



Australian Government

MEAAVI0002 Remove and install basic aircraft electrical system components

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 MEA202 Remove and install basic aircraft electrical system components.

Application

This unit describes the skills and knowledge required to apply hand skills and use maintenance documentation and publications to remove and install aircraft direct current (DC) electrical system components of fixed and rotary wing aircraft that have only DC electrical systems 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.

Pre-requisite Unit

MEA201 Remove and install miscellaneous aircraft electrical hardware/components

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. Remove DC aircraft electrical system components	1.1 Render system safe and prepare it in accordance with maintenance manual, fitting required isolation tags to ensure personnel safety 1.2 Remove electrical components in accordance with maintenance manual while observing all relevant work health and safety (WHS) requirements 1.3 Complete and process required maintenance documentation relating to removal in accordance with

Elements	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	standard enterprise procedures 1.4 Tag and pack removed components in accordance with specified procedures
2. Install DC aircraft electrical system components	2.1 Confirm correct part numbers, modification status, serviceability and shelf life of electrical components to be installed against maintenance manual 2.2 Perform physical installation including connection of electrical components in accordance with the applicable maintenance manual, and ensure appropriate adjustment or alignment with mechanical interface is carried out 2.3 Reinstall system to operational condition and prepare for required testing in accordance with maintenance manual 2.4 Complete and process required maintenance documentation relating to installation in accordance with standard enterprise 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.
- Writing skills to complete maintenance documentation.
- 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 MEA202 Remove and install basic aircraft electrical system components.

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 MEAAVI0002 Remove and install basic aircraft electrical system components

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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:

- remove and install basic aircraft electrical system components during scheduled or unscheduled maintenance to meet requirements on at least one component from each of the following:
 - direct current (DC) generators, and alternator/rectifier generators, and components of related single generator regulation and distribution systems
 - motors
 - actuators
 - piston engine ignition and starting system components
 - aircraft batteries
 - specific components of DC electrical systems, such as flaps, landing gear
 - aircraft lighting
 - gas turbine engine igniter and starting systems (may be omitted when not applicable to the enterprise).
- complete removal and installation on jobs involving:
 - electrical components with mechanical interface
 - installations that require alignment and/or adjustment (mechanical or electrical)
- apply cleanliness requirements and safety precautions at all times, as relevant to the system/s being maintained, and follow work practices associated with electrostatic sensitive devices
- correctly connect DC generators and alternator/rectifier generators for the components being maintained.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- component attachment methods
- connection of hardware and plugs
- work health and safety (WHS) practices for the removal and installation of basic aircraft electrical system components

- approved maintenance documentation and aircraft publications for DC electrical systems
- properties of permanent magnets
- precautions for the care and storage of permanent magnets
- general construction, operating characteristics and applications for:
 - aircraft DC generators
 - alternator or rectifier DC generators
 - DC starter/generators
 - DC motors, including starter motors
 - DC rotary and linear actuators
 - batteries
- how to locate and identify components of:
 - DC power regulation and distribution systems
 - piston engine ignition and starting systems
 - gas turbine engine igniter systems, including specific WHS precautions
 - gas turbine engine starting systems
 - DC electrical systems, such as flaps and landing gear retraction
 - lighting systems
- regulatory requirements and standard procedures relating to the removal and installation of basic aircraft electrical system components.

Assessment Conditions

The following conditions of assessment represent the requirements of the regulators (Civil Aviation Safety Authority [CASA] and the Defence Aviation Safety Authority [DASA]) 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 removing and installing basic aircraft electrical system 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 removing and installing basic aircraft electrical system components
 - tools and equipment specified in maintenance manuals
 - general-purpose tools and items of ground support and 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.

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