

<b>Title</b>	<b>Demonstrate knowledge of the installation and maintenance of gas measurement systems, and interpretation of meter data</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>3</b>

<b>Purpose</b>	<p>This unit standard is for people who work in the gasfitting industry.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> <li>– demonstrate knowledge of the installation, commissioning, and protection of gas measurement systems;</li> <li>– demonstrate knowledge of the maintenance of gas measurement systems;</li> <li>– demonstrate knowledge of regulatory requirements, and underpinning concepts and principles, as applied to the installation, commissioning, and maintenance of gas measurement systems; and</li> <li>– describe how to interpret gas meter data.</li> </ul>
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<b>Classification</b>	Plumbing, Gasfitting and Drainlaying > Gasfitting
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the:
- Building Act 2004;
  - Gas Act 1992;
  - Gas (Safety and Measurement) Regulations 2010;
  - Health and Safety at Work Act 2015;
  - 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 5601.1:2013 *Gas installations – Part 1: General installations*,  
 NZS 5258:2003 *Gas distribution networks*,  
 NZS 3604:2011 *Timber-framed buildings*.

The following Building Code clause, and any related Acceptable Solution and Verification Method documents, which are available at <https://www.building.govt.nz/>:

- New Zealand Building Code Clause G11 Gas as an Energy Source.

Any new, amended or replacement referenced standards, codes of practice, guidelines, Building Code Acceptable Solutions and Verification Methods, or authority requirements affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.

## 2 Definitions

*Job specifications* refer to 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.

*Maintain* may refer to all or any of – repair, upgrade, alter, remove, replace.

*Gas measurement systems (GMS)* – a combination of the meter and any associated equipment including valves, filters, regulators, over pressure protection, and connections.

## 3 Candidates must hold a current limited certificate trainee authorisation or exemption under supervision as issued under the Plumbers, Gasfitters, and Drainlayers Act 2006.

## 4 Assessment information

All evidence must be in accordance with relevant legislation, regulations, and job specifications.

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# Outcomes and performance criteria

## Outcome 1

Demonstrate knowledge of the installation, commissioning, and protection of gas measurement systems.

### Performance criteria

- 1.1 Describe the installation of gas measurement systems.
- 1.2 Describe the connection of gas measurement systems to connection and termination points.
- 1.3 Explain the testing, purging, and commissioning of gas measurement systems.
- 1.4 Describe the requirements for protection of gas measurement equipment.
- 1.5 Describe requirements to identify gas measurement equipment by label and/or colour in accordance with relevant codes and standards.

## Outcome 2

Demonstrate knowledge of the maintenance of gas measurement systems.

**Performance criteria**

- 2.1 Explain the assessment of gas measurement systems to identify safe and proper operation and suitability for appliance demand in accordance with AS/NZS 5601.1.2013.
- 2.2 Describe how to identify faults in terms of causes and possible means of rectification.
- 2.3 Explain how to rectify faults in accordance with maintenance requirements and job specifications.

Range must include but is not limited to – replacing meter, using meter bypass, bonding strap.

**Outcome 3**

Demonstrate knowledge of regulatory requirements, and underpinning concepts and principles, as applied to the installation, commissioning, and maintenance of gas measurement systems.

**Performance criteria**

- 3.1 Describe applicable sections of legislation, standards, and codes in terms of their application to the installation, testing, purging, commissioning, and maintenance of gas measurement systems.
- 3.2 Explain underpinning concepts and principles in terms of their application to gas meter data.

Range correction factors, gas volumes, Charles’ law, Boyle’s law.

**Outcome 4**

Describe how to interpret gas meter data.

**Performance criteria**

- 4.1 Describe the process for recording meter readings before and after reading.
- 4.2 Describe the application of correction factors for pressure and temperature.

<b>Replacement information</b>	This unit standard replaced unit standard 2132.
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<b>Planned review date</b>	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	23 November 2017	31 December 2028
Review	2	25 July 2024	N/A

**Consent and Moderation Requirements (CMR) reference**

0003

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

**Comments on this unit standard**

Please contact Waihanga Ara Rau Construction and Infrastructure Workforce Development Council [qualifications@waihangaararau.nz](mailto:qualifications@waihangaararau.nz) if you wish to suggest changes to the content of this unit standard.