



Australian Government

MEAAVI0044 Maintain basic light aircraft electrical systems and 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 MEA274 Maintain basic light aircraft electrical systems and components.

Application

This unit describes the skills and knowledge required to apply hand skills and use maintenance documentation or publications to maintain basic aircraft electrical systems and components involving inspection, limited testing and troubleshooting, and component removal and installation during scheduled or unscheduled maintenance. Work may be performed individually or as part of a team.

Applications include fixed wing aircraft with fixed undercarriage and basic rotary wing aircraft with skids or floats and no powered flight controls powered by either a normally aspirated piston engine or small gas turbine.

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

MEA246 Fabricate and/or repair aircraft electrical hardware or parts

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. Inspect basic aircraft electrical systems and components	1.1 Identify specific inspection requirements using relevant maintenance documentation and modification status, including relevant system defect reports 1.2 Check isolation tags and configure aircraft for safe system inspection

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	and operation in accordance with maintenance manual 1.3 Visually or physically check direct current (DC) electrical system for external signs of defects in accordance with maintenance manual while observing all relevant work health and safety (WHS) requirements 1.4 Identify and report on defects in accordance with standard enterprise procedures
2. Test or adjust basic aircraft electrical systems	2.1 Prepare aircraft and system for application of power or system operation in accordance with maintenance manual 2.2 Perform functional testing of electrical system for evidence of serviceability or malfunction in accordance with maintenance manual 2.3 Perform required calibration or adjustments to system in accordance with maintenance manual
3. Troubleshoot basic aircraft electrical systems	3.1 Use available information from maintenance documentation and inspection and test results to assist in fault determination of identified issues 3.2 Troubleshoot issues to line replacement level using maintenance manual fault diagnosis guides and logic processes 3.3 Obtain required specialist or supervisory advice to assist with troubleshooting process 3.4 Locate system faults and identify and record causes of faults in required maintenance documentation, in accordance with standard enterprise procedures 3.5 Determine requirements for rectification of faults
4. Remove and install basic aircraft electrical system components	4.1 Render system safe and prepare it in accordance with maintenance manual, fitting required isolation tags, to ensure personnel safety 4.2 Remove electrical components in accordance with maintenance manual while observing all relevant WHS requirements 4.3 Complete and process required maintenance documentation relating to removal in accordance with standard enterprise procedures 4.4 Tag and pack removed components in accordance with standard enterprise procedures 4.5 Confirm correct part numbers, modification status, serviceability and shelf life of electrical components to be installed against maintenance manual 4.6 Perform physical installation of electrical components in accordance

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	with maintenance manual, and ensure appropriate adjustment/alignment with mechanical interface is carried out 4.7 Reinstall system to operational condition and prepare for required testing in accordance with maintenance manual 4.8 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, inspection procedures and specifications (allowable limits).
- Writing skills to record and report on defects and faults and their causes
- Numeracy skills to interpret and communicate technical information and take and interpret electrical measurements.

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 MEA274 Maintain basic light 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>