



Australian Government

MEAAVI0051 Maintain light aircraft AC-powered instrument 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 MEA281 Maintain light aircraft AC powered instrument systems and components.

Application

This unit describes the skills and knowledge required to apply hand skills and use system and component knowledge and applicable test equipment to inspect, test and troubleshoot alternating current (AC) powered aircraft instrument systems, including the power supply, and to remove and install components during scheduled or unscheduled maintenance.

Applications include light fixed wing and rotary wing aircraft with piston or turbine engines. 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

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 light aircraft AC instrument systems, power supplies and components	1.1 Identify specific inspection requirements using maintenance documentation and modification status, including relevant system defect reports to identify specific inspection requirements 1.2 Check isolation tags and configure aircraft for safe system inspection and operation in accordance with maintenance manual 1.3 Visually or physically check AC instrument system and AC power

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	supply components 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 defects in accordance with standard enterprise procedures
2. Test and adjust light aircraft AC instrument systems, power supplies and components	2.1 Prepare aircraft and system for the application of power or system operation in accordance with maintenance manual 2.2 Perform functional testing on instrument system and AC power supply for evidence of serviceability or malfunction in accordance with maintenance manual 2.3 Perform required calibration or adjustments to systems in accordance with maintenance manual
3. Troubleshoot light aircraft AC instrument systems, power supplies and components	3.1 Use available information from maintenance documentation, inspection and test results to assist in fault determination 3.2 Troubleshoot to line replacement level using maintenance manual fault diagnosis guides and logic processes, test sets, downloaded maintenance data and fault-finding charts or similar 3.3 Obtain required specialist or supervisory advice to assist with the troubleshooting process 3.4 Locate instrument system or power supply 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 light aircraft AC instrument system, and power supply components	4.1 Render system safe and prepare it in accordance with the applicable maintenance manual, fitting required isolation tags to ensure personnel safety 4.2 Remove instrument or power supply component in accordance with the applicable 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 specified procedures 4.5 Confirm correct part numbers, modification status, serviceability and shelf life of instrument or power supply components to be installed

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Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	against maintenance manual 4.6 Perform physical installation of instrument or power supply components in accordance with maintenance manual and regulatory requirements, ensuring required appropriate adjustment or alignment is carried out 4.7 Reinstall system to correct operational condition in preparation for required testing 4.8 Complete and process required maintenance documentation in relation 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 system 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 MEA281 Maintain light aircraft AC powered instrument 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>