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| Title | Describe aircraft powerplant maintenance practices | | |
| Level | 3 | Credits | 10 |

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| Purpose | <p>This is a knowledge-based unit standard for people pursuing standards in the aircraft powerplant maintenance domain.</p> <p>People credited with this unit standard are able to describe: aircraft propeller maintenance practices; aircraft gas turbine engine maintenance practices; aircraft auxiliary power unit maintenance practices; aircraft reciprocating engine maintenance practices; and aircraft gearbox and transmission maintenance practices.</p> |
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| Classification | Aeronautical Engineering > Aircraft Powerplant Maintenance |
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| Available grade | Achieved |
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Guidance Information

- 1 All tasks must be carried out under supervision in accordance with the standards required by the aircraft or equipment manufacturer.
- 2 Standard practices referred to are those in the aviation industry, examples being Great Britain – Civil Aviation Authority, CAP 562: *Civil Aircraft Airworthiness Information and Procedures* (CAAIP) (London: TSO) and United States – Federal Aviation Administration, Advisory Circular 43.13-1B, *Acceptable Methods, Techniques, and Practices – Aircraft Inspection and Repair* (US Department of Transportation).
- 3 Aircraft powerplants include propellers, gas turbine engines, auxiliary power units, reciprocating engines, gearboxes and transmissions.
- 4 The scope of the system that this standard relates to is described in the applicable chapters of ATA iSpec 2200.

Outcomes and performance criteria

Outcome 1

Describe aircraft propeller maintenance practices.

Range fixed and variable pitch propellers.

Performance criteria

- 1.1 Propellers are described in terms of purpose types, function, construction, and operating principles.
- Range systems, safety precautions.
- 1.2 Maintenance of propellers is described in terms of standard practices.
- Range for propeller assemblies, propeller systems, handling procedures, safety precautions.

Outcome 2

Describe aircraft gas turbine engine maintenance practices.

Performance criteria

- 2.1 Gas turbine engines are described in terms of their purpose, construction, function and operating principles.
- Range sections, systems, system components, safety precautions.
- 2.2 Maintenance of gas turbine engines is described in terms of standard practices.
- Range for engine assemblies, engine systems may include but is not limited to – inspection, component removal and installation, adjustment, testing, servicing, handling procedures, safety precautions.

Outcome 3

Describe aircraft auxiliary power unit maintenance practices.

Performance criteria

- 3.1 Auxiliary power units are described in terms of their purpose, function, construction and operating principles.
- Range systems, safety precautions.
- 3.2 Maintenance of auxiliary power units and auxiliary power unit systems is described in terms of standard practices.
- Range for auxiliary power unit systems may include but is not limited to – inspection, servicing, handling procedures, safety precautions.

Outcome 4

Describe aircraft reciprocating engine maintenance practices.

Performance criteria

- 4.1 Reciprocating engines are described in terms of their purpose, function, construction and operating principles.

Range main assemblies, systems, system components, safety precautions.

- 4.2 Maintenance of reciprocating engines and reciprocating engine systems is described in terms of standard practices.

Range for engine assemblies and engine systems may include but is not limited to – inspection, component removal and installation, adjustment, testing, servicing, handling procedures, safety precautions.

Outcome 5

Describe aircraft gearbox and transmission maintenance practices.

Range aircraft gearbox and transmission may include but is not limited to – powerplant gearbox systems, propeller reduction gearboxes, accessory gearboxes and associated drive systems.

Performance criteria

- 5.1 Gearboxes and transmissions are described in terms of their purpose, construction and operating principles.

Range systems, safety precautions.

- 5.2 Maintenance of gearboxes and transmissions is described in terms of standard practices.

Range for gearbox assemblies and gearbox systems – inspection, servicing.

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| 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 | 17 September 2015 | 31 December 2017 |
| Review | 2 | 21 January 2016 | 31 December 2021 |
| Review | 3 | 26 March 2020 | N/A |
| Rollover and Revision | 4 | 30 May 2024 | N/A |

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| 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.