activities

MEA156 Apply quality standards during aviation maintenance activities

MEA157 Complete aviation maintenance industry documentation

MEA158 Perform basic hand skills, standard trade practices and fundamentals in aviation maintenance

Competency Field

Aviation maintenance

Elements and Performance Criteria

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Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

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1. Prepare to fabricate aircraft electrical looms and harnesses	1.1 Select and prepare materials, tools and equipment for the particular task with guidance from qualified person in accordance with maintenance documentation and standard enterprise procedures 1.2 Align required assembly or fabrication jigs to ensure accurate component fabrication
2. Fabricate aircraft electrical looms and harnesses	2.1 Fabricate components or parts with guidance from qualified person to meet industry standards and in accordance with maintenance documentation and standard enterprise procedures while observing all relevant work health and safety (WHS) requirements
3. Perform routine tests on aircraft electrical looms and harnesses	3.1 Use required test equipment and/or rigs with guidance from qualified person to confirm serviceability of finished components 3.2 Tag, seal and package fabricated components in accordance with specified procedures

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 of competency.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEA239 Fabricate aircraft electrical looms and harnesses.

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 MEAAVI0034 Fabricate aircraft electrical looms and harnesses

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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:

- fabricate aircraft electrical looms and harnesses (including wire-marking) on at least three looms and harnesses collectively
- use approved fabrication procedures and processes relating to the electrical looms, cables, and harnesses being fabricated
- recognise the integrity or security of electrical component crimps, joints and plug or connector pins for the electrical looms and harnesses being fabricated
- apply safety precautions applicable to the electrical looms, harnesses and cables being fabricated.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- electrical wire gauges and standards
- wire-marking conventions and procedures
- wire terminations, soldering and crimping techniques
- work health and safety (WHS) practices for fabrication of aircraft electrical looms and harnesses
- maintenance documentation for fabrication of aircraft electrical looms and harnesses
- industry standards for aircraft electrical looms and harnesses.

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 in the workplace or in a simulated environment that reflects workplace conditions and contingencies encountered in fabricating aircraft electrical looms and harnesses. 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 fabricating aircraft electrical looms and harnesses
- tools and equipment specified by aircraft in the maintenance manuals
- general-purpose tools and test equipment required for the fabrication of aircraft electrical looms and harnesses.

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.

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