

<b>Title</b>	<b>Demonstrate knowledge of aircraft instrument 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 and operation of instruments to their use in aircraft systems; describe the principles and operation of aircraft instrument systems; and describe instrument 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 and operation of instruments to their use in aircraft systems.

#### Performance criteria

- 1.1 The principles of electrically operated instruments are described in terms of their application to aircraft instrument systems.
- 1.2 The principles of pressure operated instruments are described in terms of their application to aircraft instrument systems.

#### Outcome 2

Describe the principles and operation of aircraft instrument systems.

**Performance criteria**

- 2.1 Instruments and components are identified in terms of aircraft systems.  
  
 Range pitot static systems, air data indicating systems, altitude indicating systems, magnetic heading reference systems, flight data recording systems, flight director systems, auto flight systems, quantity indicating systems, power plant indicating systems.
- 2.2 The function of each instrument and component is described in terms of its operation within an aircraft system.
- 2.3 The interaction and interface of instrument systems with other aircraft systems is described for normal operating conditions.

**Outcome 3**

Describe aircraft instrument 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.
- 3.3 Handling precautions are described for instrument components.  
  
 Range general instrument handling, gyroscope handling, electrostatic discharge, blanking and packing.

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<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

**Consent and Moderation Requirements (CMR) reference**

0028

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](mailto:qualifications@ringahora.nz) if you wish to suggest changes to the content of this unit standard.