



Australian Government

Department of Education, Employment and Workplace Relations

MEA305C Remove and install aircraft fixed wing flight control system components

Revision Number: 2

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Modification History

Minor formatting and editorial changes made. Additional assessment advice provided in the Evidence Guide.

Unit Descriptor

This unit is part of the Mechanical Certificate IV (Aircraft Maintenance Stream) training pathway. It may also be part of a Structures Maintenance Certificate IV training pathway. It covers the competencies required for the removal and installation of flight control system components fitted to fixed wing aircraft. This unit is used in workplaces that operate under the airworthiness regulatory systems of the ADF and CASA. Where a CASA licensing outcome is sought this unit forms part of the CASA requirement for the granting of the chosen Aircraft Maintenance Engineer Licence under CASR Part 66, in accordance with the licensing provisions in Section 3, Assessment Guidelines.

Application of the Unit

This unit requires application of hand skills and the use of maintenance publications to remove and install aircraft flight control system components. Applications include fixed wing aircraft.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

MEA302C Remove and install aircraft hydro-mechanical and landing gear system components

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>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.</p>
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Elements and Performance Criteria

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| <p>1. Remove fixed wing flight control system components</p> | <p>1.1. System is rendered safe in accordance with the applicable maintenance manual tags are fitted, where necessary, to ensure personnel safety</p> <p>1.2. Fixed wing <i>flight control system component</i> removal is carried out in accordance with applicable maintenance manual</p> <p>1.3. Required maintenance documentation is accurately completed and correctly processed</p> <p>1.4. Removed components are tagged, sealed and packaged in accordance with applicable enterprise procedures</p> |
| <p>2. Install fixed wing flight control system components</p> | <p>2.1. Components to be installed are checked to confirm correct part numbers, serial numbers and modification status</p> <p>2.2. Mass balance of control surfaces to be installed is checked in accordance with applicable maintenance manual, if required</p> <p>2.3. Installation is carried out in accordance with the applicable maintenance manual</p> <p>2.4. Required maintenance documentation is completed and processed in accordance with applicable enterprise procedures</p> |

Required Skills and Knowledge

Required skills

Look for evidence that confirms skills in:

- applying relevant OHS practices
- using relevant maintenance documentation and aircraft manuals to:
 - remove flight control surfaces
 - check the mass balance of control surfaces where required
 - install flight control surfaces
 - remove power flight control system components
 - install power flight control system components
 - remove mechanical flight control system components
 - install mechanical flight control system components

Required knowledge

Look for evidence that confirms knowledge of:

- flight control surface and system component attachment methods
- connection hardware and couplings
- electrical circuit isolation and plug removal and installation
- requirements for balancing of control surfaces
- flight control system rigging requirements
- requirements for independent inspection of work performed on flight control systems and components
- relevant OHS practices
- relevant maintenance manuals
- relevant regulatory requirements and standard procedures

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 apply hand skills and use maintenance publications to remove and install fixed wing aircraft flight control system components while applying all relevant safety precautions.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>The underlying skills inherent in this unit should be transferable into other units that require similar techniques. It is essential that safety precautions applicable to the fixed wing flight control system being maintained are fully observed, understood and complied with (especially flight control system interrelationships with other systems where applicable). An awareness of dual inspection requirements associated with work on flight controls and systems must also be demonstrated. Evidence of transferability of skills and knowledge related to removal and installation is essential. This may be demonstrated through removal and installation of a representative range of the fixed wing flight control system components listed in the Range Statement. An understanding of component attachment methods and the need for adjustment or rigging and system operation as it relates 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. 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 at least one item from each of Groups 1 to 3 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 work environment or simulated work environment 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>

Method of assessment	
Guidance information for assessment	Individuals being assessed who have already attained MEA351A Maintain airframe systems of basic light fixed wing aircraft, will have satisfied the requirements of this unit with regard to common Range Statement variables. Log of Industrial Experience and Achievement records relating to MEA351A Maintain airframe systems of basic light fixed wing aircraft, may be accepted as also meeting the evidence requirements for this unit in the applicable common areas.

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	Range statements listed below are numbered to facilitate specification of the assessment requirements included in the Evidence Guide
Flight control system components	Flight control system components may include: <ol style="list-style-type: none"> 1. Ailerons, elevators, rudders, trim tabs, speed brakes, spoilers, flaps and slats 2. Actuators - mechanical, hydraulic, pneumatic or electric 3. Mechanical flight control components (cables, pulleys, guides, fairleads, tension regulators, control rods, bellcranks, torque tubes, chains, sprockets, control sticks, wheels or columns, trim wheels or handles, and rudder pedals)
Application	Application of this unit may relate to: <ul style="list-style-type: none"> • scheduled or unscheduled maintenance activities • individual or team-related activities
Procedures and requirements	Refer to industry standard procedures specified by manufacturers, regulatory authorities or the enterprise

Unit Sector(s)

Aviation maintenance

Competency field

Co-requisite units

Not applicable