

Title	Demonstrate basic knowledge of turbine engines in accordance with Subject No 64		
Level	5	Credits	8

Purpose	People credited with this unit standard are able to demonstrate basic knowledge of turbine engines in accordance with Subject No 64.
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Classification	Aviation > Aircraft Operation
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Available grade	Achieved
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Guidance Information

- 1 This unit standard is aligned with the relevant parts of the prescribed syllabi of the Civil Aviation Authority of New Zealand (CAA) for Subject No 64 *Basic Turbine Knowledge*, for a first aircraft turbine type rating. Credit will be awarded on meeting the requirements of the CAA-approved assessment or examination.
- 2 Definitions, abbreviations, and acronyms used in this unit standard are to be found in:
 - a *Civil Aviation Rules Part 1* on the CAA website at <https://www.caa.govt.nz>, and
 - b *Aeronautical Information Publication (AIP)* published by Aeronautical Information Management (AIM), PO Box 294, Wellington 6140 or on the AIM website at <http://www.aip.net.nz>.
- 3 All references to the CAA refer specifically to the Civil Aviation Authority of New Zealand.
- 4 Industry standards and recommended practices are those set in place by the CAA.
- 5 Industry texts may include but are not limited to – aircraft flight manuals, CAA Rules, CAA Advisory Circulars, NZCAA Flight Test Standards Guides, operator exposition.
- 6 For the purpose of this unit standard, *knowledge* refers to the knowledge, understanding, and application of the subject matter.
- 7 Recommended skills and knowledge:
Industry requirements are that the candidate must meet the eligibility requirements of the Civil Aviation Act 1990 and the Civil Aviation Rule Part 61 for a private pilot licence.

Outcomes and performance criteria

Outcome 1

Demonstrate basic knowledge of turbine engines in accordance with Subject No 64.

Performance criteria

- 1.1 Basic turbine engine theory is described in accordance with industry texts and standards.
- Range includes but is not limited to – Newton's third law of motion, Boyle's Law, Charles' Law, Bernoulli's Theorem.
- 1.2 Turbine engine types are described in accordance with industry texts and standards.
- Range includes but is not limited to – turbofan, prop fan, turbojet, turboprop.
- 1.3 Turbine engine inlet systems are described in accordance with industry texts and standards.
- 1.4 Turbine engine compressors and their component parts are described in accordance with industry texts and standards.
- 1.5 Turbine engine combustion section is described in accordance with industry texts and standards.
- 1.6 Turbine engine turbine section and its component parts are described in accordance with industry texts and standards.
- 1.7 Turbine engine exhaust section and its principles of operation are described in accordance with industry texts and standards.
- Range includes but is not limited to – convergent, convergent-divergent nozzles.
- 1.8 Thrust reversers and their purpose are described in accordance with industry texts and standards.
- 1.9 Turbine engine fuel systems are described in accordance with industry texts and standards.
- 1.10 Turbine engine lubrication systems are described in accordance with industry texts and standards.
- 1.11 Turbine engine starting, ignition, relight, and shutdown are described in accordance with industry texts and standards.

- 1.12 Turbine engine air cooling and sealing is described in accordance with industry texts and standards.
- 1.13 Turbine engine indicating and instrumentation are described in accordance with industry texts and standards.
- 1.14 Turbine engine performance is defined and described in accordance with industry texts and standards.

This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	18 June 2010	31 December 2018
Review	2	20 October 2016	31 December 2027
Review	3	28 September 2023	31 December 2027

Consent and Moderation Requirements (CMR) reference

0169

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.