

Title	Select and use advanced material cutting tools in engineering machining		
Level	4	Credits	10

Purpose	<p>This unit standard, intended for on job assessment, covers advanced cutting tooling such as high speed, long life, multi-insert, and special material tooling.</p> <p>People credited with this unit standard are able to select and prepare to use advanced material cutting tools, and perform machining operations using advanced material cutting tools.</p>
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Classification	Mechanical Engineering > Engineering Machining and Toolmaking
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Available grade	Achieved
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Guidance Information

- 1 References
Health and Safety at Work Act 2015.
- 2 Definitions

Specifications – detail that defines an object being made; commonly communicated by annotated and dimensioned drawings; by written description, or by other communication media. External references may also be used to specify objects such as tables or industry standards.

Workplace 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 Timeframe
All activities are expected to be completed within commercially acceptable timeframes.

Outcomes and performance criteria

Outcome 1

Select and prepare to use advanced material cutting tools.

Range examples of tools are – high speed, long life, multi-insert, and special material tooling;
evidence of at least three different tool types is required.

Performance criteria

1.1 Specifications are interpreted to establish cutting requirements.

1.2 Tools and procedures are selected to meet material and specifications.

Range tool setting, compatibility with material, relevance to job, cost effectiveness, cutting data.

Outcome 2

Perform machining operations using advanced material cutting tools.

Performance criteria

2.1 Cutting tools are set up in accordance with specifications and workplace procedures.

Range examples – balancing, tool measurement, coolant flow and pressure.

2.2 Material is machined to specifications in accordance with workplace procedures.

2.3 Documentation for work is completed in accordance with workplace procedures.

2.4 Waste material is disposed of in accordance with workplace procedures.

Planned review date	31 December 2022
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	26 September 2001	31 December 2012
Review	2	20 June 2006	31 December 2022
Rollover and Revision	3	17 November 2011	31 December 2022
Review	4	14 December 2017	N/A

Consent and Moderation Requirements (CMR) reference	0013
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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 Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.