Australian Government

MEA212 Inspect, test and troubleshoot basic aircraft instrument systems and components

Release: 3

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Modification History

Release 3. Equivalant to MEA212 Inspect, test and troubleshoot basic aircraft instrument systems and components with amended prerequisite codes.

Application

This unit of competency requires application of hand skills and the use of system/component knowledge and applicable test equipment to inspect, test and troubleshoot basic aircraft instrument systems and components of fixed and rotary wing aircraft during scheduled or unscheduled maintenance. Work may be performed individually or as part of a team.

The unit is part of the Avionic 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

MEA204	Remove and install basic aircraft instrument system components
MEA246	Fabricate and/or repair aircraft electrical hardware or parts

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 aircraft basic instrument systems	1.1 Relevant maintenance documentation and modification status, including system defect reports where relevant,

	and components		are used to identify specific inspection requirements
		1.2	Isolation tags are checked and aircraft configured for safe system inspection and operation in accordance with the applicable maintenance manual
		1.3	Instrument system components are visually or physically checked for external signs of defects in accordance with applicable maintenance manual while observing all relevant work health and safety (WHS) requirements
		1.4	Defects are correctly identified and reported
2.	Test/adjust aircraft basic instrument systems and components	2.1	Aircraft and system are prepared in accordance with applicable maintenance manual for the application of power/system operation
		2.2	Instrument system is functionally tested in accordance with maintenance manual for evidence of serviceability or malfunction
		2.3	System calibration or adjustments are performed in accordance with maintenance manual, as appropriate
3.	Troubleshoot aircraft basic instrument systems and components	3.1	Available information from maintenance documentation, inspection and test results is used, where necessary, to assist in fault determination
		3.2	Maintenance manual fault diagnosis guides and logic processes are used to ensure efficient and accurate troubleshooting to line replacement level
		3.3	Specialist advice is obtained, where required, to assist with the troubleshooting process
		3.4	Instrument system faults are located and the causes of the faults are clearly identified and correctly recorded in maintenance documentation, where required, in accordance with standard enterprise procedures
		3.5	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.

Instrument systems and components include:	• Pitot/static systems and components, airspeed indicators (ASIs), vertical speed indicators (VSIs), outside air temperature gauges (OAT) and counter-pointer altimeters • Directional gyros (DGs) and artificial horizons (AHs) (air and electrically driven) • Turn and bank and slip/turn coordinators • Direct reading compasses • Remote reading gyro compass systems (where applicable to the enterprise) • Piston engine indication system components (direct reading measuring instruments and temperature indication) • Gas turbine engine indication system components (where applicable to the enterprise) • Electrical systems indication (voltage, current, power and frequency) • Basic fuel quantity indication systems and components • Pneumatic/vacuum indication components
Procedures and requirements include:	• Industry standard procedures specified by manufacturers, regulatory authorities or the enterprise

Unit Mapping Information

Release 3. Equivalant to MEA212 Inspect, test and troubleshoot basic aircraft instrument systems and components.

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=ce216c9c-04d5-4b3b-9bcf-4e81d0950371