

# NZS 5262: 2003

## GAS APPLIANCE SAFETY

### AMENDMENT No. 1

May 2005

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#### REVISED TEXT

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#### EXPLANATORY NOTE

This amendment has been issued for the purpose of updating the list of compliance Standards listed in Appendix A.

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#### APPROVAL

Amendment No.1 was approved on 29 April 2005 by the Standards Council and by the Associate Minister of Energy on 13 May 2005 to be an amendment to NZS 5262:2003, pursuant to the provisions of section 10 of the Standards Act 1988.

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#### REFERENCED DOCUMENTS

**Delete** the list of referenced documents (page 2) and **substitute:**

#### REFERENCED DOCUMENTS

Reference is made in this document to the following:

#### NEW ZEALAND STANDARDS

NZS 4219:1983	Specification for seismic resistance of engineering systems in buildings
NZS 5261:2003	Gas installation
NZS 5435:1996	Specification for liquefied petroleum gas (LPG)
NZS 5442:1999	Specification for reticulated natural gas

#### AMERICAN STANDARDS

ANSI Z21.10.1-2004	Gas water heaters – Vol I, Storage water heaters with input ratings of 75,000 BTU per hour or less
ANSI Z21.11.2-2002	Gas-fired room heaters – Vol II, Unvented room heaters, <i>with</i> ANSI Z21.11.2a-2003 First Addendum
ANSI Z21.86-2004	Vented gas-fired space heating appliances
NFPA 54-2002	National fuel gas code
NFPA 85-2004	Boiler and combustion systems hazard code

#### AUSTRALIAN STANDARDS

AS 1375-1985	Industrial fuel-fired appliances (known as the SAA Industrial Fuel-fired Appliances Code)
AS 2658-2003	LP Gas – Portable and mobile appliances
AS 3814/AG 501-2002	Industrial and commercial gas-fired appliances
AS 4551/AG 101-2000	Domestic gas cooking appliances

Amd 1  
May '05

Amd 1  
May '05



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AS 4552/AG 102-2000	Gas water heaters
AS 4553/AG 103-2000	Gas space heating appliances
AS 4556/AG 106-2000	Indirect gas-fired ducted air-heaters
AS 4557-2004	Domestic outdoor gas barbecues
AS 4558/AG 108-2000	Decorative gas log and other fuel effect appliances
AS 4565-2004	Radiant gas heaters for outdoor and non-residential indoor use

#### OTHER STANDARDS

BS EN 437:2003	Test gases. Test pressures. Appliance categories
BS EN 449:2002	Specification for dedicated liquefied petroleum gas appliances. Domestic flueless space heaters (including diffusive catalytic combustion heaters)
BS EN 676:2003	Automatic forced draught burners for gaseous fuels
DIN 4788.1:1977	Gas burners without blowers
JIS S 2147:1998	Portable cookers attached to liquefied petroleum gas cylinder

#### OTHER DOCUMENT

90/396/EEC	Appliances burning gaseous fuels (Gas appliances directive)
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(New Zealand legislation remains unchanged)

(Amendment No.1, May 2005)

#### APPENDIX A

##### MEANS OF COMPLIANCE STANDARDS (page 12)

Delete Appendix A and substitute:

#### APPENDIX A

##### MEANS OF COMPLIANCE STANDARDS

(Normative)

#### A1 General

This Appendix lists the Standards that may be used as the basis for demonstrating compliance with NZS 5262. It is referenced from, and shall be read in conjunction with section 7.

This listing is also provided at the Standards New Zealand web page (<http://spex.standards.co.nz/project.jsp?id=103152>) where it is updated periodically as a result of the publication of new or revised Standards, pending the issue of an amendment to NZS 5262. Users of this Standard are advised to check the current listing at the website.

#### NOTE –

- (1) The listing of Compliance Standards cites specific editions. Subsequent editions, although likely to be acceptable, need to be reviewed and formally incorporated in the Appendix A list.
- (2) Other Standards or Codes for appliances may be acceptable for demonstrating compliance with NZS 5262.

#### A2 Compliance Standards

The gas appliance shall also comply with the additional requirements listed after each Standard.

Amd 1  
May '05

**A2.1** *ANSI Z21.11.2-2002 Gas-fired room heaters, Vol II, Unvented room heaters, with ANSI Z21.11.2a-2003 First Addendum*

Additional requirement:

Freestanding appliances shall be equipped to safely shut off if overturned.

Amd 1  
May '05

**A2.2** *ANSI Z21.86-2004/CSA 2.32-2004 Vented gas-fired space heating appliances*

Additional requirement:

Freestanding appliances shall be provided with means of attachment to the building sufficient to withstand seismic loadings.

