



Australian Government

MEA312 Inspect, test and troubleshoot aircraft fixed wing flight control systems and components

Release: 1

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Modification History

Release 1 - New unit of competency

Application

This unit of competency requires application of hand skills and the use of maintenance publications and knowledge of system theory to inspect, test and troubleshoot fixed wing aircraft flight control system components during the performance of scheduled or unscheduled maintenance. Maintenance may be performed individually or as part of a team.

This unit is part of the Mechanical Certificate IV (Aircraft 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).

Where a CASA licensing outcome is sought this unit forms part of the CASA requirement for the granting of the chosen maintenance certification licence under Civil Aviation Safety Regulation (CASR) Part 66, in accordance with the licensing provisions in the Companion Volume Implementation Guide.

Pre-requisite Unit

MEA305	Remove and install aircraft fixed wing flight control system components
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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.

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| 1. Inspect fixed wing flight control systems and components | 1.1 Isolation tags already attached to the system or related systems are checked and aircraft configured for safe system inspection and operation in accordance with |
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		applicable maintenance manual
	1.2	Fixed wing flight control systems and components are visually or physically checked for signs of defects in accordance with the applicable maintenance manual while observing all relevant work health and safety (WHS) requirements
2.	Test fixed wing flight control systems	2.1 Powered controls of the aircraft and system are prepared in accordance with maintenance manual for the application of electrical and hydraulic power 2.2 Power is applied, if necessary, and system is functionally tested in accordance with applicable maintenance manual for malfunction or evidence of incorrect rigging 2.3 System rigging is performed in accordance with applicable maintenance manual
3.	Prepare for troubleshooting	3.1 Relevant maintenance documentation and modification status, including system defect reports, where relevant, are interpreted to identify an unserviceability
4.	Troubleshoot fixed wing flight control systems	4.1 Available information from maintenance documentation and inspection and test results is used, where necessary, to assist in fault determination 4.2 Maintenance manual fault diagnosis guide and logical processes are used to ensure efficient and accurate troubleshooting to line replacement level 4.3 Specialist advice is obtained, where required, to assist with the troubleshooting process 4.4 Fixed wing flight control system faults are located and the causes of the faults are clearly identified and correctly recorded in maintenance documentation, where required 4.5 Fault rectification requirements are determined to assist in planning the repair

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.

Flight control systems and system components include:

- Elevator, aileron and rudder primary flight control systems and associated trim systems
- Speed brake, spoiler, flap and high lift systems
- Ailerons, elevators, rudders, trim tabs, speed brakes, spoilers, flaps and slats
- Actuators – mechanical, hydraulic, pneumatic or electric
- 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)

Procedures and requirements include:

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

Unit Mapping Information

Release 1 – equivalent to MEA312C Inspect, test and troubleshoot aircraft fixed wing flight control systems and components

Links

Companion Volume implementation guides are found in VETNet -

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