

### Description

The qualification applies to individuals seeking the grant of a Civil Aviation Safety Authority (CASA) B2 Aircraft Maintenance Engineer Licence covering the supervision, performance and certification of avionic maintenance on aircraft that are type-rated by CASA for maintenance purposes.

The qualification satisfies CASA requirements for the grant, under Civil Aviation Regulation Part 66, of Aircraft Maintenance Engineer Licence B2 (or equivalent interim maintenance authority under CAO 100.66) when the skills and knowledge requirements align with CASA syllabus requirements under 'Licensing' in the Assessment Guidelines and training has been delivered in accordance with the requirements of Civil Aviation Safety

Regulation Part 147 (or in accordance with the transitional requirements in CAO 100.66).

It consists of:

- Common and technical stream units required at Certificate IV level in the aircraft maintenance stream
- Additional diploma level common and imported units that cover supervisor level OHS competency plus competencies required by CASA for the exercise of licence privileges
- Diploma level avionic technical stream units covering advanced fault diagnosis and aircraft weight and balance calculation.

### Pathways Information

#### University

If you haven't had the opportunity to enter university directly, Queensland Institute for Aviation Engineering (QIAE) can help you on your way to a Bachelor degree.

Through recognition of prior learning, our networks with universities, can offer you a seamless pathway to higher qualifications.

QIAE has articulation agreements in place that will give you credit for this qualification.

### Entry Requirements

The minimum entry requirements is a recognized education program equivalent to 'Year 12' of a Australian secondary education program, with passes in Mathematics, English & General Sciences.

### Employability Skills Summary

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

Employability Skills Qualification Summary	
Planning and organising	<ul style="list-style-type: none"> <li>• Clarifying task objectives and required outcomes through discussion with supervisors and other team members</li> <li>• Monitoring the time taken to complete tasks against team requirements or targets provided by supervisors</li> <li>• Collecting, analysing and organising information relating to assigned maintenance tasks and confirming the purpose and required work outcomes</li> <li>• Identifying the extent of impact on assigned work of changes in procedures, work instructions or regulatory requirements</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Accepting responsibility for managing individual workload to meet target completion times or fit in with team milestones</li> <li>• Assessing personal knowledge and skills with the aid of the self-assessment work sheets in the Log of Industrial Experience and Achievement and preparing for competency assessments</li> <li>• Actively seeking opportunities to develop competencies and to apply them across a range of tasks and monitoring performance using indicators, such as the extent of oversight exercised by supervisors</li> <li>• Identifying career paths and training opportunities that will assist in attaining career goals</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Taking advantage of learning opportunities that arise through training courses provided by the organisation or external providers and through mentoring and on-the-job training</li> <li>• Adapting competencies to accommodate new ideas and techniques</li> <li>• Using feedback from supervisors and peers to identify ways in which competence can be improved</li> <li>• Mentoring new or more junior personnel</li> <li>• Interpreting units of competency and applying them to attainment of identified career goals</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Operating aircraft and avionic systems, test equipment and ground support equipment, ground running engines and troubleshooting faults</li> <li>• Using on-board maintenance systems and using maintenance-related software</li> <li>• Maintaining aircraft systems, components and test stands</li> <li>• Performance testing of aircraft systems and engines</li> <li>• Storing and caring for components, parts, tools, test equipment and support equipment</li> <li>• Amending various forms of maintenance data</li> <li>• Using computers and microfiche to obtain maintenance data and using computers to complete documentation</li> </ul>

### Packaging Rules

To be awarded a Diploma of Aeroskills (Avionics) competency must be demonstrated in 31 or 32 units of competency, depending on the choice of elective specialist units. These units consist of:

All B1 licence sub-categories require the following 28 or 29 units:

- 8 Core Diploma level (CASA licensing) units
- 22 Core common and technical stream units from Certificate IV that are mandatory for a CASA B2 licence
- Either Elective Group A (2 units) or Group B (one unit)

### Core Units

Complete all 8 of the diploma level common, imported and avionic technical stream units listed below

Unit Code	Unit Title	Prerequisite
MEA111B	Perform administrative processes to prepare for the certification of civil aircraft maintenance	All Cert IV units listed below
MEA112B	Plan and implement civil aircraft maintenance activities	All Cert IV units listed below
MEA113C	Supervise civil aircraft maintenance activities and manage human resources in the workplace	All Cert IV units listed below
MEA116B	Apply occupational health and safety procedures at supervisor level in aviation maintenance	Nil
MEA142A	Manage self in the aviation maintenance environment	Nil
MEA235B	Perform advanced troubleshooting in aircraft avionic maintenance	All Cert IV units listed below
MEA241B	Perform aircraft weight and balance calculations as a result of modifications	All Cert IV units listed below
MSAENV472B	Implement and monitor environmentally sustainable work practices	Nil

Plus the 22 Certificate IV common and avionic/mechanical technical stream units listed below

