



Australian Government

**Assessment Requirements for
MEAAVI0018 Inspect, test and
troubleshoot aircraft secondary radar
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 MEA221 Inspect, test and troubleshoot aircraft secondary radar 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 aircraft secondary radar systems and components during scheduled or unscheduled maintenance for at least one of the following secondary radar systems and its major system components/line replaceable units (LRU):
 - air traffic control (ATC) transponder
 - radio altimeter
 - distance measuring equipment (DME)
 - doppler navigation system
 - airborne collision avoidance system (ACAS)
 - automatic dependent surveillance-broadcast (ADS-B)
- recognise system and component defects, external damage, correct/incorrect installation, connection of plugs, terminations, attachment hardware (including cabling/harnesses/transmission lines) and security in one of:
 - DME components and interface
 - radio altimeters
 - ATC transponders
 - doppler navigation system
 - ACAS
 - ADS-B
- perform functional testing by applying logic processes and taking and interpreting system measurements to accurately and effectively isolate system malfunctions within the system, 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:
 - DME, including components and interface
 - radio altimeters
 - ATC transponders
 - doppler navigation system
 - ACAS
 - ADS-B
- 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
 - radar fundamentals
 - transmission lines, waveguide and antenna characteristics
- pulse system maintenance requirements and troubleshooting procedures
- work health safety (WHS) practices for aircraft secondary radar systems and components
- maintenance manuals for aircraft secondary radar 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 under routine supervision in the workplace or in a simulated environment that reflects workplace conditions and contingencies encountered in inspecting, testing and troubleshooting aircraft secondary radar 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 aircraft secondary radar systems and components
 - tools and equipment specified in the maintenance manuals
 - general and special-purpose tools and items of ground support and test equipment required for inspecting, testing and troubleshooting aircraft secondary radar systems and components.

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>