



MEA Aeroskills Training Package Implementation Guide

Release 1.3



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Table of contents

MEA Aeroskills Training Package Implementation Guide	1
Introduction	1
Who is this guide for?	1
Version control and modification history	1
Modification history details	1
MEA mapping of changes	2
MEA Release 1.3 – summary mapping	2
MEA Release 1.2 – summary mapping	2
MEA Release 1.1 – summary mapping	3
AQF qualifications, Skill Sets and units of competency in the MEA Aeroskills Training Package	4
Qualifications	4
MEA Skill Sets	4
MEA Units of Competency and Prerequisites	4
Summary mapping information – MEA to MEA11	14
Imported units of competency	15
Key work and training requirements in the industry	21
Regulation and licensing implications	22
Regulatory requirements	22
Licences	23
Implementation information	25
Occupational outcomes of qualifications	26
Mandatory entry requirements for qualifications	28
Pathways advice	28
Packaging units of competency for a qualification	29
Credit transfer and articulation	30
Certificate II credit transfer and articulation	30
Certificate III credit transfer and articulation	32
Certificate IV credit transfer and articulation	32
Diploma credit transfer and articulation	33
Access and equity	33
Reasonable adjustments	33
Aeroskills limitations	34
Foundation Skills	34
Employability Skills in MEA qualifications	35
Core Skills in MEA units of competency	38
Health and safety implications for aviation maintenance	39
Resources and equipment	40
Legal considerations for learners	40
Additional information	41
Assessment of competency	41
List of Appendices	41
Additional MEA Companion volumes	41
Useful links	42

MEA Aeroskills Training Package Implementation Guide

Introduction

Who is this guide for?

The MEA Implementation Guide is designed to assist State Training Authorities, regulators, assessors, trainers, Registered Training Organisations (RTOs) and enterprises in delivering training based on the units and qualifications in the MEA Training Package. It provides advice about the structure of the qualifications and their key features, and information on licensing and regulatory requirements.

Version control and modification history

Release	Status	Release date	Approval process
1.3	Current	17 November 2015	ISC Upgrade
1.2	Replaced	6 August 2015	ISC Upgrade
1.1	Replaced	14 April 2015	ISC Upgrade
1.0	Replaced	12 February 2015	Endorsed: 9 February 2015

Modification history details

Release 1.3	ISC upgrade Minor changes to seven (7) units of competency required by CASA/ADF to meet regulatory requirements (no change of outcomes): • MEA317 Remove and install pressurised aircraft structural and non-structural components • MEA372 Perform mechanical elementary maintenance • MEA410 Maintain aircraft structure/components • MEA420 Fabricate basic structural components for aircraft • MEA421 Fabricate advanced structural components for aircraft • MEA422 Repair/modify aircraft metal structure • MEA423 Aircraft structure major disassembly and reassembly
Release 1.2	• Inclusion of 41 new Skill Sets (utilising existing endorsed units). • Minor modifications to units MEA204, MEA212, MEA260 and MEA275.
Release 1.1	• Inclusion of 172 new Skill Sets (utilising existing endorsed units). • Addition of 66 imported units for use in above Skill Sets. • New releases of MEA50215 and MEA60315 with editorial corrections to errors in packaging rules re total units required.
Release 1	Initial release

MEA mapping of changes

MEA Release 1.3 – summary mapping

Version 1.2		Version 1.3		Comments	E/NA
Code	Title	Code	Title		
MEA317	Remove and install pressurised aircraft structural and non-structural components	MEA317	Remove and install pressurised aircraft structural and non-structural components	Release 2 - MEA369 Inspect and maintain structure and related components of non-pressurised small aircraft added as a pre-requisite for unit application to small aircraft maintenance.	
MEA372	Perform mechanical elementary maintenance	MEA372	Perform mechanical elementary maintenance	Release 2 - Additional items added to Range of Conditions to align with CASR Part 66 MOS and related changes made to Assessment Requirements	
MEA410	Maintain aircraft structure/components	MEA410	Maintain aircraft structure/components	Release 2 - Amended to permit assessment under simulated conditions	
MEA420	Fabricate basic structural components for aircraft	MEA420	Fabricate basic structural components for aircraft	Release 2 - Changes to performance evidence and to knowledge evidence.	
MEA421	Fabricate advanced structural components for aircraft	MEA421	Fabricate advanced structural components for aircraft	Release 2 - Changes made to Performance Evidence and to Knowledge Evidence	
MEA422	Repair/modify aircraft metal structure	MEA422	Repair/modify aircraft metal structure	Release 2 - Assessment Requirements amended to permit assessment in a simulated workplace	
MEA423	Aircraft structure major disassembly and reassembly	MEA423	Aircraft structure major disassembly and reassembly	Release 2 -Assessment Conditions amended to permit assessment in a simulated workplace	

MEA Release 1.2 – summary mapping

Skill Sets

Refer to the MEA Aeroskills Skill Sets Companion Volume for details:

<http://www.mskills.org.au/training-packages/info/>.

MEA Release 1.1 – summary mapping

Skill Sets

Refer to the MEA Aeroskills Skill Sets Companion Volume for details:

<http://www.mskills.org.au/training-packages/info/>.

Qualifications

Code	Title	Modification history
MEA50215	Diploma of Aeroskills (Mechanical)	Release 2 – equivalent. Error in total core Certificate IV units required for B1 Licence sub-categories corrected from 18 to 17.
MEA60315	Advanced Diploma of Aviation Non-Destructive Testing	Release 2 – equivalent. Error in summary of total number of units required corrected from 41/50 to 39/48.

AQF qualifications, Skill Sets and units of competency in the MEA Aeroskills Training Package

Qualifications

MEA20415	Certificate II in Aeroskills
MEA20515	Certificate II in Aircraft Line Maintenance
MEA20615	Certificate II in Aircraft Surface Finishing
MEA30115	Certificate III in Aircraft Surface Finishing
MEA30215	Certificate III in Aeroskills (Mechatronics)
MEA30315	Certificate III in Aircraft Life Support and Furnishing
MEA40615	Certificate IV in Aeroskills (Avionics)
MEA40715	Certificate IV in Aeroskills (Mechanical)
MEA40915	Certificate IV in Aircraft Surface Finishing
MEA41015	Certificate IV in Aeroskills (Mechatronics)
MEA41115	Certificate IV in Aircraft Life Support and Furnishing
MEA41215	Certificate IV in Aeroskills (Armament)
MEA41315	Certificate IV in Aeroskills (Structures)
MEA50115	Diploma of Aeroskills (Avionics)
MEA50215	Diploma of Aeroskills (Mechanical)
MEA50315	Diploma of Aviation Maintenance Management (Avionics)
MEA50415	Diploma of Aviation Maintenance Management (Mechanical)
MEA50515	Diploma of Aeroskills (Non-Destructive Testing)
MEA50615	Diploma of Aeronautical Engineering
MEA50715	Diploma of Avionic Engineering
MEA60115	Advanced Diploma of Aviation Maintenance Management (Avionics)
MEA60215	Advanced Diploma of Aviation Maintenance Management (Mechanical)
MEA60315	Advanced Diploma of Aviation Non-Destructive Testing
MEA60415	Advanced Diploma of Aeronautical Engineering
MEA60515	Advanced Diploma of Avionic Engineering

MEA Skill Sets

Skill Sets are defined as single units of competency, or combinations of units of competency, from an endorsed Training Package that link to a licensing or regulatory requirement, or a defined industry need.

The MEA Aeroskills Training Package includes a number of Skill Sets developed for licensing and regulatory requirements. These are revised and updated regularly as required by the regulators. Refer to the MSA website for the MEA Skill Sets Companion Volume which provides detailed information on MEA Skill Sets: <http://www.mskills.org.au/training-packages/info/>.

MEA Units of Competency and Prerequisites

MEA Unit Code and 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
MEA111 Perform administrative processes to prepare for certification of civil aircraft maintenance	
MEA112 Plan and implement civil aircraft maintenance activities	
MEA113 Supervise civil aircraft maintenance activities and manage human resources in the workplace	
MEA114 Certify aeronautical product maintenance	
MEA115 Plan and implement aeronautical product maintenance activities	
MEA116 Apply occupational health and safety procedures at supervisor level in aviation maintenance	
MEA117 Apply self in the aviation maintenance environment	
MEA118 Conduct self in the aviation maintenance environment	
MEA119 Perform administrative processes to prepare for certification of civil aircraft A level line maintenance	
MEA120 Manage an aviation maintenance quality system	
MEA121 Manage aircraft/aeronautical product configuration	
MEA122 Manage aircraft/equipment system performance testing	MEA126
MEA123 Manage aviation maintenance work environment policy and practices	
MEA124 Coordinate change programs in the aviation maintenance environment	
MEA125 Develop aviation maintenance personnel	
MEA126 Manage aircraft maintenance activities	
MEA127 Provide technical advice in the maintenance and management of aircraft and aeronautical product	MEA705 and MEA707 Or MEA706 and MEA708
MEA128 Provide engineering advice in the modification, maintenance and management of aircraft systems	MEA705 and MEA707 Or MEA706 and MEA708
MEA129 Investigate technical aspects of aviation occurrences	
MEA130 Manage deployed/detached aviation maintenance activities	
MEA131 Manage the custody, transfer and disposal of aircraft, aeronautical product and support equipment	
MEA132 Manage budgetary resources in the aviation maintenance environment	
MEA133 Communicate aviation technical and maintenance management knowledge	
MEA134 Establish, maintain and evaluate the organisation's work health and safety system	
MEA135 Use computers in aviation maintenance-related integrated logistic support activities	
MEA136 Assess aviation maintenance spares and manage repairable items	MEA135
MEA137 Write aviation technical publications	MEA135
MEA138 Perform aviation technical publication management activities	MEA137
MEA139 Perform aviation maintenance – related integrated logistic support management activities	
MEA140 Supervise aviation maintenance teams and perform maintenance quality inspections	
MEA141 Manage risk in aviation maintenance	
MEA142 Manage self in the aviation maintenance environment	
MEA143 Develop and manage maintenance error management programs	
MEA145 Conversion from allied trades for employment in aviation maintenance workshops	MEA108
MEA146 Prepare and manage aviation maintenance organisation budgets and financial plans	
MEA147 Perform airworthiness management and maintenance program tasks	MEA137
MEA148 Apply mathematics and physics in aviation maintenance	
MEA201 Remove and install miscellaneous aircraft electrical hardware and	MEA101, MEA103,

