

FIELD ENGINEERING AND TECHNOLOGY**Review of *Mechanical Engineering* unit standards**

Subfield	Domain	Id
Mechanical Engineering	Fire Protection Systems Technology	17708-17715
	Fixed Fire Protection Systems	9362, 9366-9368, 9370-9378, 17727-17732, 17734, 17735, 18432-18434
	Hand Operated Fire Fighting Equipment	9013, 9014, 9017-9020, 17737, 17738

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

Date new versions published

March 2007

Planned review date

December 2011

Summary of review and consultation process

The above unit standards were reviewed following significant changes in building regulations and New Zealand fire protection standards, and in preparation for a major review of qualifications. A re-evaluation of training requirements at Levels 5 and 6 was to be carried out in 2007 and several unit standards at these levels would be reviewed then.

All assessors, providers, and members of the Industry Sector Advisory Group were invited to comment and the review process took into account all comments received up to mid-2006. Detailed work was carried out with groups of specialists from the industry.

The comments received, coupled with changes in regulations and New Zealand fire protection standards, were such that all unit standards were effectively rewritten. In addition the review provided an opportunity to separate knowledge from practical unit standards to facilitate the delivery processes.

Main changes resulting from the review

- Special notes have been improved and style harmonised with other unit standards recently registered or under review in the Mechanical Engineering subfield.
- Range statements, prerequisites, definitions, and other assessment parameters have been updated.
- Some titles have been amended to better convey overall outcomes and relation to other unit standards, and to better align with current regulations and New Zealand Standards.
- Elements and performance criteria have been harmonised across related unit standards, and language improved.
- Unit standards 9366-9368 and 9376-9378 have been designated expiring as they are no longer required by industry, while unit standards 9017 and 9018 are no longer relevant to the industry because of changes in the regulations relating to testing, charging, and discharging of cylinders.

- Unit standards 9013, 9020, 9362, 9372, 9375, 17708, 17709, 17713, 17714, 17727-17732, 17734, 17735, 18432, and 18434 have had their titles amended.
- A number of unit standards have been replaced with new unit standards to better reflect the requirements of the industry. These are:
 - Unit standards 9014 and 9019 have been replaced with one new unit standard, 23585.
 - Unit standards 9370 and 9371 have been replaced with one new unit standard, 23587.
 - Unit standards 9373 and 9374 have been replaced with one new unit standard, 23588.
 - Unit standards 17737 and 17738 have been replaced with one new unit standard, 23586.
- Changes to Levels and credits have been made to better represent learning demand and complexity in relation to other unit standards.

Unit standards categorised as category C or D expire at the end of December 2010.

Impact on existing provider accreditations

None.

Impact on existing qualifications

Qualifications that contain the reviewed standards or classifications are tabled below.

Affected	The qualification lists a reviewed classification (domain or subfield) in an elective set The qualification lists a standard that has changes to level or credits The qualification lists a C or D category standard
Not materially affected	The qualification lists a standard that has a new title The qualification lists a standard that has a new classification

In the following tables qualifications that contain unit standards and classifications in both categories are identified in the *Affected* table, with the items that generated the *Affected* status in **bold**.

The following Competenz qualifications are affected by the outcome of this review and will be reviewed during 2007.

Qualification title	Classification or standard in the qualification
National Certificate in Fixed Fire Protection Systems (Level 4) [Ref: 0570]	9362, 9366-9368, 9370-9372, 9377 , 17731, 17732, 18432, 18434
National Certificate in Fixed Fire Protection Systems (Level 5) [Ref: 0865]	9372-9375 , 17727-17730, 17734, 17735
National Certificate in Hand Operated Fire Fighting Equipment (Level 3) [Ref: 0568]	9013, 9014, 9017-9019 , 9020, 17737, 17738
National Diploma in Fire Protection Systems Technology (Certification of Fire Safety Systems) (Level 5) [Ref: 0867]	9373 , 17708, 17709, 17713, 17714, 17728-17732, 17735,

The following Competenz qualifications are not materially affected by the changes. They will be updated when they are next reviewed.

Qualification title	Standard in the qualification
National Certificate in Fire Detection and Alarm Systems (Level 4) [Ref:0569]	9362, 17712
National Certificate in Fire Protection Systems Technology (Inspection and Testing) (Level 4) [Ref: 0864]	17708, 17709, 17713, 17714, 17727-17732, 17734, 17735
National Certificate in Fixed Fire Protection Systems with strands in Installation, and Testing (Level 3) [Ref: 0863]	17727, 17729-17732, 17734,18432, 18434

The following qualification is also affected by the outcome of this review. The standard setting body (SSB) has been advised that it requires revision.

Qualification title	Standard in the qualification	SSB Name
National Diploma in Workplace Emergency Risk Management (Building Fire and Emergency Manager) (Level 5) [Ref: 0736]	9013, 9020, 9378	Fire and Rescue Services Industry Training Organisation

The following qualification is not materially affected by the changes. It will be updated when it is next reviewed.

