



Australian Government

Assessment Requirements for MEA145 Conversion from allied trades for employment in aviation maintenance workshops

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Modification History

Release 2. Equivalent to MEA145 Conversion from allied trades for employment in aviation maintenance workshops with amended prerequisite codes.

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:

- accessing, interpreting and applying information from industry manuals, including paper-based, microfiche or computer-based media, relating to work activities, including determination of manual amendment status, knowledge of manual structures and locating relevant information/instructions for work activity
- amending industry manuals to reflect current/approved amendment status
- identifying and interpreting information from drawings and diagrams in aircraft maintenance manuals, including component scaling, section, assembly, location, drawing applicability and amendment status from the title block
- correct handling and storage of drawings, manuals and industry media, i.e. microfiche and digital formats
- determining correct lubricants for specified applications
- identifying common ferrous and non-ferrous aircraft materials
- identifying common aircraft composite and non-metallic materials (other than wood)
- identifying aircraft hardware by markings, part numbers, size, shape and material
- installing aircraft hardware using standard practices/techniques to ensure safe security and includes:
 - minimum thread engagement
 - split pinning
 - lockwiring
 - application of locking compounds
 - locking tabs and spring washers
 - lock nuts
- installing aircraft hardware using tightening, torquing and tensioning techniques
- identifying various types of aircraft rigid and flexible plumbing and their connectors
- identifying aircraft control cables and related cable system hardware
- applying workplace hazard reporting and identification procedures
- being able to differentiate the elements which constitute the quality system and the ability to identify processes, workplace regulations and ISO 9000 compliant documentation and specifications within the workplace environment

- interpreting information relating to the work activity from a range of industry manuals, industry and enterprise regulations and industry documentation
- considering WHS regulations/precautions specific to the work activity and others working in the vicinity of the planned work activity, particularly with regard to electricity, gases (especially oxygen), oils and chemicals
- using MSDS
- applying human factors in planning maintenance activities.
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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:

- the types of industry manuals used in aviation maintenance and types of media
- requirements for custody and upkeep of industry manuals
- techniques for obtaining and applying data contained in industry manuals
- types of standard aircraft hardware and methods of identification, including bolts, nuts, washers, pins (cotter and 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
- typical quality systems and their operation in the workplace
- workplace quality documentation, such as quality manuals, procedures manuals, work instructions and worksheets
- the relationship between the quality system and WHS requirements, such as workplace hazard reporting
- the relationship between the quality system and identification systems for aircraft hardware, materials and components
- the impact of human factors on the safe and effective performance of maintenance on aircraft and aircraft components
- MSDS.

Assessment Conditions

- Competency should be assessed in the work environment, or by use of simulated activities, covering the use of publications/maintenance regulations/orders and standards and practices, the application of aviation maintenance specific standard trade practices, and of task planning and quality system application in the aeronautical product maintenance environment.

- This unit must be linked in its assessment and application to those that apply to the actual maintenance of items of aeronautical product. It is essential that all WHS requirements are met and understood.
- The transferability of general manual interpretation and use in accordance with relevant aircraft component publications/maintenance regulations/orders and standards and practices must be clearly established. This includes evidence of underlying knowledge and skills associated with the interpretation and use of manuals to supplement understanding of the structure and regulatory requirements associated with the aircraft maintenance environment for aeronautical product maintenance.
- Evidence of knowledge about how aircraft materials, standard items of hardware and fittings are used in component maintenance and the application of quality systems and work planning must be demonstrated. The ability to apply the skills and knowledge across a variety of applications must also be demonstrated.
- 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 of the unit of competency are being achieved under routine supervision on at least one manual from each of:
 - aircraft publications, maintenance instruction manuals, process specifications, servicing or service bulletins or structural repair manuals
 - tooling or equipment manuals, manufacturer's manuals, standard practices, enterprise aviation regulations and publications
 - illustrated parts catalogues, aircraft wiring manuals or drawings
- and on representative tasks from:
 - 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, 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 Assessment Guidelines).
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Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=ce216c9c-04d5-4b3b-9bcf-4e81d0950371>