



Australian Government

MEA343 Remove and install avionic system components

Release: 2

MEA343 Remove and install avionic system components

Modification History

Release 2. Equivalent to MEA343 Remove and install avionic system components with amended prerequisite codes.

Application

This unit of competency requires application of hand skills and the use of maintenance documentation/publications in the removal, installation and task certification of avionic system components of fixed and rotary wing aircraft during the performance of scheduled or unscheduled maintenance where system serviceability can be established by a simple self-test facility, other on-board test systems/equipment or by simple ramp test equipment. Maintenance may be performed individually or as part of a team.

The unit is part of the B1 maintenance certification licensing pathway under Civil Aviation Safety Regulation (CASR) Part 66, in accordance with the licensing provisions in the Companion Volume Implementation Guide.

Pre-requisite Unit

MEA227 Test and troubleshoot aircraft electrical systems and components

OR

MEA294 Inspect, test and troubleshoot advanced aircraft electrical systems and components

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. Remove avionic system components | 1.1 System is rendered safe and prepared in accordance with the applicable maintenance manual and isolation tags are fitted, where necessary, to ensure personnel safety |
|--|---|

- | | | |
|---|-----|--|
| | 1.2 | Avionic component removal is carried out in accordance with the applicable maintenance manual while observing all relevant work health and safety (WHS) requirements |
| | 1.3 | Required maintenance documentation is completed and processed in accordance with standard enterprise procedures |
| | 1.4 | Removed components are tagged and packaged in accordance with specified procedures |
| 2. Install avionic system components and verify system serviceability | 2.1 | Avionic components to be installed are checked to confirm correct part numbers, modification status, serviceability and shelf life |
| | 2.2 | Installation of avionic components is performed in accordance with the applicable maintenance manual and regulatory requirements while observing all relevant WHS requirements |
| | 2.3 | System is reinstated to correct operational condition and is tested for serviceability |
| | 2.4 | Required maintenance documentation is completed and processed in accordance with standard enterprise procedures and regulatory requirements |

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.

Procedures and requirements include:

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

Avionic components include:

- Components/line replaceable units (LRUs) from electronic instrument systems
- Components/LRUs from engine indication systems

Tested for serviceability includes:

- Communication system components
- Navigation system components
- Software updates to avionic systems where serviceability can be determined by a simple test
- Confirming system serviceability through the operation of built-in test equipment or any other on-board system that can confirm correct operation
- Using only off-aircraft test equipment that provides a simple go/no go decision regarding system serviceability

Unit Mapping Information

Release 2. Equivalent to MEA343 Remove and install avionic system components

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for MEA343 Remove and install avionic system components

Modification History

Release 2. Equivalent to MEA343 Remove and install avionic system 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:

- locating and identifying avionic components that are part of instrument and radio systems
- determining that component and system serviceability can be confirmed by a simple self-test facility, other on-board test systems/equipment or by simple ramp test equipment requiring a simple go/no go decision
- applying relevant WHS practices
- applying component attachment methods
- connecting hardware and plugs
- handling precautions for electrostatic sensitive devices
- using approved maintenance documentation and aircraft publications relating to avionic systems
- using built-in test equipment to confirm system serviceability (this may involve the operation of specific built-in test equipment, on-board maintenance systems and Integrated Modular Avionic modules).

It is essential that cleanliness requirements and safety precautions applicable to the system being maintained are fully observed, understood and complied with, as well as work practices associated with electrostatic sensitive devices.

Evidence of transferability of skills and knowledge related to removal and installation is essential. This is to be demonstrated by application across a range of aircraft avionic system 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:
 - electronic fundamentals
 - digital techniques relating to electronic instrument systems
 - engine indication systems
 - the operation of built-in test equipment
 - on-board maintenance systems

- Integrated Modular Avionics and the interface with hydraulic, fuel and pneumatic systems.

Assessment Conditions

- Competency should be assessed in the workplace or simulated workplace using tools and equipment specified in maintenance manuals. It is also expected that applicable general-purpose tools, test and ground support equipment found in most routine situations would be used where appropriate.
- An understanding of the attachment methods, connection of hardware, and system test requirements as they relate to the work must be demonstrated before undertaking any action.
- 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 a representative range of avionic components, as listed in the Range of Conditions:
 - components/LRUs from electronic instrument systems
 - components/LRUs from engine indication systems
 - communication system components
 - navigation system components
 - software updates to avionic systems where serviceability can be determined by a simple test.
- 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).
- Where the unit is to be used for CASA licensing purposes the Assessor must also meet the criteria specified in the CASR Part 147 Manual of Standards.

Links

Companion Volume implementation guides are found in VETNet -

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