



Australian Government

Department of Education, Employment and Workplace Relations

MEA343B Remove and install avionic system components

Revision Number: 2

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Modification History

Minor formatting and editorial changes made. Prerequisite unit version code updated.

Unit Descriptor

This unit of competency is part of the B1 Mechanical Aircraft Maintenance Engineer licensing pathway under CASR Part 66, in accordance with the licensing provisions in Section 3, Assessment Guidelines. It covers the competencies required for the removal and installation of avionic system components and certification of tasks where system serviceability can be verified without the use of specialist off-aircraft test equipment.

Application of the Unit

This unit requires application of hand skills and the use of maintenance documentation/publications in the removal, installation and task certification of avionic systems components where system serviceability can be established by a simple self-test facility, other on-board test systems/equipment or by simple ramp test equipment.

Applications include fixed and rotary wing aircraft.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

MEA211C Inspect, test and troubleshoot advanced aircraft electrical systems and components

OR

MEA227D Test and troubleshoot aircraft electrical systems and components

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

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| 1. Remove avionic system components | <p>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</p> <p>1.2 <i>Avionic component</i> removal is carried out in accordance with the applicable maintenance manual</p> <p>1.3 Required maintenance documentation is completed and processed in accordance with standard enterprise procedures</p> <p>1.4 Removed components are tagged and packaged in accordance with specified procedures</p> |
| 2. Install avionic system components and verify system serviceability | <p>2.1 Avionic components to be installed are checked to confirm correct part numbers, modification status, serviceability and shelf life</p> <p>2.2 Installation of avionic components is performed in accordance with the applicable maintenance manual and regulatory requirements</p> <p>2.3 System is reinstated to correct operational condition and is <i>tested for serviceability</i></p> <p>2.4 Required maintenance documentation is completed and processed in accordance with standard enterprise procedures and regulatory requirements</p> |

Required Skills and Knowledge

Required skills

Look for evidence that confirms skills in:

- 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 OHS practices
- 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)

Required knowledge

Look for evidence that confirms 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

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<p>Overview of assessment</p>	<p>A person who demonstrates competency in this unit must be able to remove and install avionic components and verify system serviceability through the use of built-in test equipment or similar on-board systems and/or off-aircraft test equipment that provides a simple go/no go decision while observing all relevant safety and component handling precautions.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>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.</p> <p>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 Range Statement. 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.</p> <p>The work plan should take account of applicable safety and quality requirements in accordance with the industry and regulatory standards. A person cannot be assessed as competent until it can be demonstrated to the satisfaction of the workplace assessor that the relevant elements of the unit of competency are being achieved under routine supervision on a representative range of avionic components, as listed in the Range Statement. This shall be established via the records in the Log of Industrial Experience and Achievement or, where appropriate, an equivalent Industry Evidence Guide.</p>
<p>Context of and specific resources for assessment</p>	<p>Competency should be assessed in the workplace or simulated workplace using tools and equipment specified in maintenance manuals. It is also expected that general-purpose tools, test and ground support equipment found in most routine situations would be used where appropriate.</p>
<p>Method of assessment</p>	

Guidance information for assessment	
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Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Note	The scope of this unit is restricted to removing and installing avionic components from systems whose serviceability can be established and certified through the use of built-in test equipment or any other on-board system that can verify correct system operation. The use of off-aircraft test equipment is limited to items that provide a simple go/no go decision
Application	Application of this unit may relate to: <ul style="list-style-type: none"> • scheduled or unscheduled maintenance • individual or team-related activities
Procedures and requirements	Refer to industry standard procedures specified by manufacturers, regulatory authorities or the enterprise
Avionic components	Avionic components include: <ul style="list-style-type: none"> • components/line replaceable units from electronic instrument systems • components/line replaceable units from engine indication systems • communication system components • navigation system components • software updates to avionic systems where serviceability can be determined by a simple test
Tested for serviceability	Tested for serviceability means: <ul style="list-style-type: none"> • 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 Sector(s)

Aviation maintenance

Competency field

Co-requisite units

Not applicable