



Australian Government

**MEA210 Inspect, test and troubleshoot
basic aircraft electrical systems and
components**

Release: 2

MEA210 Inspect, test and troubleshoot basic aircraft electrical systems and components

Modification History

Release 2. Equivalent to MEA210 Inspect, test and troubleshoot basic aircraft electrical systems and components with amended prerequisite name.

Application

This unit of competency requires application of hand skills and the use of system/component knowledge and applicable test equipment to inspect, test and troubleshoot direct current (DC) aircraft electrical systems and 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 part of the Avionic Certificate IV (Aircraft Maintenance Stream) training pathway.

The unit is used in workplaces that operate under the airworthiness regulatory systems of the Australian Defence Force (ADF) and the Civil Aviation safety Authority (CASA).

Where a CASA licensing outcome is sought this unit forms part of the CASA requirement for the granting of the chosen maintenance certification licence under Civil Aviation Safety Regulation (CASR) Part 66, in accordance with the licensing provisions in the Companion Volume Implementation Guide.

Pre-requisite Unit

MEA202 Remove and install basic aircraft electrical system components

MEA246 Fabricate and/or repair aircraft electrical hardware or parts

Competency Field

Aviation maintenance

Unit Sector

Elements and Performance Criteria

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

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| 1. Inspect DC aircraft electrical systems and | 1.1 Relevant maintenance documentation and modification status, including system defect reports where relevant, |
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| components | are used to identify specific inspection requirements |
| | 1.2 Isolation tags are checked and aircraft configured for safe system inspection and operation in accordance with the applicable maintenance manual |
| | 1.3 DC electrical system is visually or physically checked for external signs of defects in accordance with applicable maintenance manual while observing all relevant work health and safety (WHS) requirements |
| | 1.4 Defects are correctly identified and reported |
| 2. Test/adjust DC aircraft electrical systems | 2.1 Aircraft and system are prepared in accordance with applicable maintenance manual for the application of power/system operation |
| | 2.2 Electrical system is functionally tested in accordance with maintenance manual for evidence of serviceability or malfunction |
| | 2.3 System calibration or adjustments are performed in accordance with maintenance manual, as appropriate |
| 3. Troubleshoot DC aircraft electrical systems | 3.1 Available information from maintenance documentation and inspection and test results is used, where necessary, to assist in fault determination |
| | 3.2 Maintenance manual fault diagnosis guides and logic processes are used to ensure efficient and accurate troubleshooting to line replacement level |
| | 3.3 Specialist advice is obtained, where required, to assist with the troubleshooting process |
| | 3.4 System faults are located and the causes of the faults are clearly identified and correctly recorded in maintenance documentation, where required and in accordance with standard enterprise procedures |
| | 3.5 Rectification requirements are determined |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

DC electrical systems/components include:

- DC generators and alternator/rectifier generators, and components of related single generator regulation and distribution systems
- Piston engine ignition and starting system components
- Specific components of DC electrical systems, such as flaps and landing gear, including related motors and actuators
- Gas turbine engine igniter and starting systems and components (where applicable to the enterprise)
- Aircraft lighting
- Aircraft main batteries

Procedures and requirements include:

- Industry standard procedures specified by manufacturers, regulatory authorities or the enterprise

Unit Mapping Information

Release 2. Equivalent to MEA210 Inspect, test and troubleshoot basic aircraft electrical systems and components.

Links

Companion Volume implementation guides are found in VETNet -

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