



Australian Government

MEA422 Repair/modify aircraft metal structure

Release: 2

MEA422 Repair/modify aircraft metal structure

Modification History

Release 2 – Assessment Conditions amended to permit assessment in a simulated workplace

Application

This unit of competency requires application of hand skills, the use of special tools, structural repair manuals and approved repair schemes to repair aircraft structure during scheduled or unscheduled maintenance. Where fabrication of replacement components is required the applicable units are MEA420 Fabricate basic structural components for aircraft and MEA421 Fabricate advanced structural components for aircraft. Where major structural disassembly is required the applicable unit is MEA423 Aircraft structure major disassembly and reassembly.

Work may be performed individually or as part of a team.

Applications include the metal structure of fixed and rotary wing aircraft.

The unit is part of the Aeroskills Structures Maintenance Certificate IV training pathway. It is used in workplaces that operate under the airworthiness regulatory systems of the Australian Defence Force (ADF) and the Civil Aviation Safety Authority (CASA).

Pre-requisite Unit

MEA401 Inspect aircraft structures

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. Prepare to undertake repair | 1.1 The extent of damage is correctly assessed to assist in determining repair procedure |
| | 1.2 Structure is prepared and supported in accordance with the applicable maintenance manual to ensure personnel safety and freedom from damage |

- | | | |
|-------------------------------------|-----|--|
| | 1.3 | The appropriate modification or repair scheme is identified in accordance with structural repair manual and/or approved data |
| | 1.4 | Specialist advice in establishing an approved repair scheme is obtained where a standard repair scheme cannot be identified or damage is out of limits |
| | 1.5 | All required materials and equipment are organised |
| 2. Repair/modify aircraft structure | 2.1 | Structural repairs are performed in accordance with approved repair scheme, 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 | 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 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.

- Repair procedures include:**
- Removing corrosion by chemical and mechanical methods
 - Restoring protective coatings

Procedures and requirements include:

- Applying sealants and jointing compounds
- Freehand precision hole generation
- Removing and installing structural hardware, fastening devices, bushes, bearings and bearing surfaces
- Removing and repairing damaged sections and reinstall
- Industry standard specified by manufacturers, regulatory authorities or the enterprise

Unit Mapping Information

Release 2 - Assessment Conditions amended to permit assessment in a simulated workplace. Equivalent.

Release 1 – equivalent to MEA422A Repair/modify aircraft metal structure

Links

Companion Volume implementation guides are found in VETNet -

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