components	MEA105, MEA107, MEA108, MEA109
MEA202 Remove and install basic aircraft electrical system components	MEA201
MEA203 Remove and install advanced aircraft electrical system components	MEA201
MEA204 Remove and install basic aircraft instrument system components	MEA201
MEA205 Remove and install advanced aircraft instrument system components	MEA201
MEA206 Remove and install aircraft basic radio communication and navigation system components	MEA201
MEA207 Remove and install aircraft electronic system components	MEA201
MEA208 Remove and install aircraft pressurisation control system components	MEA201
MEA209 Remove and install aircraft oxygen system components	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA210 Inspect, test and troubleshoot basic aircraft electrical systems and components	MEA202, 246
MEA211 Inspect, test and troubleshoot advanced aircraft electrical systems and components	MEA203, MEA246
MEA212 Inspect, test and troubleshoot basic aircraft instrument systems and components	MEA204, MEA246
MEA213 Inspect, test and troubleshoot advanced aircraft instrument systems	MEA205, MEA246
MEA214 Inspect, test and troubleshoot aircraft basic communication and radio navigation systems and components	MEA206, 246
MEA215 Inspect, test and troubleshoot advanced aircraft communications systems and components	MEA206, MEA246
MEA216 Inspect, test and troubleshoot instrument landing systems and components	MEA206, MEA207, MEA246
MEA217 Inspect, test and troubleshoot fixed wing autopilot systems and components	MEA207, MEA246
MEA218 Inspect, test and troubleshoot rotary wing autopilot systems and components	MEA207, MEA246
MEA219 Inspect, test and troubleshoot aircraft pressurisation control systems and components	MEA208, MEA246
MEA220 Inspect, test and troubleshoot aircraft primary radar systems and components	MEA207, MEA246
MEA221 Inspect, test and troubleshoot aircraft secondary radar systems and components	MEA207, MEA246
MEA222 Inspect, test and troubleshoot aircraft oxygen systems and components	MEA209
MEA223 Inspect aircraft electrical systems and components	MEA203, MEA246
MEA224 Inspect aircraft instrument systems and components	MEA205, MEA246
MEA225 Inspect fixed wing aircraft automatic flight control systems and components	MEA207, MEA246
MEA226 Inspect aircraft electronic systems and components	MEA207, MEA246
MEA227 Test and troubleshoot aircraft electrical systems and components	MEA223
MEA228 Test and troubleshoot aircraft instrument systems and components	MEA224, MEA226
MEA229 Test and troubleshoot aircraft radio frequency navigation and communications systems and components	MEA226
MEA230 Test and troubleshoot fixed wing aircraft automatic flight control systems and components	MEA225, MEA246
MEA231 Inspect, test and troubleshoot rotary wing aircraft automatic flight control systems and components	MEA207, MEA246
MEA232 Test and troubleshoot aircraft pulse systems and components	MEA226, MEA246
MEA233 Inspect, test and troubleshoot aircraft inertial navigation and reference systems and components	MEA207, 246
MEA234 Inspect, test and troubleshoot aircraft global navigation systems and components	MEA206, MEA207, MEA246
MEA235 Perform advanced troubleshooting in aircraft avionic maintenance	
MEA238 Perform routine removal and installation of miscellaneous aircraft electrical hardware/components	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA239 Fabricate aircraft electrical looms and harnesses	MEA101, MEA103,

	MEA105, MEA107, MEA108, MEA109
MEA240 Use electrical test equipment to perform basic electrical tests	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA241 Perform aircraft weight and balance calculations as a result of modifications	
MEA246 Fabricate and/or repair aircraft electrical hardware or parts	MEA201, MEA260
MEA252 Test, align and troubleshoot aircraft synchro and servo system components	MEA201, MEA260, MEA261
MEA260 Use electrical test equipment	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA261 Use electronic test equipment	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA262 Modify/repair aircraft component single layer printed circuit boards	MEA260, MEA261
MEA263 Modify/repair aircraft component multi-layer printed circuit boards	MEA260, MEA261
MEA264 Remove and install aircraft electrical/avionic components during line maintenance	MEA265
MEA265 Remove and install general aircraft electrical hardware	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA266 Terminate and repair aircraft optical fibre cable	
MEA270 Lay out avionic systems	MEA101, MEA107, MEA109
MEA271 Lay out avionic flight management systems	MEA101 MEA107 MEA109 MEA270
MEA274 Maintain basic light aircraft electrical systems and components	MEA246
MEA275 Maintain basic light aircraft instrument systems and components	MEA246
MEA276 Maintain basic aircraft communication and radio navigation systems and components	MEA246
MEA277 Maintain twin engine aircraft electrical systems and components	MEA210
MEA278 Inspect, test and troubleshoot instrument display systems and components	MEA207, MEA246
MEA279 Inspect, test and troubleshoot full authority digital engine control systems	MEA207, MEA246
MEA280 Inspect, test and troubleshoot flight management systems and components	MEA207, MEA246
MEA281 Maintain light aircraft AC powered instrument systems and components	MEA246
MEA282 Repair or overhaul aircraft pulse system components	MEA260, MEA261
MEA283 Repair or overhaul aircraft display, control and distribution system components	MEA260, 261
MEA284 Repair or overhaul aircraft instrument system components	MEA260, MEA261
MEA285 Repair or overhaul aircraft radio frequency communication and navigation system components	MEA260, MEA261
MEA286 Repair or overhaul aircraft electrical/electro-mechanical components	MEA260, MEA201
MEA287 Repair or overhaul aircraft oxygen system components	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA288 Repair or overhaul aircraft audio and visual systems and reproducers	MEA260, MEA261
MEA289 Maintain basic light aircraft avionic systems and components	MEA246
MEA290 Fit avionic modification sheetmetal components	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA291 Inspect, test and troubleshoot fixed wing single axis autopilot systems and components	MEA207, MEA246
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
MEA305 Remove and install aircraft fixed wing flight control system components	MEA302
MEA306 Remove and install engines and engine system components	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA307 Remove and install propeller systems and components	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA308 Remove and install rotary wing rotor and flight control system components	MEA302
MEA309 Inspect, test and troubleshoot aircraft hydro-mechanical and landing gear systems and components	MEA302
MEA310 Inspect, test and troubleshoot aircraft pneumatic systems and components	MEA303
MEA312 Inspect, test and troubleshoot aircraft fixed wing flight control systems and components	MEA305
MEA313 Inspect, test and troubleshoot piston engine systems and components	MEA306
MEA314 Inspect, test and troubleshoot gas turbine engine systems and components	MEA306
MEA315 Inspect, test and troubleshoot propeller systems and components	MEA307
MEA316 Inspect, test and troubleshoot rotary wing rotor and control systems and components	MEA308
MEA317 Remove and install pressurised aircraft structural and non-structural components	MEA302, MEA303
MEA318 Inspect aircraft hydro-mechanical, mechanical, gaseous and landing gear systems and components	MEA302, MEA303 MEA305
MEA319 Inspect gas turbine engine systems and components	MEA306
MEA320 Test and troubleshoot aircraft hydro-mechanical, mechanical, gaseous and landing gear systems and components	MEA318
MEA321 Test and troubleshoot aircraft fixed wing flight control systems and components	MEA318
MEA322 Test and troubleshoot gas turbine engine systems and components	MEA319
MEA323 Perform advanced troubleshooting in aircraft mechanical maintenance	
MEA325 Weigh aircraft and perform aircraft weight and balance calculations as a result of modifications	
MEA327 Fabricate and/or repair aircraft mechanical components or parts	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA328 Maintain and/or repair aircraft mechanical components or parts	MEA302, MEA303
MEA329 Dismantle, inspect, maintain and assemble aircraft basic hydraulic and pneumatic components or parts	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA330 Dismantle, inspect, maintain and assemble aircraft non-primary structural removable components or parts and internal fittings	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA331 Dismantle, inspect, maintain and assemble aircraft gas turbine engine components or parts	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA332 Dismantle, inspect, maintain and assemble aircraft mechanical components or parts	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA333 Dismantle, inspect, maintain and assemble aircraft piston engine	MEA101, MEA103,

components or parts	MEA105, MEA107, MEA108, MEA109
MEA339 Inspect, repair and maintain aircraft structures	MEA304 or MEA317
MEA340 Lay out and set up aircraft systems	MEA101, MEA107, MEA109
MEA341 Apply basic aircraft design characteristics	MEA101, MEA107, MEA109
MEA342 Apply basic aircraft power plant design characteristics	MEA101, MEA107, MEA109
MEA343 Remove and install avionic system components	MEA211 OR MEA227
MEA344 Remove and install aircraft components	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA345 Perform scheduled line maintenance activities on gas turbine engine fixed wing aircraft	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA346 Perform scheduled line maintenance activities on gas turbine engine rotary wing aircraft	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA347 Perform scheduled line maintenance activities on piston engine fixed wing aircraft	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA348 Perform scheduled line maintenance activities on piston engine rotary wing aircraft	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA351 Maintain airframe systems of basic light fixed wing aircraft	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA352 Maintain basic rotary wing aircraft systems	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA353 Maintain basic light aircraft engines and propellers	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA354 Maintain light aircraft pneumatic systems	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA355 Maintain light aircraft air cycle air conditioning systems	MEA201, MEA246
MEA356 Maintain light piston engine aircraft pressurisation systems	MEA201, MEA246
MEA357 Inspect, test and repair aircraft fabric surfaces	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA358 Re-cover aircraft fabric surfaces	
MEA359 Inspect and repair aircraft wooden structures	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA360 Maintain aircraft diesel engines	MEA353
MEA361 Maintain aircraft two stroke petrol engines	MEA353
MEA362 Maintain aircraft vapour cycle air conditioning systems	MEA201, MEA246
MEA364 Maintain and/or repair small aircraft mechanical components or parts	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA365 Assess structural repair/modification requirements and evaluate structural repairs and modifications	
MEA366 Perform borescope inspections	One of MEA313, MEA314, MEA322, MEA387, MEA388
MEA367 Repair/modify aircraft composite structure using cold bonding	MEA401, or MEA339,

