



Australian Government

MEA410 Maintain aircraft structure/components

Release: 2

MEA410 Maintain aircraft structure/components

Modification History

Release 2 – Assessment Conditions amended to permit assessment under simulated conditions

Application

This unit of competency requires application of hand skills and the use of maintenance publications to remove corrosion from aircraft structural materials during scheduled or unscheduled maintenance. Work may be performed individually or as part of a team.

Applications include the metallic structure of fixed and rotary wing aircraft and structural components.

The unit is part of the Mechanical Aircraft Maintenance Engineer (AME) Certificate IV 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).

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 remove corrosion damage	1.1	Extent of damage is correctly assessed to assist in determining removal procedure
		1.2	Structure is supported and prepared in accordance with the applicable maintenance manual to ensure personnel safety and freedom from damage
		1.3	Appropriate corrosion removal procedure is identified in accordance with structural repair manual and/or

		approved data
	1.4	Specialist advice is obtained in establishing an approved repair scheme where a standard corrosion removal procedure cannot be identified or damage criteria is out of limits
	1.5	All materials and equipment required are organised
2. Remove corrosion damage	2.1	Corrosion removal is performed and protective coatings, sealants and jointing compounds applied in accordance with approved repair scheme ensuring that aircraft standard practices are used and process requirements are carried out including relevant work health and safety procedures and the use of material safety data sheets (MSDS) and items of personal protective equipment (PPE)
	2.2	Structure/component is cleaned of all waste material or contaminants
	2.3	Components are adjusted, where necessary, to operate within prescribed specifications
	2.4	Required maintenance/repair documentation is completed and processed in accordance with standard enterprise procedures
	2.5	Repaired components or assemblies are tagged, sealed and packaged or cradled in accordance with specified procedures, where required

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.

Corrosion removal procedures include:

- Removing corrosion by chemical and mechanical methods

Procedures and requirements include:

- Restoring protective coatings
- Applying sealants and jointing compounds
- Industry standard specified by manufacturers, regulatory authorities or the enterprise

Unit Mapping Information

Release 2 – Assessment Conditions amended to permit assessment under simulated conditions. Equivalent.

Release 1 – equivalent to MEA410C Maintain aircraft structure/components

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 MEA410 Maintain aircraft structure/components

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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 all relevant WHS procedures, including the use of MSDS and selection and use of applicable items of PPE
- using approved maintenance documentation and aircraft publications relating to aircraft structure
- identifying various aircraft metals and their basic metallurgy properties by interpretation of markings, numbering systems or visual, chemical or mechanical means
- applying structural corrosion removal/treatment techniques
- restoring aircraft structure sealing and surface finishes.

The underlying skills inherent in this unit should be transferable into other areas that require similar techniques. It is essential that procedures take into account all safety precautions and quality requirements, standards, practices and processes associated with corrosion removal.

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:

- methods of corrosion removal in aircraft structural metals
- types of corrosion typically found in various areas of aircraft structure
- removal of corrosion damage in integral fuel tanks and sealing of faying surfaces, including specific WHS and PPE requirements, including confined space entry requirements
- surface finishes and methods of restoration, including specific WHS and PPE requirements
- how to obtain MSDS
- relevant maintenance and structural repair manuals specifying corrosion removal limits and methods
- relevant regulatory requirements and standard procedures.

Assessment Conditions

- Competency should be assessed in the work environment or a simulated work environment, using tools and equipment specified by aircraft maintenance manuals. It is also expected that general-purpose tools, test and ground support equipment found in most routine situations would be used where appropriate.
- Evidence of knowledge about corrosion removal techniques and limits 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 structure and component repair by removal of corrosion within applicable limits.
- 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 one (1) task from each of the following groups:
 - removing corrosion by chemical and mechanical methods
 - restoring protective coatings
 - applying sealants and jointing compounds.
- 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).

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