



Australian Government

Assessment Requirements for MEASTR0017 Perform major disassembly and reassembly on aircraft structure

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 MEA423 Aircraft structure major disassembly and reassembly.

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 major disassembly and reassembly on aircraft structures during scheduled or unscheduled maintenance on elements from each of the following groups:
 - assembly of aircraft sub-assemblies or end items from detailed parts using jigs and fixtures
 - disassembly and reassembly of aircraft structure, such as wings, tailplanes or fuselage sections, using trestling, jigs and fixtures
 - replacement of major structural load carrying members, for example, skins, longerons, spars, frames and bulkheads.
- safely handle heavy components during removal and assembly of structures being worked on
- identify various aircraft metals/composite materials and their basic metallurgy properties by interpretation of markings, numbering systems or visual, chemical or mechanical means to inform requirements
- handle and store aircraft metal and composite components to industry standards during and after assembly work
- identify aircraft structural assembly fasteners (metal and composite) by interpretation of markings, numbering systems, size, shape and colour to inform suitable selections for structures being worked on
- use appropriate hand tools and machines to remove and assemble aircraft structural components, parts, sections and skin, including riveting equipment, drilling equipment, aligning tools, reamers and material fasteners (grip pins)
- apply correct removal and installation techniques for general and close tolerance fasteners (rivets, standard and oversize hilocks), including hole preparation and location techniques.
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Knowledge Evidence

There must be evidence the candidate has knowledge of:

- aircraft construction principles, including the causes of structural fatigue and corrosion
- describing the basic construction methods used to assemble:

- fuselage (pressure and non-pressurised)
- wings, vertical and horizontal stabilisers, rotary wing tail cones and pylons
- engine nacelles/pylons
- doors and windows, including seals, sealants and locking mechanisms
- assembly procedures, including:
 - drilling, reaming and countersinking
 - fitting fasteners and rivets
 - applying adhesives and sealants
 - fitting hardware
 - applying corrosion inhibitors and protective coatings
- assembly stress defects, including:
 - oil canning
 - buckling
 - contour misalignment
 - stress raisers
- material specifications for aluminium alloys and steel alloys used in aircraft structure
- composite cloths, matrix materials and adhesives
- structural material identification by markings and numbering systems
- material identification by chemical, electrical and mechanical methods
- material storage requirements
- hardware types and specifications
- composite bonding methods
- identification of hardware
- sealants used in aircraft structure and their application and handling
- chemical surface treatments
- electroplating
- paints and finishes
- work health and safety (WHS) precautions for disassembly and reassembly of aircraft structures, including safe handling of heavy components
- how to access and apply material safety data sheets (MSDSs)
- personal protective equipment (PPE) for disassembly and reassembly of aircraft structures.
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Assessment Conditions

The following conditions of assessment represent the requirements of the regulators Civil Aviation Safety Authority (CASA) and the Defence Aviation Safety Authority (DASA) 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 disassembling and reassembling aircraft structures. 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 disassembling and reassembling aircraft structures
 - tools and equipment specified in the aircraft maintenance manuals
 - general-purpose tools and ground support equipment found in most routine situations.

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>