Amd 1  
May '05

**A2.3** *ANSI Z21.10.1-2004 Gas water heaters – Vol I, Storage water heaters with input ratings of 75,000 BTU per hour or less*

Additional requirement:

Appliances shall be capable of restraint against earthquake forces without compromising any aspects of performance.

Amd 1  
May '05

**A2.4** *AS 2658-2003 LP Gas – Portable and mobile appliances*

No additional requirements.

**A2.5** *AS 3814/AG 501-2002 Industrial and commercial gas-fired appliances*

Additional requirements:

- (a) Moving parts shall be located or guarded to minimize hazards therefrom;
- (b) Structural design and construction of the appliance shall ensure strength is adequate to withstand loads likely to arise during use of the appliance from associated plant and equipment and from process materials. Such loading shall include seismic loadings;
- (c) The design process shall include failure mode and effects analysis of the whole appliance including the valve train, all control systems and associated equipment. This analysis shall include the effect of variations in the electrical voltage;
- (d) The sufficiency of those details of the design, required by AS 3814/AG 501 to be submitted to the technical regulator for approval (clauses 1.2.3, 1.2.4, 2.26.3 and 5.3.10 of AS 3814/AG 501), shall be verified by a suitably qualified person independent of the designer.

NOTE – This may be a person in the same organization.

**A2.6** *AS 4551/AG 101-2000 Domestic gas cooking appliances*

No additional requirements.

**A2.7** *AS 4552/AS102-2000 Gas water heaters*

Additional requirements:

- (a) Freestanding appliances shall be capable of restraint against earthquake forces without compromising any aspects of performance;
- (b) Appliances with fan assisted combustion systems shall satisfy the combustion test criteria when tests are conducted at 89 % and 105 % of rated supply voltage;
- (c) Appliances intended for outdoor installation shall comply with suitable tests (yet to be determined) or be labelled as unsuitable for installation where they would be exposed to sub-zero conditions.

**A2.8** *AS 4553/AG103-2000 Gas space heating appliances*

Additional requirement:

Freestanding appliances shall be equipped to safely shut off if overturned.

**A2.9 AS 4556/AG 106-2000 Indirect gas-fired ducted air-heaters**

Additional requirement:

Appliances shall be provided with controls or means of support or of attachment to the building sufficient to maintain their safety under seismic loadings.

Amd 1  
May '05

**A2.10 AS 4557- 2004 Domestic outdoor gas barbecues**

No additional requirements.

**A2.11 AS 4558/AG 108-2000 Decorative gas log and other fuel effect appliances**

Additional requirement:

Appliances shall be provided with means for securing them to the building sufficient to withstand seismic loadings.

Amd 1  
May '05

**A2.12 AS 4565-2004 Radiant gas heaters for outdoor and non-residential indoor use**

No additional requirements.

**A2.13 JIS S 2147:1998 Portable cookers attached to liquefied petroleum gas cylinder**

Additional requirement:

Appliances shall be tested to ensure flame stability when subjected to a draught equivalent to that used in AS 4551 directed on the front and the sides of the appliance.

