

Title	Interpret mechanical engineering drawings		
Level	3	Credits	5

Purpose	People credited with this unit standard are able to select and interpret mechanical engineering drawings.
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Classification	Mechanical Engineering > Engineering Drawing and Design
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Available grade	Achieved
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Guidance Information

1 References

AS 1100.101:1992, *Technical drawing – General principles*.

AS 1100.201:1992, *Technical drawing – Mechanical engineering drawing*.

An abridgement of these standards, suitable for the purposes of this unit standard, is SAA/SNZ HB1: 1994, *Technical Drawing for students*. Available from Standards New Zealand.

2 Definitions

Interpretation – the explanation in practical terms of features shown graphically in the drawing.

Worksite requirements – the administrative routines of any given workplace, or workplace simulations in a provider environment.

3 Assessment information

- Interpretation of mechanical engineering drawings to AS 1100, drawn in third angle projection.
- Assessment must involve at least one detail drawing and one assembly drawing, of sufficient complexity to assess the required features.

Outcomes and performance criteria

Outcome 1

Select mechanical engineering drawings.

Performance criteria

- 1.1 Drawings are selected from drawing files and validated in accordance with worksite requirements.
- 1.2 Drawing versions are identified and currency confirmed in accordance with worksite requirements.

Outcome 2

Interpret mechanical engineering drawings.

Range in accordance with AS 1100, Parts 101 and 201.

Performance criteria

2.1 Drawing concepts are explained.

Range concepts – scale, third angle projection, first angle projection, isometric drawing, oblique drawing.

2.2 Sectioned views and cross hatching are interpreted.

2.3 Different types of lines are interpreted.

2.4 Drawing symbols are interpreted.

Range assessment of 12 symbols chosen at random by the assessor.

2.5 Dimensions are interpreted.

Range datum points or lines; linear and angular dimensions; dimensioning of – diameters, radii, holes, countersinks, counterbores, spotfaces, chamfers, bolts, screws, studs, washers, screw threads, keyways;
Evidence is required for at least six dimensions.

2.6 Tolerances are interpreted.

2.7 Machining and surface roughness symbols are interpreted.

2.8 Materials required for the work are identified from the drawing.

Replacement information	This unit standard has been replaced by unit standard 29654.
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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	22 September 2005	31 December 2011
Rollover and Revision	2	20 March 2009	31 December 2016
Review	3	17 November 2011	31 December 2022
Review	4	15 September 2016	31 December 2022
Rollover	5	16 December 2021	31 December 2022

Consent and Moderation Requirements (CMR) reference

0013

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