



Australian Government

Assessment Requirements for MEA276 Maintain basic aircraft communication and radio navigation systems and components

Release: 2

Assessment Requirements for MEA276 Maintain basic aircraft communication and radio navigation systems and components

Modification History

Release 2. Equivalent to MEA276 Maintain basic aircraft communication and radio navigation systems and components with amended prerequisite unit name.

Performance Evidence

Evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria under the specified conditions of assessment, and must include:

- applying relevant WHS practices
- using approved maintenance documentation and aircraft publications relating to the radio frequency and communications system being maintained
- locating and identifying radio communication and navigation system components comprising:
 - HF and VHF communications
 - VOR, ADF and GNS
 - ATC transponders
 - ADS-B
 - ELT systems
- locating and identifying applicable radio system antennas
- recognition of system and component defects/external damage, correct installation, attaching hardware (including cabling/harnesses/transmission lines) and security in:
 - HF and VHF communications systems
 - VOR, ADF and GNS
 - ATC transponders
 - ADS-B
 - ELT systems
- applying logic processes, functional testing and visual inspections to isolate malfunctions within the above systems
- functionally testing listed systems to assess post-maintenance serviceability.

It is essential that system testing procedures, cleanliness requirements and safety precautions applicable to the basic communication or radio navigation system being maintained are fully observed, understood and complied with. Ability to interpret inspection procedures and specifications (allowable limits) and apply them in practice across a range of inspection, testing and troubleshooting applications (including the timely involvement of supervisors or other trades) is critical.

Evidence of transferability of skills and knowledge related to inspection, functional testing and visual troubleshooting is essential. This is to be demonstrated through application across a range of basic aircraft communication and radio navigation systems and components listed in the Assessment Conditions.

Knowledge Evidence

Evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- component attachment methods
- connection of hardware and plugs
- printed circuit boards
- semiconductors
- fibre optics
- handling precautions for electrostatic sensitive devices
- relevant WHS practices
- the use of approved maintenance documentation and aircraft publications relating to radio communication and navigation systems and components
- the general working principles of communication and navigation systems
- explaining the basic system layout (block diagram level), function and operation of:
 - HF and VHF communications systems
 - VOR, ADF and GNS navigation systems
 - ATC transponders
 - ELT systems
 - ADS-B systems
- radio frequency and communication system maintenance requirements and basic troubleshooting procedures
- relevant maintenance manuals
- relevant regulatory requirements and standard procedures.

Assessment Conditions

- Competency should be assessed in the work environment or simulated work environment using tools and equipment specified in maintenance documentation. It is also expected that general-purpose tools and test equipment found in most routine situations would be used where appropriate.
- The application of testing procedures should clearly indicate knowledge of system operation, the relationship of individual components and the links with other systems (if applicable) within the limits of the aircraft/system fault-finding guide before undertaking any action. The work plan should take account of applicable safety and quality requirements in accordance with the industry and regulatory standards.
- The following conditions of assessment represent the requirements of the Regulators (ADF and CASA) and maintenance stakeholders and must be rigorously observed.

- A person cannot be assessed as competent until it can be demonstrated to the satisfaction of the workplace assessor that the relevant elements and performance criteria of the unit of competency are being achieved under routine supervision on a system and at least one (1) major system component/LRU from each of the following groups:
 - HF and VHF communication LRUs, transmission lines and antennas
 - ADF, VOR and GNS navigation system LRUs, transmission lines and antennas
 - ATC transponders, transmission lines and antennas
 - ELT
 - ADS-B.
- This shall be established via the records in the Log of Industrial Experience and Achievement or, where appropriate, an equivalent Industry Evidence Guide (for details refer to the Companion Volume Assessment Guidelines).
- Assessors must satisfy the requirements of the National Vocational Education and Training Regulator (Australian Skills Quality Authority, or its successors).
- Where the unit is to be used for CASA licensing purposes the Assessor must also meet the criteria specified in the CASR Part 147 Manual of Standards.
-

Links

Companion Volume implementation guides are found in VETNet -

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