



Australian Government

Assessment Requirements for MEA425 Perform bolted composite skin repairs

Release: 1

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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:

- applying while observing all relevant WHS requirements, including the use of MSDS and items of PPE
- using approved maintenance documentation and aircraft publications relating to bolted repairs to composite aircraft skin
- identifying composite component applications in aircraft structures
- identifying various aircraft composite materials and their basic properties by interpretation of markings and visual means
- identifying the range of bolted repair patch and repair plug materials
- identifying applicable fasteners
- identifying applicable sealants
- assessing composite component damage using visual and tap test methods
- performing composite skin bolted repairs:
 - external patch repair
 - internal patch repair
 - external/internal patch repair
- correctly interpreting and/or producing repair scheme/modification drawings/sketches
- using appropriate hand tools and machines to perform bolted repairs, including drilling/cutting equipment and material fasteners.

The underlying skills inherent in this unit should be transferable across the range of composite skin materials and patch materials and fasteners. Correct checking and wearing of PPE is critical.

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:

- aircraft construction principles and the causes of structural damage, including metal fatigue and corrosion
- structural fatigue preventative measures
- composite terminology and materials used
- bolted repair methods

- types of patch material
- fastener types, specifications and identification
- plug materials
- use of scrim to prevent galvanic corrosion
- sealants used in bolted patch repairs and their application and handling
- paints and finishes for composite structure
- WHS precautions associated with repair of aircraft structure
- MSDS
- relevant PPE.

Assessment Conditions

- Competency should be assessed in the workplace or simulated workplace. It is also expected that general-purpose tools and test equipment found in most routine situations would be used where appropriate.
- Evidence of knowledge about bolted repair techniques and the use of the standard repair manual in a range of different repair situations will be necessary to supplement evidence of ability to plan and undertake repair.
- 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 application of repair patches in each of the following types of repair :
 - external
 - internal
 - external/internal
- 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).
- 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>