



Australian Government

**Assessment Requirements for
MEAAVI0047 Maintain twin-engine
aircraft electrical systems and components**

Release: 1

Assessment Requirements for MEAAVI0047 Maintain twin-engine aircraft electrical systems and components

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 MEA277 Maintain twin engine aircraft electrical systems and components.

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:

- maintain twin-engine aircraft electrical systems and components on electrical looms, cables and connection hardware, for at least once on each of the following systems and on at least one major component or line replaceable unit (LRU) in each case:
 - direct current (DC) multi-generator and alternator/rectifier generator regulation and distribution systems and components
 - electrical propeller control systems, such as feathering systems (where applicable to the enterprise)
 - batteries in dual battery installations and associated mounting equipment, including related anti-vibration aids (competency may be demonstrated through the performance of a battery check)
 - fire warning and extinguishing systems, including handling of halogen fire extinguishers (where applicable to the enterprise)
 - combustion heating systems (where applicable to the enterprise)
 - equipment cooling and ventilation
 - fuel storage and distribution systems
 - master and central warning systems (where applicable to the enterprise).
- remove and install at least one component from each of the following groups:
 - components of multi-generator regulation and distribution systems
 - electrical propeller control system components (where applicable to the enterprise)
 - batteries in dual battery installations and associated mounting equipment, including related anti-vibration aids
 - fire warning and extinguishing system components (where applicable to the enterprise)
 - combustion heaters and associated components (where applicable to the enterprise)
 - equipment cooling and ventilation components
 - fuel storage and distribution system electrical components
 - master and central warning system components (where applicable to the enterprise)
- identify or located the following in relation to the systems being maintained:

- DC multi-generator power generation, regulation, distribution and control systems and components
- electrical propeller control systems and components, such as feathering and synchronising systems
- batteries in dual battery installations and associated mounting equipment, including related anti-vibration aids
- fire warning and extinguishing systems and components
- identification of halogen fire extinguishers
- combustion heating systems
- equipment cooling and ventilation
- fuel storage and distribution system electrical components
- master and central warning systems
- connect DC generators and alternator/rectifier generators in multi-generator systems and paralleling generator output for the systems being maintained
- recognise system and component defects, external damage, correct/incorrect installation, connection of plugs, terminations, attachment hardware (including cabling or harnesses) and security in the above systems and system components
- perform functional testing by applying logic processes, taking and interpreting electrical measurements, using test equipment and appropriate wiring diagrams and manuals to isolate malfunctions in the above systems and assess post-maintenance serviceability
- apply testing procedures, cleanliness requirements and safety precautions at all times, and as relevant to the system/s being maintained.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- system testing procedures and paralleling of generator output
- the basic layout (block diagram level), function and operation of the following:
 - DC multi-generator and alternator or rectifier generator regulation and distribution systems and components
 - electrical propeller control systems, such as feathering and synchronising systems and system components
 - dual battery systems and associated mounting equipment, including related anti-vibration aids
 - fire warning and extinguishing systems and system components, including regulatory requirements relating to halogen, e.g. bromochlorodifluoromethane (BCF)) fire extinguishers
 - combustion heating systems and system components
 - equipment cooling and ventilation systems and system components
 - fuel storage and distribution systems and system components
 - master and central warning systems and system components
- maintenance requirements and troubleshooting procedures for the above electrical systems
- work health and safety (WHS) practices for aircraft electrical systems and components

- maintenance manuals for aircraft electrical systems and components
- 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 maintaining twin-engine aircraft electrical systems and components. 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 maintaining twin-engine aircraft electrical systems and components
 - tools and equipment specified in maintenance documentation
 - general-purpose tools and test equipment found in most routine.

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>