



Australian Government

**Assessment Requirements for MEA109
Perform basic hand skills, standard trade
practices and fundamentals in aviation
maintenance**

Release: 1

Assessment Requirements for MEA109 Perform basic hand skills, standard trade practices and fundamentals in aviation maintenance

Modification History

Release 1 - New unit of competency

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:

- the correct identification, inspection of, application, use and storage of general and purpose specific hand tools (i.e. spanners, screwdrivers, pliers, hammers, cutting devices, files, punches, drills and marking out tools) that may be found in an aircraft engineering workshop or hangar
- the correct identification, inspection of (including calibration), application, use and storage of precision measuring tools (i.e. micrometers, vernier instruments, feeler gauges, go/no-go gauges) that may be found in an aircraft engineering workshop or hangar. Reading instrument scales must be clearly demonstrated during application of instruments to ensure compliance with specifications
- the correct identification, inspection of, application, operation and storage/servicing of portable and fixed power and machine tools (i.e. drills, presses, grinders, shears, pan breaks) that may be found in an aircraft engineering workshop or hangar
- identification, inspection and use of lubrication equipment
- determination of correct lubricants for specified applications
- identification of common ferrous and non-ferrous aircraft materials
- identification of common aircraft composite and non-metallic materials (other than wood)
- identification of aircraft hardware by markings, part numbers, size, shape and material
- the installation of aircraft hardware using standard practices/techniques to ensure safe security and includes:
 - minimum thread engagement
 - split pinning
 - lockwiring
 - application of locking compounds
 - locking tabs, spring washers
 - lock nuts
- the installation of aircraft hardware using tightening, torquing and tensioning techniques. Calculating setting, reading scales and setting up of torque wrench and/or tensioning devices must be clearly demonstrated before application of wrench or device
- identification of various types of aircraft rigid and flexible plumbing and their connectors
- identification of aircraft control cables and related cable system hardware
- manufacture of simple items using basic hand skills.
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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:

- types of standard aircraft hardware and methods of identification, including bolts, nuts, washers, pins (cotter, tapered) and fasteners (rivets and camlocs)
- materials from which hardware is manufactured and its applications, including plain, corrosion resistant and temperature/heat resistant
- types of safety locking devices and their application

- common ferrous and non-ferrous aircraft materials, heat treatment and testing
- characteristics and properties of common composite and non-metallic materials other than wood
- types of aircraft cable, turnbuckles, end fittings, tensiometers, pulleys and cable system components, and aircraft flexible control systems
- types and characteristics of lubricants
- types and uses of lubrication equipment
- fits and clearances
- laying out of simple items for manufacture using basic hand skills
- hand and power tool storage and maintenance requirements
- tool calibration requirements
- WHS requirements relevant to the use of hand and power tools.

Assessment Conditions

- Competency should be assessed in the work environment, or by use of simulated activities, using tools and equipment specified by aircraft manuals as well as general purpose tools and test equipment found in most routine situations.
- This unit must be linked in its assessment and application to those units that apply to actual maintenance of aircraft. It is essential that all WHS requirements are met and understood.
- Evidence of knowledge about how tools and equipment are selected, used and maintained is essential. The ability to manipulate tools and equipment correctly in the performance of tasks is necessary to demonstrate transferability of hand skills across a variety of applications.
- 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 the following tasks:
 - laying out and fabricating simple items from common aircraft materials
 - assembling items using a representative range of common types of aircraft attachment hardware for which relevant fits and clearances, appropriate safety locking devices and fasteners, including lockwire, and applicable lubricants are correctly selected and applied
 - assembling/connecting a range of common aircraft connectors and plumbing, applying safety locking devices, where applicable
 - assembling/connecting aircraft control cables and applying safety locking devices, where applicable.
- 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 Implementation Guide).
- 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.education.gov.au/Pages/TrainingDocs.aspx?q=ce216c9c-04d5-4b3b-9bcf-4e81d0950371>