



**Australian Government**

# **MEA41311 Certificate IV in Aeroskills (Structures)**

**Release 2**

## MEA41311 Certificate IV in Aeroskills (Structures)

### Modification History

Release 2 - Licensing requirements clarified. Unit MEA425A added to Elective Units Group A - equivalent

Release 1 - A number of mandatory units restructured and an elective cold bonding unit added. Replaces MEA40810 - not equivalent

### Description

This qualification may apply to employees of civil aviation maintenance organisations or to members of the ADF who are engaged in the repair and modification of aircraft structures.

The qualification defines the exit from apprenticeship and may apply to work performed in hangars on the structure of complete aircraft and to work performed in workshops on structural components. It replaces MEA40810 Certificate IV in Aeroskills (Structures).

The qualification consists of:

- Common and imported units that apply to all Aeroskills specialist streams at AQF Certificate III and IV levels
- Mandatory and elective mechanical technical stream units that provide a required degree of multi-skilling
- Mandatory structures technical stream units.
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### Pathways Information

The training pathways provide for work on both metal and composite structures. In some cases, primarily in the General Aviation sector, individuals may be also required to work on aircraft with wooden structures and/or fabric coverings. The applicable competencies are covered in the units MEA357A Inspect, test and repair aircraft fabric surfaces, MEA358A Re-cover aircraft fabric surfaces and MEA359A Inspect and repair aircraft wooden structures. The qualification also provides credits towards the MEA50411 Diploma of Aviation Maintenance Management (Mechanical) and the MEA60111 Advanced Diploma of Aviation Maintenance Management (Mechanical). A limited number of credits are also provided towards the MEA50211 Diploma of Aeroskills (Mechanical).

### Licensing/Regulatory Information

This qualification complies with airworthiness regulatory requirements of CASA and the ADF.

### Entry Requirements

Not applicable.

## Employability Skills Summary

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> <li>• Understanding work and organisational instructions</li> <li>• Understanding input from specialist personnel and technical representatives</li> <li>• Providing guidance to others and describing clearly faults, problems and spares requirements</li> <li>• Negotiating with other team members or supervisors regarding timing and progress of work activities and access to sections of the aircraft, or to equipment</li> <li>• Understanding and interpreting regulations, procedures, instructions and maintenance publications</li> <li>• Completing maintenance documentation and component tags</li> <li>• Interpreting wiring diagrams and system schematics, and reading drawings relating to maintenance activities</li> <li>• Using computers to obtain maintenance data and complete documentation</li> <li>• Networking with other team members regarding work planning and execution</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Performing tasks as an individual while being responsive to supervisors and allowing for relevant human factors</li> <li>• Working effectively with others who may be of different ages, gender, race, religion and political persuasion</li> <li>• Assisting other team members with tasks and providing advice on work processes and troubleshooting</li> </ul>
Problem solving	<ul style="list-style-type: none"> <li>• Identifying problems in a timely manner and developing practical solutions to maintenance problems not fully covered by maintenance data</li> <li>• Proposing solutions to problems as modifications or amendments to specified maintenance processes</li> <li>• Constantly reviewing problem solving skills and ability to effectively apply competencies to solve problems within the limits permitted by regulatory and organisational guidelines</li> <li>• Responding to emergencies or accidents in accordance with regulatory and organisational requirements</li> <li>• Using mathematical techniques to relate test results to system or component performance and to convert values between systems of measurement</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Adapting to new situations that arise as a consequence of regulatory changes, revised maintenance data, practices and procedures</li> <li>• Varying work practices and behaviour as a result of performance feedback from peers and supervisors</li> </ul>

	<ul style="list-style-type: none"> <li>• Evaluating ideas to ensure that technical and regulatory aspects have been fully covered before proposing action that may result in modifications or changes to work processes</li> <li>• Applying human factors to avoid maintenance errors and maintain quality standards</li> <li>• Adapting competencies to the performance of a wide range of maintenance tasks</li> <li>• Contributing to a process of continuous improvement and a willingness to support and participate in the effective introduction of new work practices</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Clarifying task objectives and required outcomes through discussion with supervisors and other team members</li> <li>• Monitoring the time taken to complete tasks against team requirements or targets provided by supervisors</li> <li>• Collecting, analysing and organising information relating to assigned maintenance tasks and confirming the purpose and required work outcomes</li> <li>• Identifying the extent of impact on assigned work of changes in procedures, work instructions or regulatory requirements</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Accepting responsibility for managing individual workload to meet target completion times or fit in with team milestones</li> <li>• Assessing personal knowledge and skills with the aid of the self-assessment work sheets in the Log of Industrial Experience and Achievement and preparing for competency assessments</li> <li>• Actively seeking opportunities to develop competencies and to apply them across a range of tasks and monitoring performance using indicators such as the extent of oversight exercised by supervisors</li> <li>• Identifying career paths and training opportunities that will assist in attaining career goals</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Taking advantage of learning opportunities that arise through training courses provided by the organisation or external providers and through mentoring and on-job training</li> <li>• Adapting competencies to accommodate new ideas and techniques</li> <li>• Using feedback from supervisors and peers to identify ways in which competence can be improved</li> <li>• Mentoring new or more junior personnel</li> <li>• Interpreting units of competency and applying them to attainment of identified career goals</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Repairing aircraft metal structure, selecting and using tools and support equipment</li> <li>• Repairing aircraft composite structure, selecting and using tools and support equipment</li> </ul>

