

<b>Title</b>	<b>Select, use, and care for engineering marking-out equipment</b>		
<b>Level</b>	<b>2</b>	<b>Credits</b>	<b>4</b>

<b>Purpose</b>	People credited with this unit standard are able to select engineering marking-out equipment and materials, and use and care for engineering marking-out equipment.
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<b>Classification</b>	Mechanical Engineering > Engineering - Measurement
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<b>Available grade</b>	Achieved
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**Explanatory notes**

- 1 Definition  
*Marking-out materials* – marking blue or spirit blue (engineer’s blue), copper sulphate, chalk, whitewash (lime plus alcohol) or similar materials.
  
- 2 Assessment information
  - Marking-out equipment includes but is not limited to – mark-out tables, engineer's squares, rules, straight edges, scribing blocks, height gauges, trammels, protractors, scribes, vee blocks, parallels, angle plates, dividers, centre punches. Evidence is required for the selection, use, and care of at least six items of equipment.
  - Evidence for outcomes 1 and 2 must include – the positions of between five and ten equally spaced holes on a given pitch circle diameter (PCD), marking-out relative to a datum, marking-out from templates.

**Outcomes and evidence requirements**

**Outcome 1**

Select engineering marking-out equipment and materials.

**Evidence requirements**

- 1.1 Marking-out equipment and materials are selected, having regard to the nature of the marking-out task and the specified tolerances.
  
- 1.2 Marking-out technique is planned and outlined prior to commencing work.
  
- 1.3 Marking-out equipment is inspected for damage and faults, and supervisor advised.
 

Range	damage and faults include – deformation, worn, broken, missing parts; not zeroing; expired calibration.
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**Outcome 2**

Use engineering marking-out equipment.

**Evidence requirements**

- 2.1 Marking-out achieves requirements within the specified tolerances.
- 2.2 Marking-out is validated by re-checking with the same or alternate equipment.

**Outcome 3**

Care for engineering marking-out equipment.

**Evidence requirements**

- 3.1 Marking-out equipment is handled and stored in a manner that maintains its integrity.

<b>Planned review date</b>	31 December 2016
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	23 May 1995	31 December 2011
Revision	2	14 April 1997	31 December 2011
Revision	3	5 January 1999	31 December 2011
Revision	4	23 May 2001	31 December 2011
Review	5	21 February 2005	31 December 2014
Review	6	17 June 2011	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0013
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

**Please note**

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMRs). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

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**Comments on this unit standard**

Please contact Competenz [qualifications@competenz.org.nz](mailto:qualifications@competenz.org.nz) if you wish to suggest changes to the content of this unit standard.