

Field Engineering and Technology**Review of *Mechanical Engineering* unit standards**

Subfield	Domain	ID
Mechanical Engineering	Engineering - Fabrication	25075
	Engineering Core Skills	21906, 21909, 21913
	Welding	21907

Competenz has completed the review of the unit standards listed above.

Date new versions published

December 2016

Planned review date

December 2021

Summary

As a result of the Targeted Review of Qualifications process, Competenz has reviewed entry-level unit standards for inclusion in New Zealand Certificates in Mechanical Engineering and Fabrication. This process led to the review and development of standards to reflect conditions listed in the graduate profile outcomes of the qualifications requiring knowledge and application of mechanical engineering and fabrication.

Meetings with subject matter experts were conducted, identifying the required content and comparing this content against existing unit standards. It was identified that a more structured approach was required for assessment throughout mechanical engineering and fabrication apprenticeships. This review of *Level 2 Mechanical Engineering* unit standards will be followed by a review of higher level unit standards in other *Mechanical Engineering* domains. The review of existing, and content of new standards, is based on extensive feedback with industry experts and is endorsed by industry and providers.

Main changes

- Knowledge and application outcomes of existing unit standards 21906 and 25075 have been separated and developed into 4 new unit standards.
- Two new unit standards were developed.
- Unit standard 21909 has been replaced by one new unit standard requiring a greater breadth of knowledge of mechanical fasteners used in mechanical engineering.

Category C unit standards will expire at the end of December 2021

The last date for assessment of superseded versions of Category B unit standards is December 2021

Impact on existing organisations with consent to assess

Current consent for			Consent extended to		
Nature of consent	Classification or ID	Level	Nature of consent	Classification or ID	Level
Standard	21906	2	Standards	29671, 29673	2
Standard	21909	2	Standard	29674	2
Standard	25075	2	Standards	29670, 29730	2

Detailed list of unit standards – classification, title, level, and credits

All changes are in **bold**.

Key to review category	
A	Dates changed, but no other changes are made - the new version of the standard carries the same ID and a new version number
B	Changes made, but the overall outcome remains the same - the new version of the standard carries the same ID and a new version number
C	Major changes that necessitate the registration of a replacement standard with a new ID
D	Standard will expire and not be replaced

Engineering and Technology > Mechanical Engineering > Engineering - Fabrication

ID	Title	Level	Credit	Review Category
25075	Perform basic fabrication operations under supervision	2	12	C
29670	Demonstrate knowledge of fabrication machinery, materials, and processes	2	3	
29730	Apply good work practices when performing basic fabrication operations under supervision	2	6	

Engineering and Technology > Mechanical Engineering > Engineering Core Skills

ID	Title	Level	Credit	Review Category
21906	Perform basic mechanical engineering machining operations under supervision	2	12	C
29671	Demonstrate knowledge of machining equipment, tools, and principles	2	3	
29673	Apply good work practices when performing basic mechanical engineering machining operations under supervision	2	3	
21909	Demonstrate knowledge of fasteners used in mechanical engineering	2	1	C
29674	Demonstrate knowledge of mechanical fasteners used in mechanical engineering	2	3	
21913	Shift loads in engineering installation, maintenance, and fabrication work	2	2	B
29672	Assemble fabricated components using mechanical connections	2	3	New

ID	Title	Level	Credit	Review Category
29676	Demonstrate and apply knowledge of good work practices when servicing simple components under supervision	2	3	New

Engineering and Technology > Mechanical Engineering > Welding

ID	Title	Level	Credit	Review Category
21907	Demonstrate and apply knowledge of safe welding procedures under supervision	2	3	B
	Demonstrate and apply knowledge of welding principles and quality assurance under supervision	2	4	