

Title	Carry out chemical conversion of aeronautical grade aluminium components		
Level	4	Credits	5

Purpose	<p>People credited with this unit standard are able to: prepare to carry out chemical conversion of aeronautical grade aluminium components; carry out chemical conversion; perform post-chemical conversion treatment; and complete the chemical conversion task.</p> <p>They are able to operate, be in full control, and take responsibility for the process.</p>
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Classification	Aeronautical Engineering > Aeronautical Electroplating
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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 Acts, regulations, and bylaws regarding the handling of toxic material and waste are to be complied with during assessment against this unit standard.
- 4 This unit standard applies to a chemical conversion on any aeronautical grade aluminium.

Outcomes and performance criteria

Outcome 1

Prepare to carry out chemical conversion of aeronautical grade aluminium components.

Performance criteria

- 1.1 Task is determined by reviewing maintenance documentation and enterprise procedures.

- 1.2 Component identity is confirmed with documentation.
- 1.3 Work area is prepared and checked.
- Range may include but is not limited to – materials, equipment, safety equipment, environmental conditions established.
- 1.4 Solution parameters are analysed to ensure process tolerances are met.
- 1.5 Component is stripped.
- 1.6 Corrosion removal is carried out.
- 1.7 Dimensional tolerance assessment is completed to ensure conformity with specifications.

Outcome 2

Carry out chemical conversion.

Performance criteria

- 2.1 Component is masked.
- Range may include but is not limited to – tape, paint, lacquer, metallic foil, wax, plastic sheeting, fixtures.
- 2.2 Chemical conversion is applied to aluminium component.
- 2.3 Equipment is monitored and adjusted.
- Range may include but is not limited to – solution agitation, solution temperature, pH.

Outcome 3

Perform post-chemical conversion treatment.

Performance criteria

- 3.1 Masking and jigging is removed.
- 3.2 Component is sealed.
- 3.3 Quality control is carried out.
- Range may include but is not limited to – visual inspection, adhesion testing, abrasion resistance test.

Outcome 4

Complete the chemical conversion task.

Performance criteria

- 4.1 Component is prepared for use, storage, or transit.
Range may include but is not limited to – inhibiting, packing.
- 4.2 Resources are checked for serviceability and returned to service or storage.
Range may include but is not limited to – tools, equipment, safety equipment.
- 4.3 Leftover parts and materials are disposed of.
Range may include but is not limited to – serviceable, unserviceable, surplus, waste, scrap, hazardous.
- 4.4 Documentation is completed.
Range may include but is not limited to – labels, work cards, release notes, certification.
- 4.5 Work area is left in a state that enables the next task to begin.

Planned review date	31 December 2024
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	23 November 2017	31 December 2021
Review	2	26 March 2020	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 ServicelQ qualifications@serviceiq.org.nz if you wish to suggest changes to the content of this unit standard.