Australian Government

Assessment Requirements for MEA436 Inspect, repair and modify non-primary structure components in aircraft cabins and cockpits

Release: 1

Assessment Requirements for MEA436 Inspect, repair and modify non-primary structure components in aircraft cabins and cockpits

Modification History

Release 1. Equivalent to MEA419 Inspect and repair/modify aircraft cabin/cockpit non-primary structure components. Revised as a result of changed prerequisites. Unit codes updated.

Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, which must include the ability to:

- inspect the metallic components of one aircraft cabin or cockpit for damage and perform the following repair or minor modification tasks:
    - remove corrosion by chemical and mechanical methods
    - restore protective coatings
    - freehand precision hole generation
    - remove and install fastening devices
    - fit patches to cabin or cockpit non-primary structure sheet metal components
- inspect the non-metallic components of one aircraft cabin or cockpit for damage and perform the following repair or minor modification tasks:
    - composite patch, scarf and stepped repairs using fibreglass, sandwich honeycomb, nylon, Perspex, nomex core materials and matrix resins.

In the course of the above work, the candidate must:

- apply relevant WHS requirements and practices relating to:
    - use of safety data sheets (SDS)
    - selection and use of required items of personal protective equipment (PPE)
- use organisational procedures, approved maintenance documentation, and aircraft publications relating to non-primary structure metallic and non-metallic components of cabins and cockpits
- identify aircraft cabin/cockpit non-primary structure components and their basic properties by interpreting markings, numbering systems or visual, chemical or mechanical means
- handle and store aircraft metallic and non-metallic components, including sealing agents, to industry standards
- identify aircraft assembly fasteners by interpreting markings, numbering systems, size, shape and colour
- visually inspect metallic and non-metallic components for damage
- correctly interpret, in line with organisational procedures, applicable repair scheme/modification drawings and hand sketches

- use required hand tools and machines to remove and assemble non-primary structure metallic and non-metallic components of aircraft cabins and cockpits
- perform, in line with organisational procedures, a range of routine non-primary structure sheet metal repair techniques, including metal scab patch repairs
- perform, in line with organisational procedures, a range of routine non-primary structure non-metallic repair techniques
- apply corrosion removal and treatment techniques
- restore sealing and surface finishes
- comply with system testing procedures, cleanliness and quality requirements, and safety precautions applicable to repair or modification being performed
- complete and process maintenance documentation.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- construction methods used and assessment of common defects in aircraft crew and passenger seats, and in interior trim panels including sidewalls, galleys, furnishings and partitions, passenger modules/pods, toilets, roof panels, overhead luggage stowage bins, non-structural floor panels and cargo compartment lining
- industry, regulatory, manufacturer and organisational requirements, procedures, practices and methods required for the tasks described in the performance evidence, including:
  - inspecting cabin and cockpit components
  - WHS requirements and procedures, including procedures for:
    - obtaining and using SDS
    - selecting and using required items of PPE
  - organisational procedures for:
    - routine basic repair techniques and the use of standard repair manual/practices
    - obtaining modification instructions
    - selecting required materials and equipment
    - repairing corrosion, cracking and impact damage to metallic components
    - repairing delamination, cracking and impact damage to non-metallic components
    - completing and processing required documentation
- maintenance documentation requirements relating to materials and equipment required for repair or modification
- types of deterioration and damage
- identification and interpretation of metallic and non-metallic repair schemes applicable to cabin/cockpit non-primary structural components
- key characteristics of different forms of corrosion
- terms associated with composite materials
- requirements for handling and storing aircraft metals and composite materials including sealing agents, to industry standards
- means of identifying aircraft structural assembly fasteners (metal and composite) by interpretation of markings, numbering systems, size, shape and colour.

Assessment Conditions

The following conditions of assessment represent the requirements of the regulators (ADF and CASA) and maintenance stakeholders and must be rigorously observed.

Competency must be assessed in the work environment, or simulated work environment, using tools and equipment specified by aircraft maintenance manuals.

The candidate must have access to general-purpose tools, test and ground support equipment required to demonstrate the performance evidence above.

Candidate capability must 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 of this unit must satisfy the assessor requirements in applicable vocational education and training legislation, frameworks and/or standards.

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