Assessment Requirements for MEAAVI0011 Inspect, test and troubleshoot basic aircraft communication and radio navigation systems and components

Australian Government

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Modification History

Release 1. Unit title error amended. 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 equivalent to MEA214 Inspect, test and troubleshoot aircraft basic communication and radio navigation 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 basic aircraft communication and radio navigation systems and components during scheduled or unscheduled maintenance on a system for at least one major system component/line replaceable unit (LRU) from each of the following:
  - high frequency (HF) and very high frequency (VHF) communications systems
  - automatic direction finding (ADF) and very high frequency omni-directional range (VOR) navigation systems
  - emergency location transmitter (ELT) systems.
- recognise system and component defects, external damage, correct/incorrect installation, attachment hardware (including cabling/harnesses/transmission lines) and security in each of:
  - HF and VHF communications systems
  - VOR and ADF navigation systems
  - ELT systems
- perform functional testing by applying logic processes, taking and interpreting system measurements to accurately and effectively isolate malfunctions and faults, and assess post maintenance serviceability in the listed systems
- 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:
  - HF and VHF communications systems
  - VOR and ADF navigation systems

- ELT systems
- communication and radio frequency navigation system maintenance requirements and troubleshooting procedures
- work health and safety (WHS) practices for basic aircraft communication and radio navigation systems
- basic principles/functions, relating to the above systems and associated with:
  - electromagnetic radiation and propagation
  - basic alternating current (AC) and direct current (DC) circuit theory
  - printed circuit boards
  - digital fundamentals
  - analogue fundamentals
  - transmitter and receiver principles
  - antenna characteristics
  - transmission line characteristics
  - fibre optic communications
- maintenance manuals for basic aircraft communication and radio navigation 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 removing and installing basic aircraft communication and radio navigation 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 removing and installing basic aircraft communication and radio navigation 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