



Australian Government

Assessment Requirements for MEASTR0001 Inspect aircraft structures

Release: 1

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Modification History

Release 1. Unit code changed. 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 MEA401 Inspect aircraft structures.

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:

- prepare for non-destructive testing (NDT) (access to relevant structural zones and components)
- inspect (using physical and visual checks, mensuration and alignment) at least one aircraft component from each of the following groups, during scheduled and unscheduled maintenance:
 - non-ferrous and ferrous alloys and composite (FRP) materials used in aircraft construction
 - structural fastening and attachment hardware and/or devices
 - seals and sealants
 - glass and moulded plastics
 - doors, hinges and locking mechanisms for damage/misalignment
 - damage-tolerant and fail-safe structure relevant to enterprise
- undertake the following in performing inspections of the aircraft structures:
 - identify various aircraft metals and their basic properties to correctly assess damage
 - identify potential causes of structural failure to correctly assess damage
 - demonstrate appropriate cleaning procedures to enable structure inspection
 - demonstrate correct inspection procedures, in accordance with aircraft maintenance manuals and procedures
 - perform aircraft mensuration and alignment checks during inspection
 - identify damage to aircraft metallic (ferrous and non-ferrous) structures and/or components by way of:
 - impact
 - fatigue
 - corrosion
 - identify the various forms of structural corrosion, stating the causes and structural effects of corrosion on aircraft
 - identify composite materials used in aircraft construction, associated safety precautions and hazards

- inspect damage and assessing composite components/structures for:
 - impact damage
 - fatigue
 - disbonding
 - moisture damage
 - heat damage
 - ultraviolet (UV) damage.
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Knowledge Evidence

There must be evidence the candidate has knowledge of:

- aircraft construction principles
- structural component attachment methods
- construction methods used in:
 - fuselage sections
 - wing sections
 - engine nacelles and mounts
 - windows and window frames
 - doors, locks and access panels in pressurised and unpressurised aircraft
- structural terms, i.e. safe-life, damage-tolerant, failsafe, stress, strain, shear and cycles
- structural flight loads
- inspection requirements for metal and composite structure, including:
 - ageing aircraft inspection requirements
 - safe-life structure
 - damage-tolerant structure
 - fail-safe structure
- procedures and methodology for performing aircraft mensuration and alignment checks
- describing NDT methods and application of the various techniques
- describing construction methods of, and assessing common defects in, aircraft plastic transparencies
- describing basic constructional features of, and assessing common defects in, glass windscreens
- defining the terms associated with composite materials
- work health and safety (WHS) procedures for inspecting aircraft structures
- personal protective equipment (PPE) required for inspecting aircraft structures.
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Assessment Conditions

The following conditions of assessment represent the requirements of the regulators Defence Aviation Safety Authority (DASA) and Civil Aviation Safety Authority (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 inspecting 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 inspecting aircraft structures
 - tools and equipment specified in maintenance documentation
 - general-purpose tools and test equipment required for inspecting aircraft structures.

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>