

Description

The qualification applies to individuals seeking the grant of a Civil Aviation Safety Authority (CASA) B1 Aircraft Maintenance Engineer Licence covering the supervision, performance and certification of airframe, engine, electrical and structural maintenance on aircraft that are type-rated by CASA for maintenance purposes.

The requirement for the awarding of MEA50207 Diploma of Aeroskills (Mechanical) is demonstrated competency in listed competency units under the conditions set out below.

The listed units also satisfy Civil Aviation Safety Authority (CASA) requirements for the grant, under Civil Aviation Regulation Part 66, of Aircraft Maintenance Engineer B1 Licences in sub-categories B1.1, 1.2, 1.3 and 1.4 (or the equivalent interim maintenance authority under CAO 100.66) when the skills and knowledge requirements align with CASA syllabus requirements in under 'Licensing' in the Assessment Guidelines and in Appendix 1, 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 with electives determined by the desired licence sub-category
- Additional diploma level common units that cover supervisor level OHS competency plus competencies required by CASA for the exercise of licence privileges
- Diploma level mechanical technical stream units covering advanced fault diagnosis and aircraft weighing and 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"> Understanding work and organisational instructions Understanding input from specialist personnel and technical representatives Providing guidance to others and clearly describing faults, problems and spares requirements Negotiating with other team members or supervisors regarding timing and progress of work activities and access to sections of the aircraft, or to equipment Understanding and interpreting regulations, procedures, instructions and maintenance publications Completing maintenance documentation and component tags Interpreting wiring diagrams and system schematics, and reading drawings relating to maintenance activities Using computers to obtain maintenance data and complete documentation Networking with other team members regarding work planning and execution
Teamwork	<ul style="list-style-type: none"> Performing tasks as an individual while being responsive to supervisors and allowing for relevant human factors Working effectively with others who may be of different ages, gender, race, religion and political persuasion Assisting other team members with tasks and providing advice on work processes and troubleshooting
Problem-solving	<ul style="list-style-type: none"> Identifying problems in a timely manner and developing practical solutions to maintenance problems not fully covered by maintenance data Proposing solutions to problems as modifications or amendments to specified maintenance processes Constantly reviewing problem solving skills and ability to effectively apply competencies to solve problems within the limits permitted by regulatory and organisational guidelines Responding to emergencies or accidents in accordance with regulatory and organisational requirements Using mathematical techniques to relate test results to system or component performance and to convert values between systems of measurement
Initiative and enterprise	<ul style="list-style-type: none"> Adapting to new situations that arise as a consequence of regulatory changes, revised maintenance data, practices and procedures Varying work practices and behaviour as a result of performance feedback from peers and supervisors 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 Applying human factors to avoid maintenance errors and maintain quality standards Adapting competencies to the performance of a wide range of maintenance tasks Contributing to a process of continuous improvement and a willingness to support and participate in the effective introduction of new work practices

Employability Skills Qualification Summary	
Planning and organising	<ul style="list-style-type: none"> • Clarifying task objectives and required outcomes through discussion with supervisors and other team members • Monitoring the time taken to complete tasks against team requirements or targets provided by supervisors • Collecting, analysing and organising information relating to assigned maintenance tasks and confirming the purpose and required work outcomes • Identifying the extent of impact on assigned work of changes in procedures, work instructions or regulatory requirements
Self-management	<ul style="list-style-type: none"> • Accepting responsibility for managing individual workload to meet target completion times or fit in with team milestones • 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 • 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 • Identifying career paths and training opportunities that will assist in attaining career goals
Learning	<ul style="list-style-type: none"> • 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 • Adapting competencies to accommodate new ideas and techniques • Using feedback from supervisors and peers to identify ways in which competence can be improved • Mentoring new or more junior personnel • Interpreting units of competency and applying them to attainment of identified career goals
Technology	<ul style="list-style-type: none"> • Operating aircraft and avionic systems, test equipment and ground support equipment, ground running engines and troubleshooting faults • Using on-board maintenance systems and using maintenance-related software • Maintaining aircraft systems, components and test stands • Performance testing of aircraft systems and engines • Storing and caring for components, parts, tools, test equipment and support equipment • Amending various forms of maintenance data • Using computers and microfiche to obtain maintenance data and using computers to complete documentation

Packaging Rules

Packaging Rules

To be awarded a Diploma of Aeroskills (Mechanical) competency must be demonstrated in 36 to 42 units, chosen as described below.

