



Australian Government

MEA358 Re-cover aircraft fabric surfaces

Release: 1

MEA358 Re-cover aircraft fabric surfaces

Modification History

Release 1 - New unit of competency

Application

This unit of competency requires application of hand skills, knowledge of fabric surfaces and maintenance publications to re-cover aircraft fabric surfaces and apply correct finishing schemes during the performance of scheduled or unscheduled maintenance. Maintenance may be performed individually or as part of a team.

Applications include aircraft and aircraft components that are covered with fabric.

The unit is part of the Mechanical Certificate IV (Aircraft Maintenance Stream) training pathway.

Where a Civil Aviation Safety Authority (CASA) licensing outcome is sought this unit forms part of the CASA requirement for the granting of the chosen maintenance certification licence under Civil Aviation Safety Regulation (CASR) Part 66, in accordance with the licensing provisions in the Companion Volume Implementation Guide.

Pre-requisite Unit

Competency Field

Aviation maintenance

Unit Sector

Elements and Performance Criteria

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
1.	Re-cover aircraft fabric surfaces	1.1	Required covering materials and methods are determined from maintenance manual and/or approved data
		1.2	Required finishing scheme is determined from maintenance manual and/or approved data
		1.3	Materials and equipment required are organised
		1.4	Necessary structure and system inspection and preparation prior to covering is correctly performed

- while observing all relevant work health and safety (WHS) requirements, including the use of material safety data sheets (MSDS) and items of personal protective equipment (PPE)
- 1.5 Fabric covering is correctly fabricated and attached to the structure
 - 1.6 Drainage holes are correctly created
 - 1.7 Applicable finishing scheme is correctly applied while observing all relevant WHS requirements, including the use of MSDS and items of PPE
 - 1.8 Components are adjusted and/or re-balanced, where necessary, to operate within prescribed specifications
 - 1.9 Required maintenance/repair documentation is completed and processed in accordance with standard enterprise procedures
 - 1.10 Where required repaired components or assemblies are tagged, sealed and packaged or cradled in accordance with specified procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Procedures and requirements include:

- Industry standard procedures specified by manufacturers, regulatory authorities or the enterprise

Unit Mapping Information

Release 1 – equivalent to MEA358A Re-cover aircraft fabric surfaces

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ce216c9c-04d5-4b3b-9bcf-4e81d0950371>

Assessment Requirements for MEA358 Re-cover aircraft fabric surfaces

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 relevant WHS procedures, including the correct selection and use of PPE and MSDS
- using approved maintenance documentation and aircraft publications relating to aircraft fabric surfaces
- inspecting structural members, wiring, grommets and system components and initiation of any necessary repair or rectification action
- fabricating and fitting fabric covering with appropriately placed inspection panels, zips and drainage holes
- applying fabric finishing scheme ready for paint
- recognising defective doping.

The underlying skills inherent in this unit should be transferable across a range re-covering applications associated with aircraft fabric surfaces. It is essential that the procedures take into account all aircraft and personal safety precautions, especially with regard to the use of finishing scheme materials.

This shall be demonstrated through application across a range of aircraft fabric surfaces. Ability to interpret re-covering procedures and specifications 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 and how to obtain and use relevant MSDS and PPE
- regulatory requirements and industry publications relating to fabric covering of aircraft surfaces
- aircraft fabric surface covering and finishing materials and principles
- fabric-covered component attachment methods
- types of fabric and related characteristics
- types of tape, cord and thread and their relative advantages and disadvantages

- cements and finishing scheme materials, their characteristics, uses, storage requirements and related safety precautions
- fabric sewing techniques
- application techniques for cements and finishing schemes
- inspection and testing requirements for new fabric prior to use
- the need for re-balancing of flight control surfaces after re-covering, finishing scheme application and painting
- aircraft structure and system inspection requirements prior to re-covering with fabric
- the application of flight loads to fabric-covered surfaces, and related failure mechanisms
- the methods and procedures used (including doping and finishing) in re-covering components, such as wings, fuselages and control surfaces
- the requirements for the placement of inspection panels and zips, and for the creation of drainage holes.

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 at least two (2) fabric surface re-covering tasks.
- 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.

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