



Australian Government

MEA286 Repair or overhaul aircraft electrical/electro-mechanical components

Release: 2

MEA286 Repair or overhaul aircraft electrical/electro-mechanical components

Modification History

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

Application

This unit of competency requires application of hand skills and knowledge of component repair and overhaul procedures relating to electrical and electro-mechanical components of fixed and rotary wing aircraft that are repaired or overhauled in aviation maintenance workshops during scheduled or unscheduled maintenance. Work may be performed individually or as part of a team.

The unit of competency is part of the Avionic Certificate IV (Component Workshop 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).

Pre-requisite Unit

MEA201	Remove and install miscellaneous aircraft electrical hardware/components
MEA296	Use electrical test equipment in aviation maintenance activities

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.

- | | |
|---------------------------|--|
| 1. Determine requirements | 1.1 Component defect reports (removal tags) or customer order are correctly interpreted and matched by part and serial numbers |
|---------------------------|--|

- 1.2 Components are inspected and/or operated through prescribed test procedures to establish serviceability or confirm defects, as required
 - 1.3 Modification status is clearly established to assist in determining the overhaul requirements for the components
 - 1.4 Extent of overhaul or repair is correctly identified and documented
2. Troubleshoot electrical/ electro-mechanical components
 - 2.1 Available information from maintenance records and test results is used, where necessary, to assist in fault determination
 - 2.2 Logical processes are used to ensure efficient and accurate troubleshooting
 - 2.3 Specialist advice is obtained, where required, to assist with, or confirm, the fault and rectification requirement
 - 2.4 Electrical/electro-mechanical component faults are located and the causes of the faults are clearly identified
 - 2.5 Fault rectification requirements are determined to assist in planning the repair
3. Dismantle and inspect electrical/ electro-mechanical components
 - 3.1 Component parts are dismantled in accordance with maintenance manuals while observing all relevant work health and safety (WHS) requirements
 - 3.2 Component parts are assessed for serviceability in accordance with the relevant maintenance documentation
 - 3.3 Parts requiring specialist repair are tagged and repair instructions are accurately specified
 - 3.4 Parts lists are compiled and processed in accordance with standard enterprise procedure
4. Repair and/or modify electrical/ electro-mechanical components
 - 4.1 Component parts are repaired or replaced in accordance with the relevant maintenance documentation
 - 4.2 Modification of components or parts is undertaken, where required, by relevant manufacturer's bulletins or procedures

- | | |
|---|---|
| 5. Assemble, test and adjust electrical/electro-mechanical components | 5.1 Assembly of component parts is carried out within specified tolerances and in accordance with the appropriate maintenance documents |
| | 5.2 Components are adjusted or calibrated to operate within prescribed specifications |
| | 5.3 Finished components are tagged, sealed and packaged in accordance with specified procedures |
| | 5.4 Required maintenance documentation and modification records are completed and processed in accordance with standard enterprise procedures |

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.

- | | |
|--|---|
| Electrical/electro-mechanical components include: | <ul style="list-style-type: none">• Motors, generators and alternators• Static inverters, transformer rectifier units (TRU) and regulators• Actuators, solenoids and shutoff valves• Bus bars, circuit breakers, connectors, electrical looms and fans |
| Procedures and requirements include: | <ul style="list-style-type: none">• Industry standard procedures specified by manufacturers, regulatory authorities or the enterprise |

Unit Mapping Information

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

Links

Companion Volume implementation guides are found in VETNet -

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