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

- 10 Core Diploma level (CASA licensing) common, technical stream and imported units
- 17 Core Certificate IV common and technical stream units
- Elective technical stream units in either Group A (one unit) or Group B (two units)

Depending on the CASA B1 licence sub-category being sought, an additional 8 to 13 units are required, up to a maximum of 42 units for the qualification. All units must be chosen as specified under the conditions set out below:

Group C Elective technical stream units required by CASA for a B1.1 licence - **11 or 13 units**

Group D Elective technical stream units required by CASA for a B1.2 licence - **12 units**

Group E Elective technical stream units required by CASA for a B1.3 licence - **9 units**

Group F Elective technical stream units required by CASA for a B1.4 licence - **8 units**

Core Units

Complete the 10 Diploma level common and mechanical 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 for applicable licence
MEA112B	Plan and implement civil aircraft maintenance activities	All Cert IV units listed below for applicable licence
MEA113C	Supervise civil aircraft maintenance activities and manage human resources in the workplace	All Cert IV units listed below for applicable licence
MEA116B	Apply occupational health and safety procedures at supervisor level in aviation maintenance	Nil
MEA142A	Manage self in the aviation maintenance environment	Nil
MEA323B	Perform advanced troubleshooting in aircraft mechanical maintenance	All Cert IV units listed below for applicable licence
MEA325B	Weigh aircraft and perform aircraft weight and balance calculations as a result of modifications	All Cert IV units listed below for applicable licence
MEA343B	Remove and install avionic system components	MEA211B or 227C

Unit Code	Unit Title	Prerequisite
	Assess structural repair/modification requirements and evaluate structural repairs and modifications	All Cert IV units listed below for applicable licence
MSAENV472B	Implement and monitor environmentally sustainable work practices	Nil

Plus the following 17 Core Certificate IV common and avionic/mechanical technical stream units listed below which are mandatory for all B1 licence sub-categories

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
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
MEA302C	Remove and install aircraft hydro-mechanical and landing gear system components	MEA101B, 103B, 105B, 107B, 108B, 109B
MEA303C	Remove and install aircraft pneumatic system components	MEA101B, 103B, 105B, 107B, 108B, 109B
MEA306C	Remove and install engines and engine system components	MEA302C
MEA328C	Maintain and/or repair aircraft mechanical components or parts	MEA302C, 303C
MEA339B	Inspect, repair and maintain aircraft structures	MEA304C or 317C

Elective Units

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

Unit Code	Unit Title	Prerequisite or Co-requisite Units
Group A		
MEA211C	Inspect, test and troubleshoot advanced aircraft electrical systems and components	MEA203C, 246C
Group B		
MEA223C	Inspect aircraft electrical systems and components	MEA203C, 246C
MEA227C	Test and troubleshoot aircraft electrical systems and components	MEA223B, 246C

Plus units that are mandatory CASA requirements for individual licence sub-categories B1.1, B1.2, B1.3 and B1.4

Group C

To meet the criteria for the grant of a B1.1 Licence complete eleven (11) or thirteen (13) units listed below as specified in the unit selection guidelines in Column 4

Unit Code	Unit Title	Prerequisite or Co-requisite Units	Unit Selection Guidance
MEA208C	Remove and install pressurisation control system components	MEA201B	
MEA209C	Remove and install aircraft oxygen system components	MEA101B, 103B, 105B, 107B, 108B, 109B	
MEA219C	Inspect, test and troubleshoot pressurisation control systems and components	MEA208C, 246C	
MEA222C	Inspect, test and troubleshoot aircraft oxygen systems and components	MEA209C	
MEA305C	Remove and install aircraft fixed wing flight control system components	MEA302C	
MEA307C	Remove and install propeller systems and components	MEA101B, 103B, 105B, 107B, 108B, 109B	Mandatory for B1.1 where the rating sought includes propellers
MEA315C	Inspect, test and troubleshoot propeller systems and components	MEA307C	Mandatory unit for B1.1 where the rating sought includes propellers
MEA317C	Remove and install pressurised aircraft structural and non-structural components	MEA302C, 303C	
MEA318B	Inspect aircraft hydro-mechanical, mechanical, gaseous and landing gear systems and components	MEA302C, 303C and 305C	
MEA319B	Inspect gas turbine engine systems and components	MEA306C	
MEA320B	Test and troubleshoot aircraft hydro-mechanical, mechanical, gaseous and landing gear systems and components	MEA318B	

Unit Code	Unit Title	Prerequisite or Co-requisite Units	Unit Selection Guidance
MEA321B	Test and troubleshoot aircraft fixed wing flight control systems and components	MEA318B	
MEA322B	Test and troubleshoot gas turbine engine systems and components	MEA319B	

Group D

To meet the criteria for the grant of a B1.2 Licence complete twelve (12) units listed below

