

Title	Repair or overhaul aircraft reciprocating engines		
Level	4	Credits	25

Purpose	People credited with this unit standard are able to: prepare to repair or overhaul aircraft reciprocating engines; locate defects in aircraft reciprocating engines; repair or overhaul aircraft reciprocating engine components; test and adjust aircraft reciprocating engine components; and complete the repair or overhaul task for aircraft reciprocating engines.
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Classification	Aeronautical Engineering > Aircraft Powerplant Repair and Overhaul
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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 Repair or overhaul activities are those usually carried out in a specialist bay or workshop.
- 4 Reciprocating engines may include crank cases, crankshafts, pistons and connecting rods, valves and valve timing components, lubrication system components, intake and exhaust system components.

Outcomes and performance criteria

Outcome 1

Prepare to repair or overhaul aircraft reciprocating engines.

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 resources are obtained and checked.
- Range may include but is not limited to – publications, materials, tools, equipment, safety equipment, environmental conditions established.
- 1.4 Component is prepared for repair or overhaul.
- Range may include but is not limited to – clean, inspect.
- 1.5 Next task is determined and documented.
- Range may include but is not limited to – locate defects, repair, overhaul, test, adjust, complete the task.

Outcome 2

Locate defects in aircraft reciprocating engines.

Performance criteria

- 2.1 Defects are located using troubleshooting techniques appropriate to the defect indications.
- 2.2 Defects found during troubleshooting are reported and documented.

Outcome 3

Repair or overhaul aircraft reciprocating engine components.

Performance criteria

- 3.1 Component is disassembled.
- Range may include but is not limited to – clean, label, preserve.
- 3.2 Defects found during disassembly are reported and documented.
- 3.3 Rectification action is determined and documented.
- 3.4 Replacement parts are procured and verified as authentic and serviceable.
- Range identify, inspect.
- 3.5 Defects are rectified.
- Range may include but is not limited to – repair, replace, modify, adjust.
- 3.6 Component is assembled.
- 3.7 Inspections are obtained.

Outcome 4

Test and adjust aircraft reciprocating engine components.

Performance criteria

4.1 Component is prepared for testing.

4.2 Component is tested and adjusted.

Range may include but is not limited to – troubleshoot, functionally test, calibrate, adjust, document adjustments and performance.

4.3 Inspections are obtained.

Outcome 5

Complete the repair or overhaul task for aircraft reciprocating engines.

Performance criteria

5.1 Component is prepared for use, storage, or transit.

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

5.2 Resources are checked for serviceability and returned to service or storage.

Range may include but is not limited to – tools, equipment, safety equipment, publications.

5.3 Leftover parts and materials are disposed of.

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

5.4 Documentation is completed.

5.5 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	20 June 1995	31 December 2016
Revision	2	7 August 1997	31 December 2016
Revision	3	8 May 2001	31 December 2016
Review	4	25 September 2006	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

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.