	or MEA369
MEA368 Shot peen aircraft components	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA369 Inspect and maintain structures and related components of non-pressurised small aircraft	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA370 Repair the structure of non-pressurised small aircraft	MEA369
MEA371 Perform major repairs and modifications to small aircraft metal structure	MEA369, MEA370
MEA372 Perform mechanical elementary maintenance	MEA301
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
MEA401 Inspect aircraft structures	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA405 Repair/modify aircraft composite material structure/components	MEA401
MEA406B Repair/modify aircraft non-primary structural sheetmetal components	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA407 Repair/modify aircraft non-primary structural non-metallic components	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA410 Maintain aircraft structure/components	MEA401
MEA411 Remove surface coatings from aircraft or aircraft components	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA412 Pre-treat aluminium alloy surfaces	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA413 Seal aircraft and aircraft component structural seams	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA414 Remove light corrosion from aircraft	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA415 Paint aircraft surfaces	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109 AURVTP2003 AURVTP3012
MEA416 Apply aircraft identification markings, graphics and decals	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA417 Apply specialty coatings to aircraft	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA418 Perform basic repair of aircraft internal fittings during line maintenance	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA419 Inspect and repair/modify aircraft cabin/cockpit non-primary structure components	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA420 Fabricate basic structural components for aircraft	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA421 Fabricate advanced structural components for aircraft	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109
MEA422 Repair/modify aircraft metal structure	MEA401
MEA423 Aircraft structure major disassembly and reassembly	MEA401
MEA424 Evaluate aircraft non-destructive tests	MEA109, MEA133, MEM13013B, MEM16010A, MEM24002B, MEM24004B, MEM24006B, MEM24008B, MEM24010B,

	MEM24012C
MEA42 Perform bolted composite skin repairs	MEA401 or MEA339 or MEA369
MEA430 Gas weld aircraft components	MEM05022C, MEM05026C, MEA101, MEA105, MEA107, MEA108
MEA431 Braze weld aircraft components	MEA101, MEA105, MEA107, MEA108, MEM05006B MEM05026C
MEA432 Weld aircraft components using the gas tungsten arc welding process	MEA101, MEA105, MEA107, MEA108, MEM05044B, MEM05026C
MEA433 Weld aircraft components using the gas metal arc welding process	MEA101, MEA105, MEA107, MEA108, MEM05043B, MEM05026C
MEA434 Weld aircraft components using the plasma arc welding process	MEA101, MEA105, MEA107, MEA108, MEM05044B, MEM05026C
MEA435 Weld aircraft components using the manual metal arc welding process	MEA101, MEA105, MEA107, MEA108, MEM05045B, MEM05026C
MEA501 Maintain and fit anti-G suits	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109, MEA511, MEA118 MSFSF2002
MEA502 Maintain and fit helmets	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109 MEA118, MEA240
MEA503 Maintain and fit immersion suits	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109 LMTTF2008A, MEA118
MEA504 Maintain and fit oxygen masks	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109 MEA118, MEA240
MEA505 Maintain and pack parachutes	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109, MEA511, MEA118 MSFSF2002,
MEA507A Maintain, pack and fit survival inflatable buoyancy vests	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109, MEA118
MEA508 Maintain, install and remove restraint systems	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109, MEA511, MEA118 MSFSF2002,

MEA509 Manufacture, repair and alter aircraft related fabric components	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109 MEA511, MEA118 MSFSF2002
MEA510 Maintain seat and pod electrical and electronic systems	MEA240
MEA511 Operate and maintain sewing machines and overlockers	
MEA512 Maintain general aviation recovery devices with ballistic parachute systems	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109 DEFEO101D
MEA513 Maintain and pack survival inflatable life rafts	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109, MEA118
MEA514 Maintain and pack escape slides	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109 MEA118
MEA601 Maintain aircraft egress systems	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109 DEFEO101D
MEA602 Remove and install aircraft stores management system components	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109, DEFEO101D
MEA603 Remove and install aircraft stores suspension systems and components	MEA101, MEA103, MEA105, MEA107, MEA108, MEA109, DEFEO101D
MEA604 Inspect, test and troubleshoot aircraft stores management systems and components	MEA602
MEA605 Inspect, test and troubleshoot aircraft stores suspension systems and components	MEA603
MEA701 Produce aeronautical engineering related graphics	MEA137 MEM30007A MEM30012A
MEA702 Produce avionics engineering related graphics	MEA137 MEM30007A MEM30012A
MEA703 Apply aeronautical modelling for computer-aided engineering	MEA701
MEA704 Apply avionic modelling for computer-aided engineering	MEA702
MEA705 Apply basic scientific principles and techniques in aeronautical engineering situations	MEM23004A
MEA706 Apply basic scientific principles and techniques in avionic engineering situations	MEM23004A
MEA707 Select and test aeronautical engineering materials	
MEA708 Select and test avionic engineering materials	
MEA709 Apply aeronautical structure design techniques	MEA701, MEA703, MEA705, MEA707 MEM23004A MEM23007A
MEA710 Apply aeronautical system design techniques	MEA701, MEA703, MEA705, MEM23004A
MEA711 Apply avionic analogue design techniques	MEA702, MEA708, MEA714, MEA725

MEA712 Apply avionic digital design techniques	MEA702, MEA708, MEA714, MEA725
MEA713 Integrate aeronautical fundamentals into an engineering task	MEA705 MEM23004A MEM23007A
MEA714 Integrate avionic fundamentals into an engineering task	MEA706 and MEM23004A Plus MEM23007A or MEA727
MEA715 Evaluate aeroplane flight control systems	MEA710 MEM23004A MEM23007A
MEA716 Evaluate avionic analogue systems	MEA711, MEA727
MEA717 Evaluate avionic digital systems	MEA712, MEA727
MEA718 Evaluate rotorcraft flight control systems	MEA710 MEM23004A MEM23007A
MEA719 Evaluate aircraft electrical systems	MEA726
MEA720 Evaluate aircraft gas turbine engine power plants	MEA710 MEM23004A MEM23007A
MEA721 Evaluate aircraft hydro-mechanical systems	MEA710 MEM23004A MEM23007A
MEA722 Evaluate aircraft piston engine power plants	MEA710 MEM23004A MEM23007A
MEA723 Evaluate aircraft pneumatic systems	MEA710 MEM23004A MEM23007A
MEA724 Evaluate aircraft structure	MEA709 MEM234019A MEM234022A
MEA725 Apply advanced scientific principles and techniques in avionic engineering situations	MEA706 MEA727
MEA726 Apply aircraft electrical system design techniques	MEA702 MEA706 MEA708 MEA714 MEA725
MEA727 Apply calculus in avionic engineering situations	MEM23004A
MEA729 Apply configuration management procedures in airworthiness engineering management	MEA135 MEA138
MEA730 Apply systems engineering procedures to airworthiness engineering design project management	MEA135 MEA137

Summary mapping information – MEA to MEA11

Unit mapping information

Mapping and equivalence of Aeroskills units from the MEA11v2 Aeroskills Training Package to MEA Release 1.0 is at Appendix A.

Qualification mapping information

Mapping and equivalence of Aeroskills qualifications from the MEA11v2 Aeroskills Training Package to MEA Release 1.0 is at Appendix B.

Imported units of competency

Imported units of competency that are part of MEA qualifications are listed in the table below.

Unit code	Unit title	Prerequisites
AURVTP2003	Prepare spray painting materials and equipment	
AURVTP3012	Apply air dry and polyurethane enamel refinishing material	
AURVTT2004	Trim vehicle components	
AURVTT2005	Select and apply trim and fabric materials	
AURVTT2006	Select and apply trim and fabric adhesives	
AVIF3016A	Marshal aircraft	
DEFEO101D	Work safely with explosive ordnance	
DEFEO301D	Package ammunition	
DEFEO302D	Unpackage ammunition	
DEFEO501D	Conduct explosive ordnance inspection	
DEFEO718C	Maintain cartridge operated fire extinguishing systems	
MSFSF2001	Cut single layer fabrics	
MSFSF2002	Machine sew materials	
MSFUP3012	Apply marine sewing and installation techniques	
LMTTF2008A	Use adhesives	
MEM06003C	Carry out heat treatment	
MEM09002B	Interpret technical drawing	
MEM09003B	Prepare basic engineering drawing	MEM09002B
MEM09009C	Create 2D drawings using computer aided design systems	MEM09002B MEM16008A
MEM11011B	Undertake manual handling	
MEM12001B	Use comparison and basic measuring devices	
MEM12003B	Perform precision mechanical measurement	MEM12023A
MEM12005B	Calibrate measuring equipment	
MEM12023A	Perform engineering measurement	
MEM13013B	Work safely with ionising radiation	
MEM15010B	Perform laboratory procedures	
MEM15017B	Use and maintain reference standards	MEM11011B MEM12003B MEM12004B MEM12005B MEM12023A MEM18001C MEM18002B
MEM16002C	Conduct formal interviews and negotiations	
MEM16008A	Interact with computing technology	
MEM16010A	Write reports	MEM14005A
MEM17002B	Conduct workplace assessment	
MEM18001C	Use hand tools	
MEM22013A	Coordinate engineering projects	
MEM23004A	Apply technical mathematics	

MEM23007A	Apply calculus to engineering tasks	MEM23004A
MEM234019A	Apply finite element analysis in engineering design	
MEM234022A	Apply advanced calculus to technology problems	
MEM24002B	Perform penetrant testing	MEM18001C MEM24012C
MEM24004B	Perform magnetic particle testing	MEM18001C MEM24012C
MEM24006B	Perform eddy current testing	MEM18001C
MEM24008B	Perform ultrasonic testing	MEM18001C MEM24012C
MEM24010B	Perform radiographic testing	MEM18001C MEM24012C
MEM24011B	Establish non-destructive tests	MEM13013B MEM16010A MEM18001C MEM24002B MEM24004B MEM24006B MEM24008B MEM24010B MEM24012C
MEM24012C	Apply metallurgy principles	
MEM30007A	Select common engineering materials	
MEM30012A	Apply mathematical techniques in a manufacturing engineering or related environment	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAENV472B	Implement and monitor environmentally sustainable work practices	
MSAENV672B	Develop workplace policy and procedures for environmental sustainability	
PSPMNGT610A	Manage public sector financial resources	
TADEL301A	Provide work skill instruction	
TADEL402A	Plan, organise and facilitate learning in the workplace	
TAEASS401B	Plan assessment activities and processes	
TAEASS402B	Assess competence	
TAEASS403B	Participate in assessment validation	
TAEASS502B	Design and develop assessment tools	
TAEDES401A	Design and develop learning programs	

Imported units of competency that are part of MEA Skill Sets are listed in the table below.

