

Title	Service deluge and pre-action fire sprinkler systems		
Level	4	Credits	20

Purpose	<p>This unit standard is for personnel employed in the fire protection industry and covers the servicing of deluge and pre-action fire sprinkler systems.</p> <p>People credited with this unit standard are able to: prepare to service deluge and pre-action fire sprinkler systems; service deluge and pre-action fire sprinkler systems, and thereafter reinstate the systems to operational status; complete documentation after servicing deluge and pre-action fire sprinkler systems.</p>
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Classification	Mechanical Engineering > Fixed Fire Protection Systems
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Available grade	Achieved
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Guidance Information

- Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the:

Building Act 2004,
 Building (Forms) Regulations 2004,
 Ministry of Business, Innovation and Employment (MBIE) *Acceptable Solutions (AS) and Verification Methods (VM)*,
 MBIE New Zealand Building Code Handbook,
 NZS 4541:2020, *Automatic fire sprinkler systems*.

Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.
- Definitions**

Plan in this unit standard means the procedures developed to enable the work to be carried out in a logical and safe manner.

Servicing refers to fault finding and repair of deluge and pre-action fire sprinkler systems.

Systems documentation refers to the documentation required to be maintained by NZS 4541:2020, including logbook, test reports, equipment details and drawings, specifications, contract agreement, additions and alterations, fire reports, building consents standards, codes of practice, installation instructions, test and commissioning procedures, and test and maintenance records.

Workplace procedures refer to the documented procedures used by the organisation carrying out the work and applicable to the tasks being carried out. They may include but are not limited to – standard operating procedures, site safety procedures, equipment operating procedures, codes of practice, quality assurance procedures, housekeeping standards, charging of time and materials, management of drawings and documentation, procedures to comply with legislative and local body requirements.

3 Assessment information

- a All activities must comply with relevant legislative and/or regulatory requirements and recognised codes of practice.
- b All activities must demonstrate safe working practices.
- c All activities must be completed and reported within agreed timeframes.
- d All activities must be completed in accordance with applicable aspects of NZS 4541:2020 and applicable systems documentation, plans, and workplace procedures.

4 Range

For assessment purposes, competence must be demonstrated on servicing of one deluge and one pre-action system, at least one system being tested needs to have electronic detection.

Electronic detection system fault diagnosing is beyond the scope of this unit standard.

Outcomes and performance criteria

Outcome 1

Prepare to service deluge and pre-action fire sprinkler systems.

Performance criteria

- 1.1 The systems to be serviced are described.
- 1.2 Servicing requirements and procedures for the systems are identified.
- 1.3 Safety requirements for the systems to be serviced are identified and referenced to the systems documentation.
- 1.4 Plans for servicing the systems are prepared.

Outcome 2

Service deluge and pre-action fire sprinkler systems, and thereafter reinstate the systems to operational status.

Performance criteria

- 2.1 System isolations are completed.
- 2.2 System faults are diagnosed.

- 2.3 Systems are serviced.
- 2.4 Systems are tested and operational integrity is confirmed.
- 2.5 Systems are restored to normal operating condition.
- 2.6 Safety requirements are complied with during inspections.
- 2.7 Premises are cleared of all surplus introduced materials and equipment and left in a clean and tidy condition.

Outcome 3

Complete documentation after servicing deluge and pre-action fire sprinkler systems.

Performance criteria

- 3.1 Systems faults and improvements are identified, and recorded.
- 3.2 Documentation for servicing is completed, and distributed.
- 3.3 Personnel at site are notified of completion of tests.

Planned review date	31 December 2029
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	15 October 2015	31 December 2026
Review	2	27 June 2024	N/A

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

Comments on this unit standard

Please contact the Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.