Unit Code	Unit Title	Prerequisite
MEA101B	Interpret occupational health and safety practices in aviation maintenance	Nil
MEA103B	Plan and organise aviation maintenance work activities	MEA101B, 105B, 107B, 108B
MEA105B	Apply quality standards applicable to aviation maintenance processes	MEA101B, 107B
MEA107B	Interpret and use aviation maintenance industry manuals and specifications	Nil
MEA108B	Complete aviation maintenance industry documentation	MEA105B
MEA109B	Perform basic hand skills, standard trade practices and fundamentals in aviation maintenance	MEA105B, 108B
MEA118A	Conduct self in the aviation maintenance environment	Nil
MEA201B	Remove and install miscellaneous aircraft electrical hardware/ components	MEA101B, 103B, 105B, 107B, 108B, 109B
MEA203C	Remove and install advanced aircraft electrical system components	MEA201B
MEA205C	Remove and install advanced aircraft instrument system components	MEA201B

Unit Code	Unit Title	Prerequisite
MEA206C	Remove and install aircraft basic radio communication and navigation system components	MEA201B
MEA207C	Remove and install aircraft electronic system components	MEA201B
MEA223C	Inspect aircraft electrical systems and components	MEA203C, 246C
MEA224B	Inspect aircraft instrument systems and components	MEA205C, 208C, 246C
MEA226C	Inspect aircraft electronic systems and components	MEA207C, 246C
MEA227C	Test and troubleshoot aircraft electrical systems and components	MEA223C
MEA228C	Test and troubleshoot aircraft instrument systems and components	MEA224B, 226C
MEA229C	Test and troubleshoot aircraft radio frequency navigation and communications systems and components	MEA226C
MEA232B	Test and troubleshoot aircraft pulse systems and components	MEA226C
MEA246C	Fabricate and/or repair aircraft electrical hardware or parts	MEA201B, 260B
MEA260B	Use electrical test equipment	MEA101B, 103B, 105B, 107B, 108B, 109B
MEA301C	Perform aircraft flight servicing	MEA101B, 103B, 105B, 107B, 108B, 109B

### Elective Units

Plus either Group A or Group B for all B1 licence sub-categories.

Unit Code	Unit Title	Prerequisite or Co-requisite Units
<b>Group A</b>		
MEA225B	Inspect fixed wing aircraft automatic flight control systems and components	MEA207C, 246C
MEA230B	Test and troubleshoot fixed wing aircraft automatic flight control systems and components	MEA225B
<b>Group B</b>		
MEA231B	Inspect, test and troubleshoot rotary wing aircraft automatic flight control systems and components	MEA207C, 246C

### Unit Grid

- MEA101B Interpret occupational health and safety practices in aviation maintenance
- MEA103B Plan and organise aviation maintenance work activities
- MEA105B Apply quality standards applicable to aviation maintenance processes
- MEA107B Interpret and use aviation maintenance industry manuals and specifications
- MEA108B Complete aviation maintenance industry documentation
- MEA109B Perform basic hand skills, standard trade practices and fundamentals in aviation maintenance
- MEA111B Perform administrative processes to prepare for certification of civil aircraft maintenance
- MEA112B Plan and implement civil aircraft maintenance activities
- MEA113C Supervise civil aircraft maintenance activities and manage human resources in the workplace
- MEA116B Apply occupational health and safety procedures at supervisor level in aviation maintenance
- MEA118A Conduct self in the aviation maintenance environment
- MEA201B Remove and install miscellaneous aircraft electrical hardware/components
- MEA203C Remove and install advanced aircraft electrical system components
- MEA205C Remove and install advanced aircraft instrument system components
- MEA206C Remove and install aircraft basic radio communication and navigation system components
- MEA207C Remove and install aircraft electronic system components
- MEA223C Inspect aircraft electrical systems and components
- MEA224B Inspect aircraft instrument systems and components
- MEA225B Inspect fixed wing aircraft automatic flight control systems and components
- MEA226C Inspect aircraft electronic systems and components
- MEA227C Test and troubleshoot aircraft electrical systems and components
- MEA228C Test and troubleshoot aircraft instrument systems and components
- MEA229C Test and troubleshoot aircraft radio frequency navigation and communications systems and components
- MEA230B Test and troubleshoot fixed wing aircraft automatic flight control systems and components
- MEA231B Inspect, test and troubleshoot rotary wing aircraft automatic flight control systems and components
- MEA232B Test and troubleshoot aircraft pulse systems and components
- MEA235B Perform advanced troubleshooting in aircraft avionic maintenance
- MEA241B Perform aircraft weight and balance calculations as a result of modifications
- MEA246C Fabricate and/or repair aircraft electrical hardware or parts
- MEA260B Use electrical test equipment
- MEA301C Perform aircraft flight servicing
- MSAENV472B Implement and monitor environmentally sustainable work practices