	<ul style="list-style-type: none"><li>• Determining the causes of aircraft structural damage</li><li>• Removing and installing aircraft system components</li><li>• Storing and caring for components, parts, tools, test equipment and support equipment</li><li>• Amending various forms of maintenance data</li><li>• Using computers and microfiche to obtain maintenance data and using computers to complete documentation</li></ul>
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## Packaging Rules

To be awarded the MEA41311 Certificate IV in Aeroskills (Structures), competency must be demonstrated in **nineteen (19)** units of competency. These units must be chosen as follows:

- **sixteen (16)** Core units consisting of common, imported and technical stream units
- **three (3)** Elective technical stream units from Group A.

### Core units of competency

Unit code	Unit title	Prerequisites
MEA101B	Interpret occupational health and safety practices in aviation maintenance	Nil
MEA103B	Plan and organise aviation maintenance work activities	MEA101B, MEA105C, MEA107B, MEA108B
MEA105C	Apply quality standards applicable to aviation maintenance processes	MEA101B, MEA107B
MEA107B	Interpret and use aviation maintenance industry manuals and specifications	Nil
MEA108B	Complete aviation maintenance industry documentation	MEA105C
MEA109B	Perform basic hand skills, standard trade practices and fundamentals in aviation maintenance	MEA105C, MEA108B
MEA118A	Conduct self in the aviation maintenance environment	Nil
MEA302C	Remove and install aircraft hydro-mechanical and landing gear system components	MEA101B, MEA103B, MEA105C, MEA107B, MEA108B, MEA109B
MEA303D	Remove and install aircraft pneumatic system components	MEA101B, MEA103B, MEA105C, MEA107B, MEA108B, MEA109B
MEA327B	Fabricate and/or repair aircraft mechanical components or parts	MEA101B, MEA103B, MEA105C, MEA107B, MEA108B, MEA109B
MEA401C	Inspect aircraft structures	MEA101B, MEA103B, MEA105C, MEA107B, MEA108B, MEA109B

Unit code	Unit title	Prerequisites
MEA420A	Fabricate basic structural components for aircraft	MEA101B, MEA103B, MEA105C, MEA107B, MEA108B, MEA109B
MEA421A	Fabricate advanced structural components for aircraft	MEA101B, MEA103B, MEA105C, MEA107B, MEA108B, MEA109B
MEA422A	Repair/modify aircraft metal structure	MEA401C
MEA423A	Aircraft structure major disassembly and reassembly	MEA401C
MSAENV272B	Participate in environmentally sustainable work practices	Nil

### Elective units Group A

Select **three (3)** units while observing the unit selection guidelines in Column four.

Unit code	Unit title	Prerequisites	Unit selection guidelines
MEA304C	Remove and install non-pressurised aircraft structural and non-structural components	MEA302C	Take this unit or MEA317C
MEA305C	Remove and install aircraft fixed wing flight control system components	MEA302C	Take this unit or MEA308C
MEA308C	Remove and install rotary wing rotor and flight control system components	MEA302C	Alternate to MEA305C
MEA317C	Remove and install pressurised aircraft structural and non-structural components	MEA302C MEA303D	Alternate to MEA304C
MEA367A	Repair/modify aircraft composite structure using cold bonding	MEA401C or MEA339C or MEA363B	Take this unit or MEA405B
MEA405B	Repair/modify aircraft composite material	MEA401C	Alternate to MEA367A

Unit code	Unit title	Prerequisites	Unit selection guidelines
	structure/components		
MEA425A	Perform bolted composite skin repairs	MEA401C or MEA339D or MEA363C	

## Custom Content Section

Not applicable.