



Australian Government

MEA40715 Certificate IV in Aeroskills (Mechanical)

Release 1

MEA40715 Certificate IV in Aeroskills (Mechanical)

Modification History

Release 1 - New qualification

Qualification Description

This qualification applies to employees of Civil Aviation Maintenance Organisations (AMOs) or to members of the Australian Defence Force (ADF) who perform scheduled inspections, fault diagnosis and repair, and modification of airframes and airframe mechanical, hydraulic and pneumatic systems and components, and of aircraft engines and (where applicable) propellers.

The qualification defines the exit from an apprenticeship and may apply to either aircraft maintenance performed on flight lines/ramps and in hangars, or to airframe and engine component repair and overhaul performed in workshops. These outcomes are defined in two streams:

- aircraft maintenance stream
- component maintenance workshop stream.

The qualification consists of:

- common units that apply to all Aeroskills specialist streams at AQF Certificate III and IV levels
- mechanical and structures technical stream units relating to airframe and engine system and component maintenance
- mechanical technical stream units and a small number of avionic stream units that are applicable to the aircraft component maintenance workshop stream.

Because of the wide application of this qualification there is considerable flexibility in the selection of technical stream units and individuals should be mindful of their future career aspirations when selecting units for, in particular, the aircraft maintenance stream. Provided that the correct elective units are selected, the qualification articulates with the MEA50215 Diploma of Aeroskills (Mechanical) which qualifies individuals for the grant by Civil Aviation Safety Authority (CASA) of a B1 Aircraft Maintenance Engineer Licence.

The qualification also provides credit towards the MEA50415 Diploma of Aviation Maintenance Management (Mechanical) and the MEA60215 Advanced Diploma of Aviation Maintenance Management (Mechanical).

Entry Requirements

Not applicable

Packaging Rules

To be awarded the MEA40715 Certificate IV in Aeroskills (Mechanical), competency must be demonstrated in:

Aircraft Maintenance Stream

- Core common and imported units: **eight (8)** units
- Elective technical stream units from Group A: **thirteen (13)** units
- Total: **twenty-one (21)** units.

OR

Component Maintenance Workshop Stream

- Core common and imported units: **eight (8)** units
- Elective technical stream units from Groups B and C: **six (6)** units
- Total: **fourteen (14)** units.

Core units of competency (common to both streams)

Unit code	Unit title	Prerequisites
MEA101	Interpret work health and safety practices in aviation maintenance	
MEA103	Plan and organise aviation maintenance work activities	MEA101, MEA105 MEA107, MEA108
MEA105	Apply quality standards applicable to aviation maintenance processes	MEA101, MEA107
MEA107	Interpret and use aviation maintenance industry manuals and specifications	
MEA108	Complete aviation maintenance industry documentation	MEA105
MEA109	Perform basic hand skills, standard trade practices and fundamentals in aviation maintenance	MEA105, MEA108
MEA118	Conduct self in the aviation maintenance environment	
MSAENV272B	Participate in environmentally sustainable work practices	

Elective units of competency

Group A (Aircraft Maintenance Stream)

- Choose **thirteen (13)** of the elective mechanical and structures technical stream units listed below while observing the unit selection guidelines in column 4.

Unit code	Unit title	Prerequisites	Unit selection guidelines
MEA201	Remove and install miscellaneous aircraft electrical hardware/components	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109	
MEA246	Fabricate and/or repair aircraft electrical hardware or parts	MEA201, MEA260	
MEA260	Use electrical test equipment	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109	
MEA301	Perform aircraft flight servicing	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109	
MEA302	Remove and install aircraft hydro-mechanical and landing gear system components	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109	
MEA303	Remove and install aircraft pneumatic system components	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109	
MEA304	Remove and install non-pressurised aircraft structural and non-structural components	MEA302	Do not take with MEA317
MEA305	Remove and install aircraft fixed wing flight control system components	MEA302	
MEA306	Remove and install engines and engine system components	MEA302	
MEA307	Remove and install propeller systems and components	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109	

