

Title	Demonstrate knowledge of piston aeroplanes for aeronautical engineering (EASA 147 Maintenance)		
Level	5	Credits	55

Purpose	<p>This knowledge-based unit standard is one of a series intended for people under training to gain authorisation to certify, to European Aviation Safety Agency (EASA) standards, the release to service of aircraft or aeronautical components following maintenance or repair.</p> <p>People credited with this unit standard are able to demonstrate knowledge of piston aeroplanes for aeronautical engineering (EASA 147 Maintenance).</p>
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Classification	Aeronautical Engineering > Aeronautical Maintenance Certification
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Available grade	Achieved
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Guidance Information

- 1 This unit standard is aligned with the European Aviation Safety Agency Examination Standard for *Module 11B Piston Aeroplane Aerodynamics, Structures and Systems* and will be evidenced by meeting these requirements. This can be located through the EASA website at <http://www.easa.europa.eu>.
- 2 *Knowledge* – will be in the context of aeronautical maintenance as defined by European Commission Regulation (EU) No 1321/2014 as follows: ‘A detailed knowledge of the theoretical and practical aspects of the subject and a capacity to combine and apply the separate elements of knowledge in a logical and comprehensive manner’; will include making judgements regarding the scope, processes, and quality of maintenance for release to service certification; and will be in accordance with industry texts as defined by the candidate’s workplace or enterprise.
- 3 *Industry texts* include but are not limited to –
published aeronautical training manuals or text books;
enterprise exposition;
manufacturer publications;
government and local body legislation;
airworthiness or regulatory authority requirements.
- 4 Some performance criteria are aligned with *iSpec 2200: Information Standards for Aviation Maintenance - 2021.1*. Washington, DC: Airlines for America, 2021. Airlines for America (A4A) was formerly known as Air Transport Association of America (ATA). Chapter numbers are cited where applicable.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of piston aeroplanes for aeronautical engineering (EASA 147 Maintenance).

Performance criteria

- 1.1 The theory of flight is described and its applications in piston aeroplane operations are explained.
- Range may include but is not limited to – piston aeroplane aerodynamics and flight controls.
- 1.2 Piston aeroplane airframe structures are described and their applications are explained.
- Range airframe structure may include but is not limited to – general concepts, fuselage (ATA Chapters 52-53, 56), wings (ATA Chapter 57), stabilisers (ATA Chapter 55, flight control surfaces (ATA Chapters 55, 57), nacelles/ and/or pylons (ATA Chapter 54).
- 1.3 Piston aeroplane aircraft systems are described and their applications are explained.
- Range aircraft systems may include but are not limited to – air conditioning and cabin pressurisation (ATA Chapter 21), instrument systems (ATA Chapter 31), avionic systems (ATA Chapters 22-23, 34), electrical power (ATA Chapter 34), equipment and furnishings (ATA Chapter 25), fire protection (ATA Chapter 26), flight controls (ATA Chapter 27), fuel systems (ATA Chapter 28), hydraulic power (ATA Chapter 29), ice and rain protection (ATA Chapter 30), landing gear (ATA Chapter 32), lights (ATA Chapter 33), oxygen system (ATA Chapter 35), pneumatic/vacuum system (ATA Chapter 36), water and waste systems (ATA Chapter 38).

Planned review date	31 December 2027
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	16 August 2012	31 December 2020
Review	2	28 September 2017	31 December 2024
Review	3	27 October 2022	N/A

Consent and Moderation Requirements (CMR) reference	0028
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Ringa Hora Services Workforce Development Council qualifications@ringahora.nz if you wish to suggest changes to the content of this unit standard.