



Australian Government

MEA371 Perform major repairs and modifications to small aircraft metal structure

Release: 1

MEA371 Perform major repairs and modifications to small aircraft metal structure

Modification History

Release 1 - New unit of competency

Application

This unit of competency requires application of hand skills, applicable tools, maintenance publications and repair drawings to perform major repairs and modifications to small aircraft structure, including the replacement of primary structure components of both fixed and rotary wing aircraft. This may occur during scheduled or unscheduled maintenance activities and may involve individual or team-related activities.

The unit is part of the Aeroskills Mechatronics Certificates III and IV small aircraft maintenance training pathways.

The unit is used in workplaces that operate under the airworthiness regulatory systems of the Australian Defence Force (ADF) and the Civil Aviation Safety Authority (CASA).

Where a 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

MEA369	Inspect and maintain structures and related components of non-pressurised small aircraft
MEA370	Repair the structure of non-pressurised small aircraft

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.
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1. Prepare to undertake repair or modification
 - 1.1 Modification or the repair scheme is identified in accordance with structural repair manual and/or approved data
 - 1.2 Specialist advice is obtained in establishing an approved repair scheme where a standard repair scheme cannot be identified or where damage is beyond specified limits
 - 1.3 All materials and equipment required are organised
 - 1.4 Structure is supported and prepared in accordance with the applicable maintenance manual to ensure personnel safety and freedom from damage
 - 1.5 Jigs, fixtures or bracing are used, as required, to maintain shape and/or alignment
2. Repair/modify aircraft structure
 - 2.1 Structural repairs/modifications are performed, in accordance with approved repair scheme or modification drawings and instructions, ensuring that aircraft standard practices are used and process requirements are carried out 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)
 - 2.2 Work area is cleaned of all waste material or contaminants
 - 2.3 Required mensuration/alignment checks are completed and components are adjusted, where necessary, to operate within prescribed specifications
 - 2.4 Repaired components or assemblies are tagged, sealed and packaged or cradled in accordance with specified procedures, where required
 - 2.5 Required maintenance documentation is completed and processed in accordance with standard enterprise 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.

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| Repair tasks include: | <ul style="list-style-type: none">• Removing and installing structural hardware and fastening devices• Repairing by replacement major load-carrying structural members, such as skins, longerons, spars, frames and bulkheads |
| Assembly stress defects include: | <ul style="list-style-type: none">• Oil canning• Buckling• Contour misalignment |
| Procedures and requirements include: | <ul style="list-style-type: none">• Industry standard procedures specified by manufacturers, regulatory authorities or the enterprise |

Unit Mapping Information

Release 1 – partially replaces MEA311D Inspect and repair/modify aircraft structures

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=ce216c9c-04d5-4b3b-9bcf-4e81d0950371>