

Title	Demonstrate knowledge of the installation, testing, and maintenance of water supply backflow prevention devices		
Level	4	Credits	4

Purpose	<p>This unit standard is for people who work in the plumbing, industry.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> – determine requirements for water supply backflow prevention devices; and – demonstrate knowledge of regulatory requirements, selection of methods and materials, and underpinning concepts and principles, as applied to the installation, testing, and maintenance of water supply backflow prevention devices.
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Classification	Plumbing, Gasfitting and Drainlaying > Plumbing
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Available grade	Achieved
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Guidance Information

1 References

Building Act 2004;

Health and Safety at Work Act 2015;

Local Government Act 2002;

Plumbers, Gasfitters, and Drainlayers Act 2006;

Plumbers, Gasfitters, and Drainlayers Regulations 2010;

The following standards, which are available at <http://www.standards.govt.nz>:

AS/NZS 2845.1:1998 *Water Supply – Backflow prevention devices – Materials, design and performance requirements*,

AS/NZS 3500.1:2003, *Plumbing and Drainage – Water services*, Section 5.2,

NZS 3604:1999 *Timber Framed Buildings*,

NZS 5807:1980 *Code of practice for industrial identification by colour, wording or other coding*;

New Zealand Water and Wastes Association, *Boundary Backflow Prevention for Drinking Water Suppliers Code of Practice*, 2013 available at

<https://www.waternz.org.nz>;

The following clauses, and any related compliance documents, which are available at

<https://www.building.govt.nz>:

New Zealand Building Code Clause G10 Piped Services,

New Zealand Building Code Clause G12 Water Supplies;

The following reference, which is available at <https://nepis.epa.gov>:

United States Environmental Protection Agency (EPA), *Cross-Connection Control Manual*, February 2003, Chapter 5. Ref 816R03002;

and all subsequent amendments and replacements.

- 2 Range
backflow prevention devices for – atmospheric vacuum break (AVB), pressure vacuum breaker (PVB), spill proof vacuum breaker (SPVB), registered air gap, double detector check, double check valve (Dual check), hose connection vacuum breaker, reduced pressure zone device, vacuum break, vented dual check.
- 3 Credit for this unit standard does not entitle the candidate to legally perform the testing of backflow prevention devices in the capacity of an Independent Qualified Person (IQP), or Accredited Backflow Prevention Tester (ABT).
- 4 Candidates must hold a current plumbing certificate or licence as issued under the Plumbers, Gasfitters, and Drainlayers Act 2006.
- 5 Definitions
Job requirements – specific requirements of the job at hand not covered by job specifications.
Job specifications – instructions (oral, written, graphic) and may include any of the following: manufacturer instructions; design drawing detail specifications; specifications from a specialist source such as an architect, designer, engineer, or a supervisor; and site or work specific requirements. Where job specifications are in conflict with applicable legislation, standards, and/or codes, such legislation, standards, and/or codes shall take precedence for the purpose of assessment.
Maintain may refer to all or any of – repair, upgrade, alter, remove.

Outcomes and performance criteria

Outcome 1

Determine requirements for water supply backflow prevention devices.

Performance criteria

- 1.1 Describe the operation of backflow prevention devices.
- 1.2 Identify the requirements for backflow prevention devices accordance with water supply features and regulatory requirements.

Range pressure (negative, positive), flow, associated drains.
- 1.3 Select suitable backflow prevention devices for types or levels of risk.

Range risk includes high, medium risk, and low risk situations.

Outcome 2

Demonstrate knowledge of regulatory requirements, selection of methods and materials, and underpinning concepts and principles, as applied to the installation, testing, and maintenance of water supply backflow prevention devices.

Performance criteria

2.1 Describe the application of relevant sections of legislation, standards, and codes to the installation, testing, and maintenance of water supply backflow prevention devices.

2.2 Justify the selection of backflow prevention methods and materials.

Range job specifications, operation of the installed devices, prudent use and longevity of materials; may include job requirements.

2.3 Explain the application of underpinning concepts and principles to the installation, testing, and maintenance of water supply backflow prevention devices.

Range back pressure, differential pressure, siphon.

Replacement information	This unit standard and unit standard 30599 replaced unit standard 2117.
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Planned review date	31 December 2022
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	26 October 2017	N/A

Consent and Moderation Requirements (CMR) reference	0003
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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 Skills Organisation reviewcomments@skills.org.nz if you wish to suggest changes to the content of this unit standard.