Unit code	Unit title	Prerequisites
MEM05004C	Perform routine oxy acetylene welding	
MEM05006C	Perform brazing and/or silver soldering	
MEM05007C	Perform manual heating and thermal cutting	
MEM05012C	Perform routine manual metal arc welding	
MEM05015D	Weld using manual metal arc welding process	MEM05012C MEM05051A MEM05052A MEM12023A MEM18001C MEM18002B

MEM05016C	Perform advanced welding using manual metal arc welding process	MEM05007C MEM05012C MEM05015D MEM05051A MEM05052A MEM09002B MEM12023A MEM18001C MEM18002B
MEM05017D	Weld using gas metal arc welding process	MEM05050B MEM05051A MEM05052A MEM12023A MEM18001C MEM18002B
MEM05018C	Perform advanced welding using gas metal arc welding process	MEM05007C MEM05017D MEM05050B MEM05051A MEM05052A MEM09002B MEM12023A MEM18001C MEM18002B
MEM05019D	Weld using gas tungsten arc welding process	MEM05049B MEM05051A MEM05052A MEM12023A MEM18001C MEM18002B
MEM05020C	Perform advanced welding using gas tungsten arc welding process	MEM05007C MEM05019D MEM05049B MEM05051A MEM05052A MEM09002B MEM12023A MEM18001C MEM18002B
MEM05022C	Perform advanced welding using oxy acetylene welding process	MEM05004C MEM05007C MEM05051A MEM05052A MEM09002B MEM18001C MEM18002B
MEM05026C	Apply welding principles	
MEM05043B	Perform welds to code standards using gas metal arc welding process	MEM05007C MEM05017D MEM05018C MEM05026C MEM05050B MEM05051A

		MEM05052A MEM09002B MEM12023A MEM18001C MEM18002B
MEM05044B	Perform welds to code standards using gas tungsten arc welding process	MEM05007C MEM05019D MEM05020C MEM05026C MEM05049B MEM05051A MEM05052A MEM09002B MEM12023A MEM18001C MEM18002B
MEM05046B	Perform welds to code standards using manual metal arc welding process	MEM05007C MEM05012C MEM05015D MEM05016C MEM05026C MEM05051A MEM05052A MEM09002B MEM12023A MEM18001C MEM18002B
MEM05049B	Perform routine gas tungsten arc welding	
MEM05050B	Perform routine gas metal arc welding	
MEM05051A	Select welding processes	
MEM05052A	Apply safe welding processes	
MEM07001B	Perform operational maintenance of machines/equipment	MEM18001C
MEM07002B	Perform precision shaping/planning/slotting operations	MEM07005C MEM09002B MEM12003B MEM12023A MEM18001C
MEM07005C	Perform general machining	MEM09002B MEM12023A MEM18001C
MEM07006C	Perform lathe operations	MEM07005C MEM09002B MEM12023A MEM18001C
MEM07007C	Perform milling operations	MEM07005C MEM09002B MEM12023A MEM18001C
MEM07008D	Perform grinding operations	MEM07005C MEM09002B MEM12023A MEM18001C

MEM07009B	Perform precision jig boring operations	MEM07005C MEM07007C MEM09002B MEM12003B MEM12023A MEM18001C
MEM07010B	Perform tool and cutter grinding operations	MEM07005C MEM07008D MEM09002B MEM12003B MEM12023A MEM18001C
MEM07011B	Perform complex milling operations	MEM07005C MEM07007C MEM09002B MEM12003B MEM12023A MEM12024A MEM18001C
MEM07012B	Perform complex grinding operations	MEM07005C MEM07008D MEM09002B MEM12003B MEM12023A MEM18001C
MEM07013B	Perform machining operations using horizontal and/or vertical boring machines	MEM07005C MEM09002B MEM12023A MEM18001C
MEM07015B	Set computer controlled machines/processes	
MEM07016C	Set and edit computer controlled machines/processes	
MEM07018C	Write basic NC/CNC programs	
MEM07019C	Program NC/CNC machine centre	
MEM07020C	Program multiple spindle and/or multiple axis NC/CNC machining centre	
MEM07021B	Perform complex lathe operations	
MEM07022C	Program CNC wire cut machine	
MEM07024B	Operate and monitor machine/process	
MEM07028B	Operate computer controlled machines/processes	
MEM07030C	Perform metal spinning lathe operations (basic)	
MEM07031C	Perform metal spinning lathe operations (complex)	
MEM07032B	Use workshop machines for basic operations	
MEM08001B	Perform wire, jig and barrel load/unload work	
MEM08002C	Pre-treat work for subsequent surface coating	
MEM08003C	Perform electroplating operations	
MEM08004B	Finish work using wet, dry and vapour deposition methods	
MEM08006B	Produce clear and/or coloured and/or sealed anodised film on aluminium	
MEM08018B	Electroplate engineering coatings	
MEM12024A	Perform computations	
MEM13003B	Work safely with industrial chemicals and materials	
MEM15004B	Perform inspection	
MEM16006A	Organise and communicate information	

MEM18002B	Use power tools/hand held operations	
MEM24001B	Perform basic penetrant testing	
MEM24003B	Perform basic magnetic particle testing	
MEM24005B	Perform basic eddy current testing	
MEM24007B	Perform ultrasonic thickness testing	
MEM24009B	Perform basic radiographic testing	
PMBPROD262B	Operate tyre curing equipment	
PMBPROD263B	Operate tyre retread curing equipment	
PMBPROD264C	Check recycle wash process	
PMBPROD265C	Operate portable vulcanising equipment	
PMBPROD266B	Prepare tyre casing for retreading	
PMBPROD324B	Inspect tyres for retreading	
PMBPROD325B	Lay on tyre retreads	
PMBPROD326B	Inspect tyres	

Key work and training requirements in the industry

There are two major work and training streams in aviation maintenance, these are on-aircraft maintenance and maintenance of aircraft components in workshops. Within these streams, key work and training requirements are defined by the regulatory requirements of the Australian Defence Force (ADF) and the Civil Aviation Safety Authority (CASA) which are discussed in detail under the next heading. In many cases there is mandated training, usually specific to aircraft types and components, beyond that covered by Aeroskills units of competency and qualifications.

To work on aircraft under routine supervision and take responsibility for work performed, individuals are required to be trained to Certificate IV in Aeroskills level in either avionics, mechanical or structures. For maintenance on small aircraft training may be to Certificate III or IV in Aeroskills (Mechatronics). Under the CASA system, mechanical and avionic personnel may be qualified to Diploma of Aeroskills level and be granted an aircraft maintenance engineer licence that enables them to release aircraft to service after maintenance. In the ADF system individuals are authorised under the organisation's quality system to certify as supervisors and release aircraft to service. These individuals require units of competency from the Diploma of Aviation Maintenance Management (Avionics or Mechanical).

To work on the repair and overhaul of aircraft components individuals can be qualified at Certificate IV in Aeroskills level in the applicable field (avionics, mechanical or structures), at least in the core units of competency and in the technical stream unit/s applicable to their area of employment. Many in this area of employment are trade qualified in an allied field, such as automotive or electrotechnology, and these individuals are required to have a unit of competency that covers the core skill specific to aviation maintenance and the Aeroskills technical stream unit/s applicable to the components that they maintain. Under both the ADF and CASA systems some individuals are authorised to certify and release completed components to service and there are Diploma level units that provide the additional competencies for this task.

Spanning both aircraft and component maintenance are specialist trades, such as aircraft surface finishing and life support. Surface finishing involves stripping and repainting aircraft and aircraft components while life support encompasses maintenance of safety and survival equipment and the maintenance and fabrication of aircraft soft furnishings. Training in these fields for specific tasks is available at Certificate II level and trade-level training is provided at Certificate III. Training at Certificate IV level is provided for those who either require multi-skilling or competencies required to function as supervisors and certifiers.

Non-destructive testing (NDT) is a specialist employment field that covers both aircraft and component maintenance. All NDT personnel have to be qualified to AS 3669-2006 Non-destructive testing - Qualification and approval of personnel - Aerospace, or to one of the equivalent overseas standards. Under the ADF system NDT technicians are generally qualified in all of the methods and training for this is provided at AS 3669-2006 Non-destructive testing - Qualification and approval of personnel -

Aerospace Level 2 by the Diploma of Aeroskills (NDT) and training to AS 3669-2006 Non-destructive testing - Qualification and approval of personnel - Aerospace Level 3 is provided by the Advanced Diploma of NDT. In the CASA system individuals are authorised method-by-method and Skill Sets are provided for this purpose.

Beyond the performance and certification of maintenance a number of managerial and engineering paraprofessional positions are defined in both ADF and CASA regulations. Diplomas and Advanced Diplomas in aviation maintenance management (avionic and mechanical) and in aeronautical and avionic engineering provide training leading to such positions.

