Australian Government

MEA316 Inspect, test and troubleshoot rotary wing rotor and 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, the use of maintenance publications, and knowledge of rotors and rotor control system theory to inspect, test and troubleshoot rotary wing aircraft rotors and rotor control systems during the performance of scheduled or unscheduled maintenance. Maintenance may be performed individually or as part of a team.

The 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

MEA308	Remove and install rotary wing rotor and flight control system 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.	Inspect rotor and rotor control systems and components	1.1 Isolation and warning signs are fitted/installed to the system or related systems and the aircraft configured for safe system inspection and operation in accordance with relevant aircraft publications/maintenance regulations

			orders and standards and practices
		1.2	Rotor and rotor control system is visually or physically checked/inspected for external signs of defects in accordance with relevant aircraft publications maintenance regulations/orders and standards and practices while observing all relevant work health and safety (WHS) requirements
		1.3	Defects are identified and recorded in accordance with standard enterprise procedures
2.	Ground test rotor and rotor control systems	2.1	Aircraft and system prepared in accordance with relevant aircraft publications/maintenance regulations orders and standards and practices for the operation of engine and rotor system
		2.2	Rotor and rotor control system are functionally tested in accordance with relevant aircraft publications maintenance regulations/orders and standards and practices for evidence of malfunction
		2.3	System calibration or adjustments are performed in accordance with relevant aircraft publications/maintenance regulations/orders and standards and practices
3.	Prepare for troubleshooting	3.1	Relevant aircraft publications and modification status, including system defect reports, are interpreted to identify an unserviceability
4.	Troubleshoot rotor and rotor control systems	4.1	Available information from aircraft maintenance documentation, inspection and test results is used to assist in fault determination
		4.2	Relevant aircraft publication fault diagnosis guide and logical processes are used to ensure efficient and accurate troubleshooting to line replacement level
		4.3	Specialist advice is obtained to assist with the troubleshooting process
		4.4	Rotor and rotor control system faults are located and the causes of the faults are clearly identified and recorded in aircraft maintenance documentation in accordance with standard enterprise procedures
		4.5	Fault rectification requirements are determined

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.

Rotor and rotor control systems include:	• Main rotor blades and tail rotor blades • Rotor heads, swash plates and tail rotor pitch control assemblies • Mechanical, powered flight control components • Main rotor, intermediate or tail rotor gearboxes • Drive shafts and couplings
Procedures and requirements include:	• Industry standard procedures specified by manufacturers, regulatory authorities or the enterprise

Unit Mapping Information

Release 1 – equivalent to MEA316C Inspect, test and troubleshoot rotary wing rotor and 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