



Australian Government

Assessment Requirements for MEA286 Repair or overhaul aircraft electrical/electro-mechanical components

Release: 2

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Modification History

Release 2. Equivalent to MEA286 Repair or overhaul aircraft electrical/electro-mechanical components with amended prerequisite codes.

Performance Evidence

Evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria under the specified conditions of assessment, and must include:

- applying relevant WHS practices
- using approved repair/overhaul procedures and processes relating to electrical and electro-mechanical components
- recognising the serviceability state and repair or overhaul requirements for:
 - alternating current (AC) and direct current (DC) motors, generators and alternators
 - static inverters
 - TRU
 - regulators/control units
 - actuators
 - solenoids and shutoff valves
 - engine ignition/starting components
- applying logic processes, and using test equipment and appropriate wiring diagrams and manuals to isolate component faults
- performing component testing to isolate/confirm component fault and assess post-repair/overhaul serviceability
- correctly disassembling, inspecting component parts, repairing/replacing/modifying component parts and assembling components listed above.

It is essential that component testing procedures, cleanliness requirements and safety precautions applicable to the system component being maintained are fully observed, understood and complied with. Ability to interpret inspection procedures and specifications (allowable limits) and apply them in practice across a range of inspection, testing and troubleshooting applications (including the timely involvement of supervisors or other trades) is critical.

Evidence of transferability of skills and knowledge related to repair is essential. This may be demonstrated through application across a range of aircraft electrical/electro-mechanical components as listed in the Assessment Conditions.

Knowledge Evidence

Evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- component and system operation
- the basic function and operation of components listed below to enable testing for fault isolation/confirmation, to determine repair or overhaul requirements, and serviceability status post repair or overhaul:
 - AC and DC motors, generators and alternators
 - static inverters
 - TRU
 - regulators/control units
 - actuators
 - solenoids and shutoff valves
 - engine ignition/starting components
- basic principles/functions, relating to components listed above and associated with:
 - AC and DC power generation
 - circuit theory
 - analogue fundamentals
- electro-mechanical interface.

Assessment Conditions

- Competency should be assessed in the work environment, or simulated work environment, using tools and equipment specified in maintenance documentation. It is also expected that applicable general and special-purpose tools and test equipment would be used where appropriate.
- Ability to assess component serviceability and interpret parts requirements will be necessary to supplement the required evidence. The application of testing procedures should also clearly indicate knowledge of system operation before undertaking any action. Knowledge of system operation and the relationship of individual components will be necessary to supplement evidence of ability to troubleshoot component faults. The work plan should take account of applicable safety and quality requirements in accordance with the industry and regulatory standards.
- The following conditions of assessment represent the requirements of the Regulators (ADF and CASA) and maintenance stakeholders and must be rigorously observed.
- A person cannot be assessed as competent until it can be demonstrated to the satisfaction of the workplace assessor that the relevant elements and performance criteria of the unit of competency are being achieved under routine supervision on at least one (1) component from each of the following groups:
 - motors, generators and alternators
 - static inverters, TRU and regulators
 - actuators, solenoids and shutoff valves
 - bus bars, circuit breakers, connectors, electrical looms and fans.

- This shall be established via the records in the Log of Industrial Experience and Achievement or, where appropriate, an equivalent Industry Evidence Guide (for details refer to the Companion Volume Assessment Guidelines).
- Assessors must satisfy the requirements of the National Vocational Education and Training Regulator (Australian Skills Quality Authority, or its successors).

Links

Companion Volume implementation guides are found in VETNet -

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