Regulation and licensing implications

Regulatory requirements

Aviation maintenance is highly regulated by both the ADF and CASA. In the case of CASA, regulations are often based on International Civil Aviation Organisation (ICAO) requirements and are aligned with those of the European Aviation Safety Agency (EASA). Generally there is a fairly high level of alignment between CASA regulatory requirements and those specified by the ADF. Many units of competency and the structure of some qualifications in this Training Package are specifically aimed at satisfying regulatory requirements. Where applicable, regulations are referred to in units of competency and in qualifications, and individuals need to read and understand them. Their content is not repeated in units of competency or qualifications because of the risk of having out-dated information for some time after regulations and supporting publications are amended.

The ADF regulatory requirements associated with aviation maintenance are in the AAP7001.053 Technical Airworthiness Management Manual and the requirements for civilian technical personnel working on state aircraft and components for ADF contractors are found in DEF (AUST) 9022 Requirements for Civilian Personnel Maintaining State Aircraft and Aeronautical Product.

CASA requirements are in the following regulations and their related Manuals of Standards and Acceptable Means of Compliance publications:

CASR Part 21 Certification and Airworthiness Requirements for Aircraft and Parts

CASR Part 42 Continuing Airworthiness Requirements for Aircraft and Aeronautical Products

CASR Part 66 Continuing Airworthiness – Aircraft Engineer Licences and Ratings

CASR Part 145 Maintenance Organisation Requirements

CASR Part 147 Maintenance Training Organisations

Licences

Aircraft maintenance engineer licences are issued in accordance with CASR Part 66 and details of the requirements for the grant of a licence are in the Part 66 Manual of Standards.

The licences and the related Aeroskills qualifications are:

B1 with sub-categories B1.1, B1.2, B1.3 and B1.4 for certification of mechanical and electrical maintenance performed, respectively, on gas turbine fixed wing aircraft, piston engine fixed wing aircraft, gas turbine engine helicopters and piston engine helicopters. The qualification that provides a pathway to these licences is the Diploma of Aeroskills (Mechanical).

B2 for certification of avionic maintenance on aircraft. The qualification that provides a pathway to this licence is the Diploma of Aeroskills (Avionics).

Individuals seeking the grant of a licence must do their off-job training and competency assessment at a Registered Training Organisation (RTO) that is registered to deliver the MEA Aeroskills Training Package and is also a CASR Part 147 Maintenance Training Organisation (MTO) operating in accordance with a CASA-approved Exposition. The Exposition has requirements additional to the Australian Qualifications Framework (AQF) with regard to conditions of training delivery, theory content, examinations and assessment of competency. Should an individual trained at an RTO that is not also a Part 147 MTO seek a licence they would be required to undergo recognition of prior learning (RPL) for relevant units at such an organisation and probably sit the applicable theory examinations. A full certified record of work performed and competency assessment is also required in the form of the Log of Industrial Experience and Achievement, or an acceptable alternative (see the MEA Aeroskills Training Package Assessment Guidelines for details).

At present the foregoing licensing information does not apply to most General Aviation maintenance organisations which are still operating under CAR30 provisions using maintenance engineers licensed under CAR31. The maintenance of small aircraft is expected to be covered by the CASRs (with amendments to cover small aircraft maintenance and licensing) from mid-2015. Until then, individuals seeking licences may complete the Certificate IV in Aeroskills (Mechatronics), but will also have to sit the CASA Basic Examinations. From mid-2015 CASA will no longer provide examinations and the Certificate IV in Aeroskills (Mechatronics) will become the sole avenue to the grant of a small aircraft licence.

The provisions for including small aircraft licensing within the B1 and B2 framework are expected to be finalised within the first half of 2014, with regulation amendments to follow, and possibly some amendment to the Certificate IV in Aeroskills (Mechatronics).

There are also A and C licences. The A licence enables individuals to release aircraft to service after performing a range of specified minor rectification tasks or the completion of up to the equivalent of a

weekly check on an aircraft. Training consists of the completion of the Certificate II in Aircraft Line Maintenance at a CASR Part 147 MTO and specific task training at the CASR Part 145 Maintenance Organisation. There is also a path from Certificate IV in Aeroskills to A Licence through the completion of gap training specified in Skill Sets at a Part 147 MTO.

The C licence is used to release large aircraft to service after major maintenance. While not specifically aimed at this licence, there are a number of units of competency in the Advanced Diplomas of Aviation Maintenance Management (Mechanical) and (Avionic) that cover some of the responsibilities of such individuals.

Advice to contact CASA for authoritative information on licensing requirements

This MEA Aeroskills Training Package publication provides advisory information based on discussions with CASA, including their anticipated future requirements. All possible care has been taken in the preparation of this material however persons should not rely solely on this publication on matters involving CASA's current or proposed licensing requirements or arrangements.

Precise information on licensing, current and proposed compliance requirements can be obtained from CASA on telephone 131 757 or at www.casa.gov.au.

Implementation information

Information on the key features of the MEA Aeroskills Training Package and the industry that will impact on the selection of training pathways

The MEA Aeroskills Training Package covers the Aviation Maintenance Sector of the Australian Aerospace Industry. This sector covers maintenance performed on aircraft and their components in support of both civil and military aviation by a workforce of about 15,000 civilian and ADF personnel.

On the civil side, the workforce ranges from airlines employing large numbers of maintenance personnel to medium and small general aviation organisations that may employ as few as two or three individuals. In both the airline and general aviation areas there are third-party maintenance organisations that support aircraft operators on a contractual basis. Again, these organisations vary in size from hundreds of maintenance personnel down to organisations with fewer than ten personnel. Some maintenance organisations maintain both aircraft and their components while others maintain either complete aircraft or a range of aircraft components.

Military aviation consists of the three Services of the ADF where maintenance work is performed by uniformed personnel, plus a large network of contractors with civilian workforces that perform the deeper maintenance of most aircraft types and contractors also perform most component maintenance. The Defence contractors are typically large aerospace organisations, or subsidiaries thereof. Many have a number of contracts and operate from a number of sites that may be geographically remote from one another.

Those involved in the maintenance of civil aircraft work under an extensive range of regulations that are aimed at ensuring a high level of flight safety and rely on licensed and specifically authorised individuals for the certification of maintenance. Those involved in the maintenance of State (military) aircraft and their components operate under a range of ADF regulations and standards that are also aimed at ensuring a high level of flight safety. Under the ADF system the certification of maintenance is based on task authorisation and levels of maintenance quality inspection. In both cases, the level of regulation relates to the old adage in aviation maintenance that “in the air you can’t get out and fix something that has gone wrong and seemingly minor maintenance errors can have catastrophic consequences”.

The importance of safe and efficient aviation services to the national economy cannot be overstated.

Aviation is of considerable importance in the use of often complex and very expensive equipment for the rapid transportation of people and cargo, in the provision of aerial work services to agriculture and in fire fighting. Military aviation is of considerable importance to national defence, and in the provision of services to the community at times of natural disaster.

Aviation maintenance is thus a key national industry sector. It is diverse, highly technical and uses advanced technologies. It operates in a multi-billion dollar capital equipment environment and high quality and maximum safety requirements and standards are critical.

Occupational outcomes of qualifications

Qualifications in the MEA Aeroskills Training Package support occupational outcomes ranging from workers below trade-level through trade and technician levels to licensing and paraprofessional engineering and airworthiness/maintenance management positions. Some typical outcomes by qualification are listed in the table below.

Qualification	Typical occupational outcomes
MEA20415 Certificate II in Aeroskills	Employment in component workshops operating under ADF and/or CASA systems at worker level.
MEA20515 Certificate II in Aircraft Line Maintenance	Employment in airlines and charter organisations operating large aircraft on line maintenance tasks as the holder of a CASA A licence.
MEA20615 Certificate II in Aircraft Surface Finishing	Employment at worker level in an aircraft maintenance organisation operating under ADF and/or CASA systems on stripping of paint finishes and preparation of surfaces for the application of paint finishes.
MEA30115 Certificate III in Aircraft Surface Finishing	Employment at trade level in an aircraft maintenance organisation operating under the ADF and/or CASA systems on the application of paint finishes, markings and decals.
MEA30215 Certificate III in Aeroskills (Mechatronics)	Employment at trade level in general aviation maintenance organisations operating under the CASA system on the maintenance of small aircraft and some more advanced types used in charter and regional airlines.
MEA30315 Certificate III in Aircraft Life Support and Furnishing	Employment at trade level under the ADF and/or CASA systems on the maintenance of flight crew, passenger and aircraft safety and survival equipment, seats and soft furnishings.
MEA40615 Certificate IV in Aeroskills (Avionics)	Employment at technician level in maintenance organisations operating under ADF and/or CASA systems on the maintenance of avionic systems of aircraft or in workshops on the repair and overhaul of electrical, instrument, radio and pulse components.
MEA40715 Certificate IV in Aeroskills (Mechanical)	Employment at technician level in maintenance organisations operating under ADF and/or CASA systems on the maintenance of structure and mechanical systems of aircraft or in workshops on the repair and overhaul of engine, mechanical, hydraulic and pneumatic components
MEA40915 Certificate IV in Aircraft Surface Finishing	Employment beyond trade level in aircraft maintenance organisations operating under ADF and/or CASA systems on surface finishing tasks involving multi-skilling in the mechanical field, or as a supervisor and section head.
MEA41015 Certificate IV in Aeroskills (Mechatronics)	Employment at technician level or as a Licensed Aircraft Maintenance Engineer (LAME) on small aircraft maintenance in general aviation maintenance organisations operating under the CASA system.
MEA41115 Certificate IV in Aircraft Life Support and Furnishing	Employment beyond trade level under the ADF and/or CASA systems supervising the maintenance of flight crew, passenger and aircraft safety and survival equipment, seats and soft furnishings, and as a head of section.
MEA41215 Certificate IV in Aeroskills (Armament)	Armament technician in the ADF maintaining aircraft egress systems and stores suspension and delivery systems.