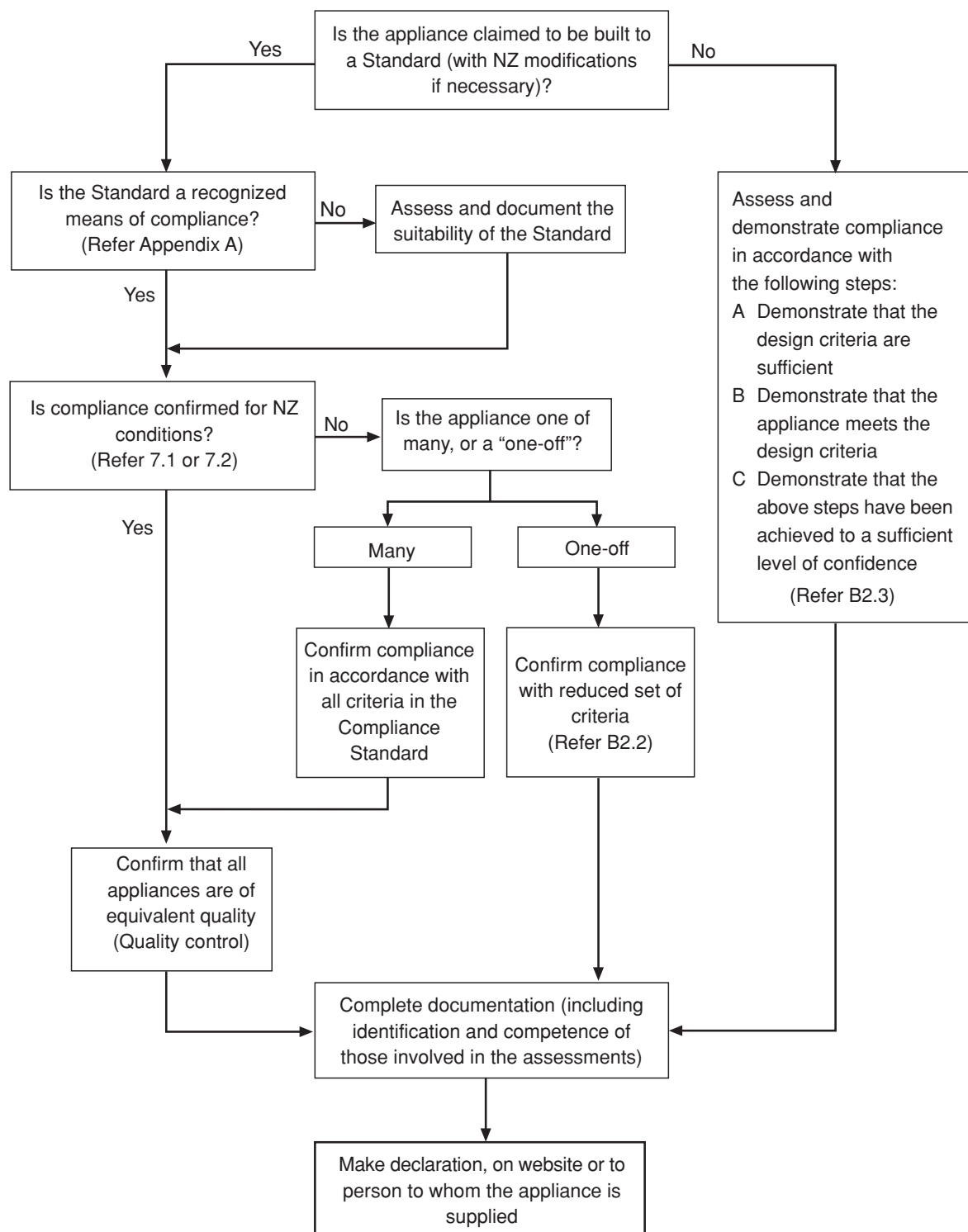
**A2.14 BS EN 449:2002 Specification for dedicated liquefied petroleum gas appliances.  
Domestic flueless space heaters (including diffusive catalytic combustion heaters)**

No additional requirements.

NOTE – The following Standards have been evaluated, but are insufficiently comprehensive to qualify for recognition as a Compliance Standard:

- (1) BS EN 676:2003 *Automatic forced draught burners for gaseous fuels*  
As this Standard covers automatic forced draught burners for fitting to appliances, it cannot stand alone as an appliance Standard. Other requirements for the relevant appliance apply additionally. Appliances equipped with burners to BS EN 676 will require testing in accordance with NZS 5262 clause B2.3.2 to ensure compliance of the appliance as a whole.
- (2) DIN 4788.1:1977 *Gas burners without blowers*  
As this Standard covers only burners for fitting to appliances, it cannot stand alone as an appliance Standard. It relies on compliance with other DIN Standards for many requirements and on installation testing to DGVW G622 for combustion performance. Appliances equipped with burners claiming compliance with DIN 4788:Part 1 will require testing in accordance with NZS 5262 clause B2.3.2 to ensure compliance of the appliance as a whole.
- (3) AS 1375-1985 *Industrial fuel-fired appliances* (known as the SAA Industrial Fuel-fired Appliances Code)  
This Standard addresses many of the relevant requirements of NZS 5262 but does not give quantitative performance criteria. Any appliance constructed to AS 1375 is likely to comply with NZS 5262, but will require testing in accordance with NZS 5262 clause B2.3.2 to ensure compliance of the appliance overall. On-site testing of the appliance is required.
- (4) NFPA 54-2002 *National fuel gas code*  
This Standard is an installation code, similar in scope to NZS 5261:Part 2. It does not address the requirements in NZS 5262 that are specific to appliances.
- (5) NFPA 85-2004 *Boiler and combustion systems hazard code*  
This Standard covers the hazards controlled by burner management systems but does not address many of the other relevant requirements of NZS 5262. Any appliance designed and constructed on the basis of this code is likely to comply with NZS 5262, but will require comprehensive commissioning and testing possibly in excess of the tests outlined in NZS 5262 clause B2.3.2 to ensure compliance of the appliance overall. Extensive on-site testing of the appliance is required.

(Amendment No.1, May 2005)

**APPENDIX B****ESTABLISHING THE COMPLIANCE OF GAS APPLIANCES WITH NZS 5262** (page 15)**Delete** figure B1 and **substitute**:Amd 1  
May '05**Figure B1 – Gas appliance assessment flowchart**

(Amendment No.1, May 2005)