

Title	Apply avionic repair skills		
Level	4	Credits	18

Purpose	<p>This unit standard is intended for people pursuing unit standards in the avionic repair and avionic maintenance domains. It contains a range of generic repair skills that may be applied to the repair of avionic equipment.</p> <p>People credited with this unit standard are able to: test semiconductor devices; repair avionic printed wiring assemblies; test avionic components; and apply avionic repair procedures.</p>
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Classification	Aeronautical Engineering > Aeronautical Engineering - Core
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Available grade	Achieved
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Guidance Information

- 1 All tasks must be carried out in accordance with enterprise procedures.
- 2 **Definition**
Enterprise procedures – procedures used by the organisation carrying out the work and applicable to the tasks being carried out. Examples are – standard operating procedures, safety procedures, equipment operating procedures, codes of practice, quality management practices and standards, procedures to comply with legislative and local body requirements.
- 3 Standard industry 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 Dept of Transportation).
- 4 Competencies within this unit standard will be assessed in the work environment or by the use of simulated activities off the job.

Outcomes and performance criteria

Outcome 1

Test semiconductor devices.

Performance criteria

- 1.1 Semiconductor devices are identified and match circuit specifications.
- 1.2 Serviceability of semiconductor devices is established in accordance with standard industry practices.
- Range diodes, transistors, using ohmmeter to detect open and short circuits.
- 1.3 Semiconductor device terminals are identified, and match information contained in circuit specifications.

Outcome 2

Repair avionic printed wiring assemblies.

Performance criteria

- 2.1 Printed wiring components are removed and installed in accordance with standard industry practices.
- 2.2 Printed wiring components are soldered in accordance with standard industry practices.
- Range may include but is not limited to – using large iron, soldering station, continuous vacuum extractor, rework and repair station.
- 2.3 Printed circuit boards are reworked and repaired in accordance with standard industry practices.
- Range may include but is not limited to – single-sided, double-sided, multilayer, flexible.

Outcome 3

Test avionic components.

Performance criteria

- 3.1 Testing task is determined in accordance with standard industry practices.
- Range avionic equipment identified; test procedures determined.
- 3.2 Test equipment is selected in terms of the task requirements.
- Range may include but is not limited to – analogue and/or digital multimeter, logic probe, oscilloscope, frequency counter, signal generator, capacitance meter.

3.3 Test equipment is operated in accordance with manufacturer's instructions.

Range may include but is not limited to – analogue and/or digital multimeter, logic probe, oscilloscope, frequency counter, signal generator, capacitance meter.

3.4 Avionic components are tested for serviceability in accordance with manufacturer's specifications.

Outcome 4

Apply avionic repair procedures.

Performance criteria

4.1 Avionic repair procedures are applied in accordance with standard industry practice.

Range may include but is not limited to – disassembly, inspection, repair, assembly, calibration, test.

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	21 May 1996	31 December 2016
Revision	2	13 August 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
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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.