MEA41315 Certificate IV in Aeroskills (Structures)	Employment at technician level in maintenance organisations operating under ADF and/or CASA systems on the repair and modification of aircraft metal and composite structure.
MEA50115 Diploma of Aeroskills (Avionics)	Employment as a B2 LAME on aircraft for which a type rating has been granted.
MEA50215 Diploma of Aeroskills (Mechanical)	Employment as a B1 (B1.1, 1.2, 1.3 or 1.4) LAME on aircraft for which a type rating has been granted.
MEA50315 Diploma of Aviation Maintenance Management (Avionics)	In organisations operating under the ADF system, employment as: independent or maintenance quality inspectors spares assessors repairable item managers technical authors maintenance managers In organisations operating under the CASA system, employment: In Continuing Airworthiness Management Organisations (CAMOs) In CASR Part 145 Maintenance Organisations in roles such as maintenance managers and in engineering support departments.
MEA50415 Diploma of Aviation Maintenance Management (Mechanical)	
MEA50515 Diploma of Aeroskills (Non-Destructive Testing)	Employment as an NDT technician qualified at AS 3669-2006 Non-destructive testing - Qualification and approval of personnel - Aerospace Level 2.
MEA50615 Diploma of Aeronautical Engineering	Employment in engineering teams involved in design of repairs, modifications and maintenance procedures.
MEA50715 Diploma of Avionic Engineering	Employment in engineering teams involved in design of repairs, modifications and maintenance procedures, including the development and support of automatic test equipment.
MEA60115 Advanced Diploma of Aviation Maintenance Management (Avionics)	Employment in senior maintenance management positions and in the management of continuing airworthiness procedures.
MEA60215 Advanced Diploma of Aviation Maintenance Management (Mechanical)	
MEA60315 Advanced Diploma of Aviation Non-Destructive Testing	Employment as manager of an NDT organisation and in developing and delivering NDT training. Also in assessment of Level 2 personnel for accreditation and reaccreditation in accordance with AS 3669-2006 Non-destructive testing - Qualification and approval of personnel – Aerospace.
MEA60415 Advanced Diploma of Aeronautical Engineering	Employment in engineering teams involved in design of repairs, modifications and maintenance procedures.
MEA60515 Advanced Diploma of Avionic Engineering	Employment in engineering teams involved in design of repairs, modifications and maintenance procedures, including the development and support of automatic test equipment.

Refer to Appendix C for information on MEA Aeroskills qualifications AQF alignment.

Mandatory entry requirements for qualifications

The Diplomas and Advanced Diplomas of Aviation Maintenance Management were developed to meet the competency requirements of a range of paraprofessional and managerial positions related to the management of airworthiness and maintenance. Many such positions are described in ADF and CASA regulations and have mandatory experience requirements. The qualifications are thus of little immediate use to individuals unable to meet the criteria and therefore have mandatory entry requirements.

The following table lists qualifications in the MEA Aeroskills Training Package that have mandatory entry requirements and provides details of the specific requirements.

Qualification	Mandatory entry requirements
MEA50315 Diploma of Aviation Maintenance Management (Avionics)	At least one of: at least five years current aviation avionic maintenance experience Maintenance Engineer Licence (Avionics) issued by CASA (B2 licence) Certificate IV in Aeroskills (Avionics).
MEA50415 Diploma of Aviation Maintenance Management (Mechanical)	At least one of: at least five years current aviation mechanical maintenance experience Maintenance Engineer Licence (Mechanical) issued by CASA (B1 licence) Certificate IV in Aeroskills (Mechanical).
MEA60115 Advanced Diploma of Aviation Maintenance Management (Avionics)	At least one of: five or more years current aviation avionics maintenance experience Maintenance Engineer Licence (Avionics) issued by CASA (B2 licence) Certificate IV in Aeroskills (Avionics) Diploma of Aviation Maintenance Management (Avionics).
MEA60215 Advanced Diploma of Aviation Maintenance Management (Mechanical)	At least one of: Five or more years current aviation mechanical maintenance experience Maintenance Engineer Licence (Mechanical) issued by CASA Certificate IV in Aeroskills (Mechanical) Diploma of Aviation Maintenance Management (Mechanical).

Pathways advice

The MEA Aeroskills Training Package Release 1.0 includes national qualifications at Certificate II, Certificate III, Certificate IV, Diploma and Advanced Diploma levels. The Training Package provides national qualification outcomes based on recognition of competency achievement that may also provide articulation or credit transfer towards other qualifications. These qualifications can be accessed through traineeship and apprenticeship pathways, or through other pathways that do not involve a contract of training, such as recognition of prior learning (RPL).

Alternate pathways exist in most qualifications, as shown in the qualification details, to align with industry and regulatory employment requirements. The selection of the appropriate training pathway requires discussion between the apprentice/trainee, the employer and the applicable RTO.

There are also pathways between qualifications that can lead to a career ranging from worker below trade-level through trade to licensing and/or higher level employment as a supervisor, manager or paraprofessional engineer. Some qualifications fully articulate with higher level qualifications and others provide varying levels of credit transfer. These career pathways are described hereunder.

Packaging units of competency for a qualification

Qualifications may be achieved in a number of ways, but regardless of how they are attained, they must be based on the achievement of a package of competency standards.

Each qualification is made up of core and elective units drawn from common, technical stream and imported units:

- the mandatory core of common, technical stream and imported units for each qualification ensure the integrity of the qualification and effective alignment with CASA and ADF regulatory requirements
- the ability to select from a range of elective units that may be packaged into alternate training pathways provides flexibility and, where applicable, a means of alignment with regulatory requirements in areas such as licensing sub-sets in the CASA system and task authorisation in the ADF system.

The units of competency to be achieved for each qualification have been determined in consultation with industry and the Regulators (CASA and the ADF). Any RTO issuing a qualification will need to comply with this framework. However, RTOs are encouraged to offer flexible learning delivery formats to suit industry needs (what is taught, how, when, where delivered etc).

People with experience in related industries, such as manufacturing, engineering, automotive and electrotechnology, may be able to achieve competence in MEA Aeroskills component workshop units of competency with limited levels of 'gap' training and experience. This process is facilitated through a common 'conversion' unit of competency (MEA145) and a number of Skill Sets relating to specific component workshop employment areas. Skill Sets are developed in conjunction with the regulators and added to the Training Package as required on an ongoing basis.

Credit transfer and articulation

Details of credit transfer and articulation from Certificate II and III levels to Certificate IV and onwards to Diplomas and Advanced Diplomas are provided below. In addition, in many units of competency there is guidance information for assessment where training and experience associated with another unit may be used also as evidence for the unit being assessed. This will assist learners, enterprises and RTOs in realising the greatest possible efficiencies in terms of learning and skills acquisition.

A separate mapping exercise to document the level of credit transfer available from, and to, competencies under other related industry Training Packages, such as Metal and Engineering, Electrotechnology and Automotive, towards the Aeroskills Certificate IV qualifications has resulted in the development of a common 'conversion' unit and a number of Skill Sets. These Skill Sets lead to employment in component maintenance workshops and meet regulatory requirements for maintenance organisations to be able to demonstrate the attainment of competencies required for employment on specific types of component maintenance.

Certificate II credit transfer and articulation

Provisions for credit transfer and articulation from Certificate II MEA qualifications towards other qualifications at Certificate II and higher is provided in the tables below.

MEA20415 units of competency	Possible credits
MEA238 Perform routine removal and installation of miscellaneous aircraft electrical hardware/components	Partial towards MEA201 Remove and install miscellaneous aircraft electrical hardware/components
MEA239 Fabricate aircraft electrical looms and harnesses	Partial towards MEA246 Fabricate and/or repair aircraft electrical hardware or parts
MEA240 Use electrical test equipment to perform basic electrical tests	Partial towards MEA260 Use electrical test equipment
MEA329 Dismantle, inspect, maintain and assemble aircraft basic hydraulic and pneumatic components or parts	Partial towards any or all of: MEA380 Repair and/or overhaul aircraft hydraulic system components MEA381 Repair and/or overhaul aircraft pneumatic system components MEA382 Repair and/or overhaul aircraft fuel system components
MEA330 Dismantle, inspect, maintain and assemble aircraft non-primary structural removable components or parts and internal fittings	Partial towards MEA328 Maintain and/or repair aircraft mechanical components or parts
MEA331 Dismantle, inspect, maintain and assemble aircraft gas turbine engine components or parts	Partial towards any or all of: MEA383 Repair and/or overhaul gas turbine engine air inlet and compressor components and/or modules MEA384 Repair and/or overhaul gas turbine engine combustion section components and/or modules MEA385 Repair and/or overhaul gas turbine engine turbine

	and exhaust section components MEA386 Repair and/or overhaul gas turbine engine ancillary section components
MEA332 Dismantle, inspect, maintain and assemble aircraft mechanical components or parts	Partial towards MEA328 Maintain and/or repair aircraft mechanical components or parts
MEA333 Dismantle, inspect, maintain and assemble aircraft piston engine components or parts	Partial towards MEA388 Repair and/or overhaul piston engines
MEA406 Repair/modify aircraft non-primary structural sheet metal components	Partial towards MEA423 Repair/modify aircraft metal structure
MEA407 Repair/modify aircraft non-primary structural non-metallic components	Partial towards MEA405 Repair/modify aircraft composite material structure/components

MEA20515 elective units	Possible credit
MEA240 Use electrical test equipment to perform basic electrical tests	Partial towards MEA260 Use electrical test equipment
MEA264 Remove and install aircraft electrical/avionic components during line maintenance	Partial towards MEA202 Remove and install basic aircraft electrical system components and MEA203 Remove and install advanced aircraft electrical system components
MEA265 Remove and install general aircraft electrical hardware	Partial towards MEA201 Remove and install miscellaneous aircraft electrical hardware/components
MEA344 Remove and install aircraft components	Partial towards MEA302 Remove and install aircraft hydro mechanical and landing gear system components
MEA345 Perform scheduled line maintenance activities on gas turbine engine fixed wing aircraft	Full credit for MEA301 Perform aircraft flight servicing
MEA346 Perform scheduled line maintenance activities on gas turbine engine rotary wing aircraft	
MEA347 Perform scheduled line maintenance activities on piston engine fixed wing aircraft	
MEA348 Perform scheduled line maintenance activities on piston engine rotary wing aircraft	
MEA418 Perform basic repair of aircraft internal fittings during line maintenance	Partial towards MEA339 Inspect, repair and maintain aircraft structures

MEA20615 elective units	Possible credit
MEA330 Dismantle, inspect, maintain and assemble aircraft non-primary structural removable components or parts and internal fittings	Full credit towards MEA20415 Certificate II in Aeroskills
MEA406 Repair/modify aircraft non-primary structural sheet metal components	Full credit towards MEA20415 Certificate II in Aeroskills
MEA407 Repair/modify aircraft non-primary structural non-metallic	Full credit towards MEA20415 Certificate II in Aeroskills

Certificate III credit transfer and articulation

Extensive credit transfer is available from Certificate III qualifications to those at Certificate IV, in some cases amounting to full articulation. Since many qualifications have an extensive range of electives the extent of such credit transfer and articulation will depend on the choice of electives. In general:

MEA30115 Certificate III in Aircraft Surface Finishing articulates with MEA40915 Certificate IV in Aircraft Surface Finishing and provides credits towards MEA40715 Certificate IV in Aeroskills (Mechanical)

MEA30215 Certificate III in Aeroskills (Mechatronics) articulates with MEA41015 Certificate IV in Aeroskills (Mechatronics) and provides credits towards MEA40615 Certificate IV in Aeroskills (Avionics) and MEA40715 Certificate IV in Aeroskills (Mechanical)

MEA30315 Certificate III in Aircraft Life Support and Furnishing articulates with MEA41115 Certificate IV in Aircraft Life Support and Furnishing and provides a limited range of credit transfer towards other qualifications at Certificate IV level.