Qualification title	Standard in the qualification	SSB Name
National Certificate in Roadmarking (Skilled Operator) with optional strands in Long-life Products, Extruded Thermoplastics, Screeded Thermoplastics, Sprayed Thermoplastics, and Testing [Ref: 0617]	9020	InfraTrain

Summary of main changes to standards' Ids, classification, titles, levels, 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

Subfield Mechanical Engineering
Domain Fire Protection Systems Technology

Id	Title	Level	Credit	Review Category
17708	Inspect and test interconnected control and fire detection systems Inspect and test interconnected control and fire detection and alarm systems	4	12	B
17709	Demonstrate knowledge of inspection and testing for passive fire safety systems Demonstrate knowledge of inspection and testing of passive fire safety systems	4	4	B

Id	Title	Level	Credit	Review Category
17710	Demonstrate knowledge of passive fire safety systems	3	4	B
17711	Inspect and test passive fire safety systems	4	6	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 systems 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 detection systems Demonstrate knowledge of inspection and testing of interconnected control and fire detection and alarm systems	4	4	B
17715	Demonstrate knowledge of, and apply legislation for the fire protection industry	5	8	B

Domain Fixed Fire Protection Systems

Id	Title	Level	Credit	Review Category
9362	Establish site facilities for the installation of fire safety systems Establish and disestablish site facilities for the installation of fire safety systems	4	4	B
9366	Pre-commission water based special hazard fixed fire protection systems	4	9	D
9367	Pre-commission non water based special hazard fixed fire protection systems	4	10	D
9368	Pre-commission conventional fixed fire protection systems	4	16	D
9370	Commission water based special hazards fixed fire protection systems	4	7	C
9371	Commission non water based special hazards fixed fire protection systems	4	7	C
23587	Commission special hazards fixed fire protection systems	4	7	
9372	Commission conventional fixed fire protection systems Commission fire sprinkler systems	5 4	12 20	B
9373	Service water based special hazard fixed fire protection systems	5	8	C
9374	Service non water based special hazard fixed fire protection systems	5	11	C
23588	Service special hazards fixed fire protection systems	4	11	

Id	Title	Level	Credit	Review Category
9375	Service conventional fixed fire protection systems Service fire sprinkler systems	5 4	14 11	B
9376	Test special hazards fixed fire protection systems	4	16	D
9377	Test conventional fixed fire protection systems	4	10	D
9378	Survey conventional fixed fire protection systems	5	26	D
17727	Test special hazard fixed fire protection systems Conduct routine tests and maintenance of special hazards fixed fire protection systems	4	5	B
17728	Inspect special hazard fixed fire protection systems Conduct routine surveys of special hazards fixed fire protection systems	4	5	B
17729	Demonstrate knowledge of inspection and testing for special hazard fixed fire protection systems Demonstrate knowledge of maintenance of special hazards fixed fire protection systems	4	4	B
17730	Demonstrate knowledge of inspection and testing for conventional fixed fire protection systems Demonstrate knowledge of maintenance of fire sprinkler systems	3	4	B
17731	Demonstrate knowledge of conventional fixed fire protection systems and installation practices Demonstrate knowledge of fire sprinkler systems and installation practices	3	10	B
17732	Demonstrate knowledge of special hazard fixed fire protection systems and installation practices Demonstrate knowledge of special hazards fixed fire protection systems	4	6	B
17734	Test conventional fixed fire protection systems Conduct routine tests and maintenance of fire sprinkler systems	3	4	B
17735	Inspect conventional fixed fire protection systems Conduct routine surveys of fire sprinkler systems	4	4	B
18432	Fabricate pipe work for fire protection systems on site Fabricate pipe-work for fire sprinkler systems on site	3	6	B
18433	Install special hazards fixed fire protection systems	3	17	B
18434	Install conventional fixed fire protection systems Install fire sprinkler systems	3	40	B

Domain Hand Operated Fire Fighting Equipment

Id	Title	Level	Credit	Review Category
9013	Survey a building and select hand operated fire fighting equipment Survey buildings and select hand operated fire fighting equipment	4	23	B
9014	Install hand operated fire extinguishers and ancillary equipment	2	11	C
9019	Install and maintain fire hose reels	3	12	C
23585	Install and commission hand operated fire fighting equipment	3	20	
9017	Proof test fire extinguisher cylinders	3	11	D
9018	Stretch test fire extinguisher cylinders	4	16	D
9020	Demonstrate knowledge of hand operated fire fighting equipment and demonstrate their use Demonstrate knowledge and use of hand operated fire fighting equipment	3	9	B
17737	Service, maintain, and recharge hand operated fire fighting equipment on site	3	12	C
17738	Service, maintain, and recharge hand operated fire fighting equipment in a workshop	3	16	C
23586	Maintain hand operated fire fighting equipment	3	20	