

<b>Title</b>	<b>Describe aircraft powerplant maintenance practices</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>10</b>

<b>Purpose</b>	<p>This is a knowledge-based unit standard for people pursuing unit 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>
----------------	--

<b>Classification</b>	Aeronautical Engineering > Aircraft Powerplant Maintenance
-----------------------	--

<b>Available grade</b>	Achieved
------------------------	----------

---

### 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, *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.

<b>Planned review date</b>	31 December 2024
----------------------------	------------------

**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

<b>Consent and Moderation Requirements (CMR) reference</b>	0028
--	------

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

---

### Comments on this unit standard

Please contact ServiceIQ [qualifications@serviceiq.org.nz](mailto:qualifications@serviceiq.org.nz) if you wish to suggest changes to the content of this unit standard.