

Title	Assemble aeronautical metal components by bonding		
Level	4	Credits	10

Purpose	People credited with this unit standard are able to: prepare to assemble aeronautical metal components by bonding; assemble aeronautical metal components; and carry out task completion activities.
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Classification	Aeronautical Engineering > Aircraft Structures
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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.

Outcomes and performance criteria

Outcome 1

Prepare to assemble aeronautical metal components by bonding.

Performance criteria

- 1.1 Task is determined by reviewing maintenance documentation and enterprise procedures.
- 1.2 Work area is prepared, and resources are obtained and checked for serviceability or status.

Range	may include but is not limited to – publications, materials, heat treatment states, tools, safety equipment, jigs, patterns, fixtures, environmental conditions established.
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- 1.3 Component parts and test pieces are prepared for assembly.

Range	clean, inspect, mark out, align.
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Outcome 2

Assemble aeronautical metal components.

Performance criteria

2.1 Fastener holes are prepared.

Range drill, ream, determine physical clearance, countersink, deburr, dimple.

2.2 Component parts and test pieces are assembled and bonded.

Range prepare surfaces, fit alignment fasteners, apply bonding agent, adjust to fit.

2.3 Pressure and/or temperature are applied to parts.

Range clamp, vacuum bag, heat source, thermocouples.

2.4 Any defects are rectified.

Range test piece peel strength, damage, misalignment, foreign objects, stress raisers, continuity.

2.5 Sealant is applied.

Range may include but is not limited to – weatherproofing, tank sealing, pressure sealing.

2.6 Inspections are obtained.

Outcome 3

Carry out task completion activities.

Performance criteria

3.1 Item is prepared for use, storage, or transit.

Range may include but is not limited to – locking, inhibiting, blanking, packing.

3.2 Completion activities specific to the task and work area are carried out.

Range may include but are not limited to – tool control, cleanliness, tidiness, return of publications, preparation for next activity, return of aircraft and systems to normal.

3.3 Leftover items, parts, and materials are disposed of.

Range may include but is not limited – serviceable, unserviceable, surplus, waste, scrap, hazardous.

3.4 Documentation is completed in accordance with enterprise procedures.

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	19 June 1995	31 December 2016
Revision	2	7 August 1997	31 December 2016
Revision	3	8 May 2001	31 December 2016
Review	4	26 March 2007	31 December 2016
Review	5	18 June 2014	31 December 2021
Review	6	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 ServiceIQ qualifications@serviceiq.org.nz if you wish to suggest changes to the content of this unit standard.