

<b>Title</b>	<b>Demonstrate knowledge of aircraft electrical systems</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>10</b>

<b>Purpose</b>	People credited with this unit standard are able to: relate the principles of electrical power to its use in aircraft systems; describe the principles and operation of aircraft electrical systems; and describe aircraft electrical system maintenance procedures.
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<b>Classification</b>	Aeronautical Engineering > Aeronautical Engineering - Core
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 The depth and scope of knowledge required for each performance criterion in this unit standard is that required to carry out system maintenance and component repair or overhaul tasks.
- 2 The scope of the system that this standard relates to is described in ATA iSpec 2200, and applicable chapters.

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### Outcomes and performance criteria

#### Outcome 1

Relate the principles of electrical power to its use in aircraft systems.

#### Performance criteria

- 1.1 Applications of the principles of alternating current are described in terms of aircraft electrical systems.
- 1.2 Applications of the principles of direct current are described in terms of aircraft electrical systems.

#### Outcome 2

Describe the principles and operation of aircraft electrical systems.

**Performance criteria**

2.1 Electrical components are identified in terms of aircraft systems.

Range generators, alternators, motors, actuators, inverters, transformers, rectifiers, lighting components, fire detection components, ignition components, heating and cooling components, wiring, cables, connectors.

2.2 The function of each component is described in terms of its operation within an aircraft system.

2.3 The interaction and interface of the electrical systems with other aircraft systems is described for normal operating conditions.

**Outcome 3**

Describe aircraft electrical system maintenance procedures.

**Performance criteria**

3.1 Maintenance procedures are described for on-board system maintenance activities.

Range fault finding, component changes, testing.

3.2 Safety precautions are identified for on-board system maintenance activities.

Range system isolation, labels, warning signs, system activation procedures.

<b>Planned review date</b>	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	19 June 1995	31 December 2016
Review	2	1 September 1997	31 December 2016
Revision	3	8 May 2001	31 December 2016
Review	4	19 May 2006	31 December 2016
Revision	5	21 September 2007	31 December 2016
Review	6	19 September 2013	31 December 2021
Review	7	26 March 2020	N/A
Rollover and Revision	8	26 April 2024	N/A

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

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### Comments on this unit standard

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