Unit Code	Unit Title	Prerequisite or Co-requisite Units
MEA208C	Remove and install pressurisation control system components	MEA201B
MEA209C	Remove and install aircraft oxygen system components	MEA101B, 103B, 105B, 107B, 108B, 109B
MEA219C	Inspect, test and troubleshoot pressurisation control systems and components	MEA208C, 246C
MEA222C	Inspect, test and troubleshoot aircraft oxygen systems and components	MEA209C
MEA305C	Remove and install aircraft fixed wing flight control system components	MEA302C
MEA307C	Remove and install propeller systems and components	MEA101B, 103B, 105B, 107B, 108B, 109B
MEA309C	Inspect, test and troubleshoot aircraft hydro-mechanical and landing gear systems and components	MEA302C
MEA310C	Inspect, test and troubleshoot aircraft pneumatic systems and components	MEA303C
MEA312C	Inspect, test and troubleshoot aircraft fixed wing flight control systems and components	MEA305C
MEA313C	Inspect, test and troubleshoot piston engine systems and components	MEA306C
MEA315C	Inspect, test and troubleshoot propeller systems and components	MEA307C
MEA317C	Remove and install pressurised aircraft structural and non-structural components	MEA302C, 303C

Group E

To meet the criteria for the grant of a B1.3 Licence complete nine (9) units listed below (noting that MEA308C and 316C each count as two units)

Unit Code	Unit Title	Prerequisite or Co-requisite Units
MEA304C	Remove and install non-pressurised aircraft structural and non-structural components	MEA302C
MEA308C	Remove and install rotary wing rotor and flight control system components	MEA302C
MEA309C	Inspect, test and troubleshoot aircraft hydro-mechanical and landing gear systems and components	MEA302C
MEA310C	Inspect, test and troubleshoot aircraft pneumatic systems and components	MEA303C
MEA316C	Inspect, test and troubleshoot rotary wing rotor and control systems and components	MEA308C
MEA319B	Inspect gas turbine engine systems and components	MEA306C
MEA322B	Test and troubleshoot gas turbine engine systems and components	MEA319B

Group F

To meet the criteria for the grant of a B1.4 Licence complete eight (8) units listed below (noting that MEA308C and 316C each count as two units)

Unit Code	Unit Title	Prerequisite or Co-requisite Units
MEA304C	Remove and install non-pressurised aircraft structural and non-structural components	MEA302C
MEA308C	Remove and install rotary wing rotor and flight control system components	MEA302C
MEA309C	Inspect, test and troubleshoot aircraft hydro-mechanical and landing gear systems and components	MEA302C
MEA310C	Inspect, test and troubleshoot aircraft pneumatic systems and components	MEA303C
MEA313C	Inspect, test and troubleshoot piston engine systems and components	MEA306C
MEA316C	Inspect, test and troubleshoot rotary wing rotor and control systems and components	MEA308C

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
- MEA208C Remove and install aircraft pressurisation control system components
- MEA209C Remove and install aircraft oxygen system components
- MEA211C Inspect, test and troubleshoot advanced aircraft electrical systems and components
- MEA219C Inspect, test and troubleshoot aircraft pressurisation control systems and components
- MEA222C Inspect, test and troubleshoot aircraft oxygen systems and components
- MEA223C Inspect aircraft electrical systems and components
- MEA227C Test and troubleshoot aircraft electrical systems and components
- MEA246C Fabricate and/or repair aircraft electrical hardware or parts
- MEA260B Use electrical test equipment
- MEA301C Perform aircraft flight servicing
- MEA302C Remove and install aircraft hydro-mechanical and landing gear system components
- MEA303C Remove and install aircraft pneumatic system components
- MEA304C Remove and install non-pressurised aircraft structural and non-structural components
- MEA305C Remove and install aircraft fixed wing flight control system components
- MEA306C Remove and install engines and engine system components
- MEA307C Remove and install propeller systems and components
- MEA308C Remove and install rotary wing rotor and flight control system components
- MEA309C Inspect, test and troubleshoot aircraft hydro-mechanical and landing gear systems and components
- MEA310C Inspect, test and troubleshoot aircraft pneumatic systems and components
- MEA312C Inspect, test and troubleshoot aircraft fixed wing flight control systems and components
- MEA313C Inspect, test and troubleshoot piston engine systems and components
- MEA315C Inspect, test and troubleshoot propeller systems and components
- MEA316C Inspect, test and troubleshoot rotary wing rotor and control systems and components
- MEA317C Remove and install pressurised aircraft structural and non-structural components
- MEA318B Inspect aircraft hydro-mechanical, mechanical, gaseous and landing gear systems and components
- MEA319B Inspect gas turbine engine systems and components

- MEA320B Test and troubleshoot aircraft hydro-mechanical, mechanical, gaseous and landing gear systems and components
- MEA321B Test and troubleshoot aircraft fixed wing flight control systems and components
- MEA322B Test and troubleshoot gas turbine engine systems and components
- MEA323B Perform advanced troubleshooting in aircraft mechanical maintenance
- MEA325B Weigh aircraft and perform aircraft weight and balance calculations as a result of modifications
- MEA328C Maintain and/or repair aircraft mechanical components or parts
- MEA339B Inspect, repair and maintain aircraft structures
- MEA343B Remove and install avionic system components
- MEA365A Assess structural repair/modification requirements and evaluate structural repairs and modifications
- MSAENV472B Implement and monitor environmentally sustainable work practices