Certificate IV credit transfer and articulation

The Certificate IV qualifications articulate with, or provide credit towards, the qualifications at Diploma and Advanced Diploma levels. This provides avenues towards meeting the full CASA requirements for the grant of B1 and B2 licences, and to prepare individuals to work in maintenance management and maintenance-related integrated logistic support (ILS) activities within both the ADF and CASA regulatory environments.

The Certificate IV qualifications in Aeroskills in Avionics and Mechanical (MEA40615 and MEA40715) articulate with or provide substantial credit towards the four Diploma level qualifications MEA50115 Diploma of Aeroskills (Avionics), MEA50215 Diploma of Aeroskills (Mechanical), MEA50315 Diploma of Aviation Maintenance Management (Avionics) and MEA50415 Diploma of Aviation Maintenance Management (Mechanical). Some credits are also provided towards the Advanced Diplomas of Aviation Maintenance Management MEA60115 and MEA60215. The MEA41015 Certificate IV in Aeroskills (Mechatronics) also provides significant credit towards these Diplomas.

The MEA41315 Certificate IV in Aeroskills (Structures), MEA40915 Certificate IV in Aircraft Surface Finishing and MEA41115 Certificate IV in Aircraft Life Support and Furnishing qualifications do not articulate with the Diplomas, but individuals with one of those qualifications would be entitled to credit for a number of common units of competency.

All of the Certificate IV qualifications provide a limited number of credits towards the Diploma of Aeroskills (Non-Destructive Testing).

The MEA41215 Certificate IV in Aeroskills (Armament) is somewhat different since, at present, training is available only to trainees who have enlisted in the RAAF and ongoing career development involves, in part, the attainment of additional qualifications from the Defence Training Package that cover weapons and explosive ordnance.

Diploma credit transfer and articulation

The two Diplomas of aviation maintenance management (MEA50315 and MEA50415) articulate fully with the two Advanced Diplomas of aviation maintenance management (MEA60115 and MEA60215). The MEA50615 Diploma of Aeronautical Engineering and the MEA50715 Diploma of Avionic Engineering fully articulate with the MEA60415 Advanced Diploma of Aeronautical Engineering and the MEA60515 Advanced Diploma of Avionic Engineering, but provide only a limited number of credits towards the Advanced Diplomas of aviation maintenance management.

The MEA50515 Diploma of Aeroskills (Non-Destructive Testing) articulates fully with the MEA60315 Advanced Diploma of Aviation Non-Destructive Testing, but only a limited range of credits towards the Advanced Diplomas of aviation maintenance management.

Access and equity

An individual's access to training and assessment should not be adversely affected by restrictions placed on the location or context of the training and assessment beyond the requirements specified in the Aeroskills Training Package and must be bias-free.

Training Packages reflect and cater for the increasing diversity of Australia's VET clients and current and future workforce. The flexibilities offered by Training Package qualifications and units of competency enhance opportunities and potential outcomes for all people so that we can all benefit from a wider national skills base and a shared contribution to Australia's economic development and social and cultural life.

Reasonable adjustments

It is important that education providers take meaningful, transparent and reasonable steps to consult, consider and implement reasonable adjustments for learners with disability. Under the Disability Standards for Education 2005, education providers must make reasonable adjustments for people with disability to the maximum extent that those adjustments do not cause that provider unjustifiable hardship. While 'reasonable adjustment' and 'unjustifiable hardship' are different concepts and involve different considerations, they both seek to strike a balance between the interests of education providers and the interests of learners with and without disability. The Disability Standards and guidelines for their implementation can be downloaded at <https://education.gov.au/disability-standards-education>

An adjustment is any measure or action that a learner requires because of their disability, and which has the effect of assisting them to access and participate in education and training on the same basis as those without a disability. An adjustment is reasonable if it achieves this purpose while taking into account factors such as the nature of the learner's disability, their views, the potential effect of the adjustment on the learner and others who might be affected, and the costs and benefits of making the adjustment.

A training provider is also entitled to maintain the academic requirements of a course or program and to consider the requirements or components that are inherent or essential to its nature when assessing whether an adjustment is reasonable. There may be more than one adjustment that is reasonable in a given set of circumstances; education providers are required to make adjustments that are reasonable and that do not cause them unjustifiable hardship.

The definition of reasonable adjustment in the Standards for NVR Registered Training Organisations 2012 says that 'reasonable adjustment means adjustments that can be made to the way in which evidence of candidate performance can be collected. Whilst reasonable adjustments can be made in terms of the way in which evidence of performance is gathered, the evidence criteria for making competent/not yet competent decisions (and/or awarding grades) should not be altered in any way. That is, the standards expected should be the same irrespective of the group and/or individual being assessed; otherwise comparability of standards will be compromised'.

Aeroskills limitations

In applying the foregoing guidelines to training leading to qualifications in the MEA Aeroskills Training Package, training providers will need to consider limitations specified in regulations and their associated Manuals of Standards. In some cases there are specific physical standards that must be met, such as visual acuity and colour perception. Also, the conditions of work need to be considered; there would be little point in training an individual with limited mobility for a qualification associated with on-aircraft work requiring movement around flight lines and the ability to climb onto aircraft and hangar docking for access to aircraft structure, systems and components. Yet, such an individual may be quite easily employed on component maintenance in a workshop environment.

Foundation Skills

Aviation maintenance is a technology-based industry requiring high skill levels and the ability to troubleshoot faults in often complex components and systems. The industry is highly regulated and those working within it must be able to read and interpret instructions, standards and manuals, and document and certify the work that they perform. Work performed may be closely supervised and be inspected/certified by supervisors, or may have a high level of autonomy and personal accountability. Work may be performed either individually or within teams of various sizes.

Training providers must use aviation maintenance industry qualification Foundation Skills information in order to design valid and reliable training and to assist in meeting the Assessment Requirements specified in the units of competency and the MEA Aeroskills Companion Volume. This analysis could include:

- reviewing units of competency to locate relevant Employability Skills and determine how they are applied within the unit
- analysing the Employability Skills Summary for the AQF qualification level in which the unit or units are packaged to help clarify relevant industry and workplace contexts and the application of Employability Skills in a particular qualification outcome
- designing training and assessment to address Employability Skills requirements.

Foundation Skills are deemed essential to successful learning and continuing employment. In the MEA Aeroskills Training Package units of competency advice is provided that relevant employability skills and Core Skills are embedded in all units of competency. Employability Skills are best identified holistically at the qualification level. Tables setting out how Employability Skills are covered in MEA qualifications are below, based on national Employability Skills facets. Following this is a table setting out the Core Skills of reading, writing, numeracy and oral communication essential to competent performance in every unit of competency.

Employability Skills in MEA qualifications

Aviation maintenance involves dealing with a wide range of technology in a highly regulated environment and consistently working to high standards in order to ensure flight safety. There is therefore a particular emphasis on all areas of Employability Skills. For example, communication skills are vital to being able to operate in a highly regulated environment with extensive work involving recording and reporting, environments and problem solving across a range of technologies is vital. Also, with ongoing mandatory training associated with many types of aircraft a high level of personal commitment to learning is essential.

There are eight Employability Skills with sets of facets that show important work skills. Not all facets are required in a particular job role.

Employability Skill - Communication

Facets:

- contributes to productive listening and understanding
- speaks clearly and directly
- establishes harmonious relations across employees and customers
- writes to the needs of the audience
- negotiates responsively
- reads independently

- empathises with others
- uses numeracy effectively
- understands the needs of internal and external customers
- persuades effectively
- establishes and uses networks
- can be assertive
- shares information
- speaks and writes in languages other than English.

Employability Skill – Teamwork

Facets:

- contributes to productive working relationships and outcomes
- contributes to working across different ages irrespective of gender, race, religion or political persuasion
- works as an individual and as a member of a team
- knows how to define a role as part of the team
- applies teamwork to a range of situations (e.g. futures)
- plans and applies problem solving techniques
- identifies the strengths of team members
- coaches and mentors, including giving feedback.

Employability Skill – Problem solving

Facets:

- contributes to productive outcomes
- develops creative, innovative and practical solutions
- shows independence and initiative in identifying and solving problems
- solves problems in teams
- applies a range of strategies to problem solving
- uses mathematics, including budgeting and financial management to solve problems
- applies problem-solving strategies across a range of areas
- tests assumptions, taking into account the context of data and circumstances
- resolves customer concerns in relation to complex project issues.

