



Australian Government

**Assessment Requirements for
MEAAVI0014 Inspect, test and
troubleshoot fixed wing autopilot systems
and components**

Release: 1

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Modification History

Release 1. Application changed. Elements and Performance Criteria changed. Foundation Skills made explicit. Range of Conditions removed, and relevant information moved to Assessment Requirements. Assessment Requirements clarified. Supersedes and is equivalent to MEA217 Inspect, test and troubleshoot fixed wing autopilot systems and components.

Performance Evidence

There must be evidence the candidate has completed all the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to:

- perform inspection, testing and troubleshooting on a three-axis fixed wing autopilot system incorporating a radio-coupled flight director and its components during scheduled or unscheduled maintenance at least once
- recognise system and component defects, external damage, correct/incorrect installation, connection of plugs, terminations, attachment hardware (including cabling/harnesses) and security in each of the following:
 - flight director components and interface
 - multi-axis autopilot system components
- perform functional testing by applying logic processes, taking and interpreting system measurements and using test equipment and appropriate wiring diagrams and manuals to accurately and effectively isolate malfunctions in the above systems and assess post-maintenance serviceability
- apply testing procedures, cleanliness requirements and safety precautions at all times, and as relevant to the system/s being maintained.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- component attachment methods
- the basic layout (block diagram level), function and operation of:
 - flight director components and interface
 - three-axis autopilot system components
- integration with other avionic systems, e.g. flight management systems and navigation systems
- flight director and autopilot system maintenance requirements and troubleshooting procedures
- work health and safety (WHS) practices for fixed wing autopilot systems and components
- basic principles/functions relating to the listed systems and associated with:
 - basic alternating current (AC) and direct current (DC) circuit theory

- digital fundamentals
- analogue fundamentals
- fixed wing flight theory
- inner and outer loop control
- flight control modes/channels
- maintenance manuals for fixed wing autopilot systems and components
- relevant regulatory requirements and standard procedures.

Assessment Conditions

The following conditions of assessment represent the requirements of the regulators (DASA and CASA) and maintenance stakeholders and must be rigorously observed.

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies encountered in inspecting, testing and troubleshooting fixed wing autopilot systems and components. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - workplace procedures, manufacturing specifications, codes, standards, manuals, and reference materials relevant to inspecting, testing and troubleshooting fixed wing autopilot systems and components
 - tools and equipment specified in the maintenance manuals
 - general and special-purpose tools and items of ground support and test equipment.

Evidence of tasks demonstrating competency must be recorded in a log of industrial experience and achievement.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -

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