

Field Engineering and Technology

Review of *Mechanical Engineering* unit standards

Subfield	Domain	ID
Mechanical Engineering	Fire Detection and Alarm Systems	23258-23267, 28813-28819
	Fire Protection Systems Technology	17708, 17712-17715
	Fixed Fire Protection Systems	9362, 9372, 9375, 17727-17735, 18432, 18433, 23587, 23588, 27524-27526, 28820, 28821, 28824-28834
	Hand Operated Fire Fighting Equipment	9013, 9020, 23585, 23586

Hanga Aro Rau Manufacturing, Engineering and Logistics Workforce Development Council has completed the review of the unit standards listed above.

Date new versions published

June 2024

Planned review date

December 2029

Summary

Hanga-Aro-Rau Workforce Development Council undertook a review of the unit standards listed above in November 2022 as part of the 5-year review cycle. Regular Technical Advisory Group (TAG) meetings were held with a wide range of industry stakeholders, including representatives from fire protection industry associations, employers, training providers, assessment writers and subject matter experts. The review of unit standards in the Passive Fire Protection domain was done separately but at the same time as this review to maintain clarity and more comprehensive consultation due to the cross-over between industries in the fire sector.

All feedback received was incorporated and endorsed for registration by the stakeholders in July 2023.

Main changes

- Guidance information and document formatting were updated across the suite of unit standards.
- Standard setting body information was updated from Competenz to Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council.
- Performance criteria and range statements were updated to accurately reflect current industry practice and legislation.
- Language was simplified for clarity of intent.
- Title of unit standards 27526, 28827 and 28829 were updated to better align with the standard contents.

The last date for assessment of superseded versions of Category B unit standards is December 2026

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 > Fire Detection and Alarm Systems

ID	Title	Level	Credit	Review Category
23258	Demonstrate knowledge of fire detection and alarm systems and installation practices	3	20	B
23259	Demonstrate knowledge of checking and testing of fire detection and alarm systems	3	9	B
23260	Install fire detection and alarm systems	4	25	B
23261	Commission fire detection and alarm systems	4	25	B
23262	Check, test, and inspect fire detection and alarm systems	4	20	B
23263	Check, test, and inspect special hazards fire detection and alarm systems	4	20	B
23264	Inspect fire detection and alarm systems for compliance	5	20	B
23265	Service fire detection and alarm systems	4	30	B
23266	Demonstrate knowledge of fire detection and alarm system design	5	10	B
23267	Design fire detection and alarm systems	5	20	B
28813	Demonstrate knowledge of fire detection and alarm system components and installation practices	3	9	B
28814	Demonstrate knowledge, use, and care of tools and test equipment used in the fire detection and alarm industry sector	2	4	B
28815	Install fire detection and alarm system components under supervision	3	30	B
28816	Demonstrate knowledge of special hazards fire detection and alarm systems and installation practices	4	20	B
28817	Demonstrate knowledge of commissioning tests and procedures for special hazards fire detection and alarm systems	3	2	B
28818	Install special hazards fire detection and alarm systems	4	20	B
28819	Commission special hazards fire detection and alarm systems	4	20	B

Engineering and Technology > Mechanical Engineering > Fire Protection Systems Technology

ID	Title	Level	Credit	Review Category
17708	Inspect and test interconnected control and fire detection and alarm systems	4	30	B
17712	Demonstrate knowledge of organisations and documentation that impact on the fire protection industry	3	4	B
17713	Demonstrate knowledge of interconnected control and fire detection and alarm systems	4	6	B
17714	Demonstrate knowledge of inspection and testing of interconnected control and fire alarm systems	4	4	B
17715	Demonstrate knowledge of and apply legislation and standards for the fire protection industry	5	4	B

Engineering and Technology > Mechanical Engineering > Fixed Fire Protection Systems

ID	Title	Level	Credit	Review Category
9362	Establish and disestablish site facilities for the installation of fire safety systems	4	4	B
9372	Commission fire sprinkler systems	4	20	B
9375	Service fire sprinkler systems	4	11	B
17727	Conduct routine maintenance of special hazards fixed fire protection systems	4	5	B
17728	Conduct surveys of special hazards fixed fire protection systems	4	10	B
17729	Demonstrate knowledge of maintenance, testing, inspections, and surveys of special hazards fixed fire protection systems	4	7	B
17730	Demonstrate knowledge of routine testing and maintenance of fire sprinkler systems	3	6	B
17731	Demonstrate knowledge of fire sprinkler systems and installation practices	3	10	B
17732	Demonstrate knowledge of special hazards and non-standard fixed fire protection systems	4	6	B
17734	Conduct routine maintenance of fire sprinkler systems	3	20	B
17735	Conduct routine inspections of fire sprinkler systems	4	20	B
18432	Fabricate and install pipe-work for fire sprinkler systems on site	3	20	B
18433	Install special hazards fixed fire protection systems	4	20	B
23587	Commission special hazards fixed fire protection systems	4	7	B
23588	Service special hazards fixed fire protection systems	4	11	B
27524	Design fixed fire protection systems	5	40	B
27525	Inspect fixed fire protection systems for compliance	5	40	B
27526	Supervise fire protection industry jobs/operations Supervise fire protection industry jobs or operations	5	30	B
28820	Conduct routine tests of fixed fire protection systems	3	20	B
28821	Inspect and test non-standard fixed fire protection systems	4	20	B

28824	Demonstrate knowledge of the underpinning principles of hydraulic design for fire sprinkler systems	4	4	B
28825	Conduct routine tests and inspections of special hazards fixed fire protection systems	4	10	B
28826	Read and interpret fire sprinkler construction and services drawings	3	4	B
28827	Fabricate and install pipe supports, hangers, braces, and brackets for fire sprinkler systems on site Fabricate and install pipe supports, hangers, braces, seismic restraints and brackets for fire sprinkler systems on site	3	10	B
28828	Install sprinkler heads	3	10	B
28829	Install pump sets for fire sprinkler systems Install pump units for fire sprinkler systems	3	10	B
28830	Install valves, switches, and gauges for fire sprinkler systems	3	10	B
28831	Demonstrate knowledge of deluge and pre-action fire sprinkler systems and commissioning procedures	4	3	B
28832	Install deluge and pre-action fire sprinkler systems	4	20	B
28833	Service deluge and pre-action fire sprinkler systems	4	20	B
28834	Commission deluge and pre-action fire sprinkler systems	4	20	B

Engineering and Technology > Mechanical Engineering > Hand Operated Fire Fighting Equipment

ID	Title	Level	Credit	Review Category
9013	Survey for fire risks and select hand operated fire fighting equipment	4	25	B
9020	Demonstrate knowledge and use of hand operated fire fighting equipment	3	5	B
23585	Install and commission hand operated fire fighting equipment	3	25	B
23586	Maintain hand operated fire fighting equipment	3	20	B