Employability Skill – Initiative and enterprise

Facets:

- contributes to innovative outcomes
- adapts to new situations
- develops a strategic, creative and long-term vision

- is creative
- identifies opportunities not obvious to others
- translates ideas into action
- generates a range of options
- initiates innovative solutions
- contributes to long and short-term strategic planning
- manages time and priorities (setting time lines and coordinating tasks for self and with others)
- is resourceful
- takes initiative and makes decisions
- adapts resource allocations to cope with contingencies
- establishes clear project goals and deliverables
- allocates people and other resources to tasks
- plans the use of resources, including time management
- participates in continuous improvement and planning processes
- develops a vision and a proactive plan to accompany it
- predicts - weighing up risk, evaluating alternatives and applying evaluation criteria
- collects, analyses and organises information
- understands basic business systems and their relationships.

Employability Skill – Self-management

Facets:

- contributes to employee satisfaction and growth
- has a personal vision and goals
- evaluates and monitors own performance
- has knowledge and confidence in own ideas and visions
- articulates own ideas and visions
- takes responsibility.

Employability Skill – Learning

Facets:

- contributes to ongoing improvement and expansion in employee and company
- operations and outcomes
- manages own learning
- contributes to the learning community at the workplace
- uses a range of mediums to learn - mentoring, peer support and networking, IT and courses
- applies learning to technical issues (e.g. learning about products) and people issues (e.g. interpersonal and cultural aspects of work)
- has enthusiasm for ongoing learning
- willing to learn in any setting - on and off the job
- open to new ideas and techniques
- prepared to invest time and effort in learning new skills

- acknowledges the need to learn in order to accommodate change.

Employability Skill – Technology

Facets:

- contributes to the effective carrying out of tasks
- has a range of basic IT skills
- applies IT as a management tool
- uses IT to organise data
- willing to learn new IT skills
- has WHS knowledge to apply technology
- has the appropriate physical capacity.

Employability Skills Summaries

Employability Skills Summaries can be developed at the qualification level and are important tool in training development. They:

- provide examples of how each skill is applicable to the job roles covered by the same AQF level qualification
- contain general information about industry context which is further explained as measurable outcomes of performance in the units of competency
- will vary in detail depending on the range of job roles covered by the qualifications at an AQF level
- are not exhaustive lists of requirements or checklists of performance (which are separate assessment tools that should be designed by trainers and assessors after analysis at the unit level)
- contain information that may also assist in building learners' understanding of industry and workplace expectations.

Employability Skills Summaries for a sample of AQF qualifications in the MEA Aeroskills Training Package are in Appendix D. They are a lens through which to view Employability Skills at the qualification level and capture the key aspects or facets of the Employability Skills that are important to the job roles covered by the qualification.

Core Skills in MEA units of competency

Certain levels of reading, writing, numeracy and oral communication skills are essential to learning and workplace performance. The Australian Core Skills Framework (ACSF) sets out levels and examples of skills capability for these and another skills dimension of learning. This is largely a description of attributes demonstrated in a learning environment rather than work-based competencies.

From the table in Appendix D trainers and assessors will be able to determine what reading, writing, oral communication and numeracy skills and levels are required in every aeroskills unit of competency. ACSF assessment tools can then be selected and applied to find out what levels a learner has achieved and whether these differ from the level specified for competent performance in the unit/s.

If necessary, trainers and assessors can work with a language, literacy and numeracy (LLN) specialist to support the core skill requirements of the learner. This could be done in a variety of ways, such as providing extra support, mentoring, giving more opportunities for practice and so on.

Details on the ACSF levels and descriptors can be obtained from:

<http://www.industry.gov.au/skills/AssistanceForTrainersAndPractitioners/AustralianCoreSkillsFramework/Pages/default.aspx>

Health and safety implications for aviation maintenance

All Commonwealth and, where applicable, state and territory work health and safety (WHS) legislation and regulations apply to aviation maintenance. Specific areas of the aviation maintenance environment require great care and these areas are emphasised in the relevant units of competency. Examples of such areas include:

- personal protective equipment (PPE) to counter noise and exposure to toxic liquids such as fuel and hydraulic fluids
- jet engine intakes and exhaust
- propellers
- the risk of fire and explosion with oxygen systems
- anti-collision strobe lighting
- testing of radar systems on the ground
- working in confined spaces
- working at heights
- danger to team members when moving flight controls and landing gear
- handling of heavy components
- isolation of systems during maintenance
- electrocution when working on live electrical high voltage AC systems
- compressed air and gases
- high temperature jet engine bleed air when testing anti-ice or air conditioning systems
- jet engine high energy ignition units – risk of electrical shock
- PPE to counter toxic sealants and surface finishes during removal or application.

Resources and equipment

While most units of competency permit assessment under simulated conditions the range of resources and equipment required means that assessment at RTOs is impractical for most units associated with maintenance activities and the application of off-job training and competency assessment mostly occurs in the workplace. Here, the resources and equipment vary according to the maintenance organisation and the types of aircraft and/or components being maintained.

Legal considerations for learners

Apprenticeship legal requirements are determined by the appropriate state/territory authority or commission. This includes form and registration of indenture. Apprenticeship arrangements may also be determined by agreement by the industry training advisory body at a national level or between the industrial parties by establishing a committee at a state level in conjunction with the appropriate state authority or commission.

Current legislation and successor legislation is defined in:

- Australian Capital Territory: Training and Tertiary Education Act 2003
- New South Wales: Apprenticeship and Traineeship Act 2001
- Northern Territory: Northern Territory Employment and Training Act 1991
- Queensland: Vocational Education, Training and Employment Act 2000
- South Australia: Training and Skills Development Act 2008
- Tasmania: Vocational Education and Training Act 1994
- Victoria: Education and Training Reform Act 2006
- Western Australia: Vocational Education and Training Act 1996

Under awards employers must ensure that each apprentice has appropriate arrangements made at an enterprise level to meet the apprentices' training requirements and adequate access to and supervision from tradespersons has been arranged. Awards will stipulate payment levels for first, second, third and fourth years of the apprenticeship and any work and pay conditions applying where apprentices willing to work overtime or on public holidays, which usually has set limits.

The term of an apprenticeship is determined by the rate by which an apprentice gains the required competence and the starting level of competence of the apprentice. For the trades covered by the MEA Aeroskills Training Package three to four years is a general guide.

Aviation maintenance is heavily regulated by the ADF and CASA. Once apprentices/trainees begin working in maintenance organisations there are regulations that must legally be observed. These are generally referred to in organisation Maintenance Management Plans (ADF system) or Maintenance Organisation Expositions (CASA system).

Additional information

Assessment of competency

The standard AQF requirements for assessment and qualifications for assessors must be observed. In addition, there are requirements of the two aviation maintenance regulators (ADF and CASA) that must also be observed because units of competency form part of the basis for authorisation to perform maintenance tasks on aircraft or aircraft components. Also, some qualifications are the pathway to the grant by CASA of aircraft maintenance engineer licences.

To meet aggregate requirements all tasks performed in the workplace or simulated workplace have to be recorded and certified by supervisors in a Log of Industrial Experience and Achievement, or an accepted alternative. When the aggregate of tasks in a specific area of competency meet the assessment criteria the records are used by an assessor to confirm that requirements have been met and certify competence. Assessments that will contribute to the grant of a licence have to be conducted by an assessor from an RTO that is also a CASR Part 147 Maintenance Training Organisation.

Detailed advice and instructions on assessment are in the MEA Aeroskills Training Package Assessment Guidelines. (link to be provided when finalised)

List of Appendices

- A Mapping of units of competency from MEA11v2 to MEA Release 1.0
- B Mapping of qualifications from MEA11v2 to MEA Release 1.0
- C Qualifications AQF alignment
- D Summary of employability skills by qualification and core skills

Additional MEA Companion volumes

The following additional MEA Companion Volumes are in development and will be made available on the MSA website: <http://www.mskills.org.au/training-packages/info/>.

MEA Aeroskills Training Package Assessment Guidelines

MEA Aeroskills Training Package Interface with Civil Aviation Safety Authority Licensing Requirements

MEA Aeroskills Training Package Skill Sets by Purpose

Further advice may be obtained from:

Manufacturing Skills Australia

Level 3, 104 Mount Street
North Sydney NSW 2060
PO Box 289
NORTH SYDNEY NSW 2059

Telephone: (02) 9955 5500

Fax: (02) 02 9955 8044

Web: www.mskills.org.au

Email: info@mskills.org.au

Useful links

<http://www.mskills.org.au/info/links>

- Acronyms
- Associations
- Career information
- Government
- Manufacturing industry training advisory body websites
- NSW ITAB
- Research
- Sponsor
- Support
- Unions
- Workforce Development
- Workplace English Language and Literacy (WELL)

General links

Australian Qualifications Framework: First edition, July 2011: www.aqf.edu.au/

NCVER VET Information Portal, Training Authorities:
www.vetinformatportal.edu.au/TrainingAuthorities

TGA website, training packages: www.training.gov.au

Industry Skills Councils: www.isc.org.au

Department of Education and Training: <https://www.education.gov.au/>

Australian Skills Quality Authority (ASQA): www.asqa.gov.au

The Australian Apprenticeships site: www.australianapprenticeships.gov.au offers information about traineeships and apprenticeships and includes links to state and territory authorities (STAs) that monitor provision.

State training authorities

Australian Capital Territory: <http://www.det.act.gov.au/home>

New South Wales: <https://www.det.nsw.edu.au>

Northern Territory: <http://www.det.nt.gov.au>

Queensland: <http://training.qld.gov.au>

South Australia: <http://www.dfeest.sa.gov.au>

Tasmania: <http://www.education.tas.gov.au>

Victoria: <http://www.vrqa.vic.gov.au>

Western Australia: <http://www.dtwd.wa.gov.au>

LiteracyNet – key information about Australian adult literacy activities and links to a range of program, professional development, resource and research sites:

<http://www.deewr.gov.au/skills/programs/litandnum/literacynet/Pages/default.aspx>

National Foundation Skills Strategy for Adults:

<http://www.deewr.gov.au/Skills/Overview/Policy/NFSS/Pages/NFSSforAdults.aspx>

NQC Foundation Skills Principles:

http://www.nssc.natase.gov.au/21c/foundation_skills/principles_of_foundation_skills

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