Unit code	Unit title	Prerequisites	Unit selection guidelines
MEA308	Remove and install rotary wing rotor and flight control system components	MEA302	Alternate to both MEA305 and MEA307
MEA309	Inspect, test and troubleshoot aircraft hydro-mechanical and landing gear systems and components	MEA302	Do not take with MEA318 and MEA320
MEA310	Inspect, test and troubleshoot aircraft pneumatic systems and components	MEA303	Do not take with MEA318 and MEA320
MEA312	Inspect, test and troubleshoot aircraft fixed wing flight control systems and components	MEA305	Do not take with MEA318C and MEA321
MEA313	Inspect, test and troubleshoot piston engine systems and components	MEA306	
MEA314	Inspect, test and troubleshoot gas turbine engine systems and components	MEA306	Do not take with MEA319 and MEA322
MEA315	Inspect, test and troubleshoot propeller systems and components	MEA307	
MEA316	Inspect, test and troubleshoot rotary wing rotor and control systems and components	MEA308	Alternative to both of MEA312 and MEA315
MEA317	Remove and install pressurised aircraft structural and non-structural components	MEA302 MEA303	Do not take with MEA304
MEA318	Inspect aircraft hydro-mechanical, mechanical, gaseous and landing gear systems and components	MEA302, MEA303 MEA305	Do not take with MEA309 or MEA310
MEA319	Inspect gas turbine engine systems and components	MEA306	Do not take with MEA314

Unit code	Unit title	Prerequisites	Unit selection guidelines
MEA320	Test and troubleshoot aircraft hydro-mechanical, mechanical, gaseous and landing gear systems and components	MEA318	Do not take with MEA309 or MEA310
MEA321	Test and troubleshoot aircraft fixed wing flight control systems and components	MEA318	Do not take with MEA312
MEA322	Test and troubleshoot gas turbine engine systems and components	MEA319	Do not take with MEA314
MEA327	Fabricate and/or repair aircraft mechanical components or parts	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109	Do not take with MEA328
MEA328	Maintain and/or repair aircraft mechanical components or parts	MEA302, MEA303	Do not take with MEA327
MEA339	Inspect, repair and maintain aircraft structures	MEA304 or MEA317	Do not take with MEA401 or MEA410
MEA362	Maintain aircraft vapour cycle air conditioning systems	MEA201, MEA246	
MEA366	Perform borescope inspections	MEA313 or MEA314 or MEA322 or MEA388	Additional unit where CASA borescope inspection authority required
MEA401	Inspect aircraft structures	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109	Do not take with MEA311 or MEA339
MEA410	Maintain aircraft structure/components	MEA401	Do not take with MEA339
AVIF3016A	Marshal aircraft		

Groups B and C (Component Workshop Stream)

- Choose at least **three (3)** of the elective technical stream units listed in Group B and make up to a total of **six (6)** units with units from Group C.

Group B

Unit code	Unit title	Prerequisites
MEA380	Repair and/or overhaul aircraft hydraulic system components	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109
MEA381	Repair and/or overhaul aircraft pneumatic system components	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109
MEA382	Repair and/or overhaul aircraft fuel system components	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109
MEA383	Repair and/or overhaul gas turbine engine air inlet and compressor components and/or modules	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109
MEA384	Repair and/or overhaul gas turbine engine combustion section components and/or modules	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109
MEA385	Repair and/or overhaul gas turbine engine turbine and exhaust section components	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109
MEA386	Repair and/or overhaul gas turbine engine ancillary section components	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109
MEA387	Test gas turbine engines and engine modules after overhaul or repair	MEA383, MEA384 MEA385, MEA386
MEA389	Repair and/or overhaul propellers	MEA101, MEA103

		MEA105, MEA107 MEA108, MEA109
MEA390	Repair and/or overhaul rotary wing dynamic components	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109
MEA391	Repair and/or overhaul aircraft mechanical system components	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109
MEA392	Disassemble aircraft piston engines	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109
MEA393	Repair and/or overhaul aircraft piston engine cylinder assembly components	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109
MEA394	Repair and/or overhaul aircraft piston engine crankcase assembly components	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109
MEA395	Reassemble aircraft piston engines	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109
MEA396	Assemble aircraft piston engine quick engine change unit	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109
MEA397	Test aircraft piston engines after repair or overhaul	MEA392, MEA393 MEA394, MEA395 MEA396

Group C

Unit code	Unit title	Prerequisites
MEA201	Remove and install miscellaneous aircraft electrical	MEA101, MEA103

	hardware/components	MEA105, MEA107 MEA108, MEA109
MEA246	Fabricate and/or repair aircraft electrical hardware or parts	MEA201, MEA260
MEA260	Use electrical test equipment	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109
MEA368	Shot peen aircraft components	MEA101, MEA103 MEA105, MEA107 MEA108, MEA109
MEM24002B	Perform penetrant testing	MEM18001C (Note that MEA109 is equivalent) MEM24012C
MEM24004B	Perform magnetic particle testing	MEM18001C (Note that MEA109 is equivalent) MEM24012C
MEM24012C	Apply metallurgy principles	

Qualification Mapping Information

Supersedes and is equivalent to MEA40711 Certificate IV in Aeroskills (Mechanical)

Links

MSA Training Package Implementation Guides - <http://mskills.org.au/training-packages/info/>