



Australian Government

Assessment Requirements for MEA359 Inspect and repair aircraft wooden structures

Release: 2

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Modification History

Release 2. Equivalent to MEA359 Inspect and repair aircraft wooden structures 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:

- applying relevant WHS procedures, including the correct selection and use of PPE and MSDS
- using approved maintenance documentation and aircraft publications relating to aircraft wooden structure
- identifying and using woodworking tools
- identifying aircraft structural timbers and their characteristics
- identifying potential causes of deterioration in wooden structural components
- identifying wooden structure defects and damage
- identifying the condition of glue lines
- fabricating and fitting repair members
- gluing of wooden structure
- restoring surface finish after repair.

The underlying skills inherent in this unit should be transferable across a range of inspection, testing and repair applications associated with maintenance of aircraft wooden structures. It is essential that the procedures take into account all aircraft and personal safety precautions relating to aircraft structure.

This shall be demonstrated through application across a range of aircraft wooden structures. Ability to interpret inspection and repair procedures and specifications (allowable limits) and apply them in practice is critical.

The application of the procedures should also clearly indicate knowledge of structural flight loads.

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:
- WHS hazards relating to wooden structure repair materials and how to obtain relevant MSDS and PPE
- aircraft wooden construction principles and inspection techniques

- wooden structural component attachment methods
- the effects of environmental factors on aircraft wooden structures
- wooden structure glues and application methods
- wooden component assembly methods and testing of joints
- wooden structure finishing schemes for exterior and interior surfaces
- the application of flight loads to aircraft wooden structural components and joints, and related failure mechanisms
- wooden component fabrication and repair techniques.

Assessment Conditions

- Competency should be assessed in the work environment or simulated work environment using tools and equipment specified in maintenance documentation. It is also expected that general-purpose tools and test equipment found in most routine situations would be used where appropriate.
- 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 all of the following:
 - inspection and/or testing of:
 - drainage and water and dirt collection points
 - fabric covered plywood surfaces
 - single and double plywood skin
 - structural timbers and bolt holes
 - glued joint strength
 - glue lines
 - inspection techniques must include visual inspection, physical checks, mensuration and alignment
 - repair of:
 - load carrying structural timbers
 - plywood skin
 - spars and ribs.
 - refinishing of structure after repair using approved finishing scheme.
- 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.gov.au/Pages/TrainingDocs.aspx?q=ce216c9c-04d5-4b3b-9bcf-4e81d0950371>