

## STANDARDS ALERT: Publication of AS/NZS 5601.2 2020 – Gas installations, Part 2: LP Gas installations in caravans and boats for non-propulsive purposes

On 1 October 2020, Standards Australia published the revised AS/NZS 5601.2: 2020 – Gas installations, Part 2: LP Gas (LPG) installations in caravans and boats for non-propulsive purposes.

### Commencement

The requirements of this standard will apply from 1 April 2021, except for changes relating to cylinder quick-connect devices which will apply from 1 October 2021.

### Scope

This standard outlines requirements relating to the design, installation, repair, alteration, modification, replacement and commissioning of LPG installations in caravans and boats for non-propulsive purposes. The standard forms part of the Victorian plumbing regulatory regime and applies to gasfitting work carried out in Victoria.

### Regulatory bodies

Standard installations in caravans are regulated by the Victorian Building Authority (VBA) via Section 221B of the *Building Act 1993* which defines plumbing laws as including provisions in the *Gas Safety Act 1997* and the *Gas Safety (Installation) Regulations 2018*.

Complex installations in boats and catering vehicles are regulated by Energy Safe Victoria (ESV) via Section 72 of the *Gas Safety Act 1997* and the *Gas Safety (Installations) Regulations 2018*.

### Key changes

The following sections provide a summary of the key changes to AS/NZS 5601.2. Gasfitters must refer to the whole standard for full details of requirements.

### Section 1 Scope and general

#### Clause 1.3 Terms and definitions

The definitions of “controlled area”, “domestic caravan”, “encapsulated”, “ignition source”, “non-sparking by nature”, “quick-connect device (cylinder)” and “toughened safety glass” have been included or updated in the standard.

### Section 2 Essential safety and performance-based design requirements

#### Clause 2.4.5 Use of [in situ fill] cylinders

A cylinder that is filled from a tanker is defined as an in-situ fill cylinder. The installation or storage of in-situ fill cylinders on or in a caravan is now prohibited.

Refer to clause 2.4.5 for information on boats.

### Section 3 Means of conformance – cylinders

#### Clause 3.1.8 Required clearances around a cylinder

To provide clarity for clearances from LPG cylinders on the drawbar of a domestic caravan to ignition sources, a detailed diagram has now been provided (see figure 3.1.8(A)). Where vapour barriers are installed to achieve separation distances, evidence (in the form of documentation) must be provided to demonstrate compliance with this clause. Refer to ‘controlled area’ in Figure 3.1.8(A).

#### Clause 3.3.4.1 Access to internal cylinder compartments in caravans

Cylinder compartments or lockers must:

- have access doors that can only be opened from the outside
- not contain more than two 10kg cylinders
- be sealed to prevent the flow of vapour into the caravan
- provide for compartment drainage or ventilation.

## Section 5 Means of conformance – piping and fittings

### *Clause 5.1.4.2 Low pressure*

Annealed or hard-drawn copper piping may now be used on houseboats used on inland waters.

### *Clause 5.1.4.3 Materials for piping systems*

Hose assembly (pigtail) between the cylinder and gas regulator must be certified to AS/NZS 1869: Class F with an excess flow valve immediately upstream of the hose assembly.

### *Clause 5.1.4.4 Prohibited types of piping, joints and fittings*

The use of press-fit connections in piping is now specifically prohibited (clause 5.1.4.4(g)).

### *Clause 5.3 Encapsulated electrical devices*

To prevent an electrical ignition source, compartments or lockers on caravans must not contain any electrical equipment other than encapsulated gas safety shut-off valves.

Gasfitters must refer to the manufacturer's installation instructions on the type of encapsulated device that applies to the installation. Please also refer to Clauses 3.3.1(g) and 3.3.3(i) for additional requirements.

## Section 6 Means of conformance – gas appliances

### *Clause 6.11.1 Clearances around gas cooking appliances*

There are new specified clearance requirements for installing gas cooking appliances in new or existing caravans and boats to align with the international IEC standard for rangehoods.

The increased height clearance is between the pan support of the cooking appliance and a range hood or exhaust fan.

Gasfitters must refer to mandatory manufacturer's installation instructions for applicable height clearances. If the manufacturer's clearances are not specified, the clearance must be installed to the specifications in Clause 6.11.1 (a) and Figure 6.11.1 as minimum clearance requirements.

For replacement of existing cooking appliances, clearance from the highest part of the

burner to the rangehood shall be not less than 600 mm unless the manufacturer's instructions specifies a greater clearance.

## Appendix B – Thermal protection of combustible materials

Specifications for materials to provide thermal protection of combustibles adjacent to gas appliances must comply with the new Table B.2. These include 'Thermal protection of combustibles' and testing requirements for 'maximum co-efficient of heat transfer'.

Gasfitters should refer to AS/NZS 5601.1 for commercial catering protection requirements.

## Appendix C – Pipe sizing

New gas pipe sizing graphs and tables include flow calculation formulas. These tables allow for pressure losses that occur due to diameter, pressure drop and roughness.

The pipe sizing tables specify the flow of gas in megajoules per hour and allowable pressure drop through various piping systems.

The shaded values in Figures 6.7(A) and F6.7(B) under clause C6.7 should not be used unless verified by a competent person.

For sizing pipe systems that are not listed in Appendix C, gasfitters should refer to the manufacturer's sizing charts.

## Appendix E – Testing gas installations

### *E.3.2 Method 1 – Pressure loss*

When testing for gas leakage on appliances with interlocks, gasfitters must ensure all gas appliance isolation valves are open and appliance control valves are turned off.

Gasfitters should refer to clause E.3.2.1 for further information.

## Appendix L – Purging

A new appendix on purging has been introduced for consistency with the purging appendix in AS/NZS5601.1.

When purging gas systems on existing or new installation in poorly ventilated spaces, the purged gas must be dispersed to the atmosphere to reduce the possibility of an explosion.

Gasfitters must refer to Appendix L for purging requirements.

## Other information

### Introduction of cylinder quick-connect device (Type 27 valve)

As of 1 October 2021, existing LP cylinder 'POL' (Type 21) fittings/valves will be gradually phased out on leisure cylinders (nominally 10kg or less) and replaced by 'Type 27' quick-connect device valves with an external thread.

The new valve will be known as the Leisure Cylinder Connection Type 27 valve or LCC27. These new valves won't allow gas to flow when the valve is open unless the gas connection is made, and will reduce the risk of potential gas leakage and gas safety incidents. The matching pigtail connection is referred to in AS/NZS5601.2 as a "cylinder quick-connect device".

The below table sets out the transition timeframes for these changes.

For guidance on acceptable materials to be used between the cylinder and regulator for piping systems in caravans and boats, gasfitters must refer to Table 5.1.4.3.

Note: Adaptors to convert a Type 21 to a cylinder quick-connect device shall not be permitted.

### Prohibited cylinder connection methods

AS 2473.2 Valves for compressed gas cylinders, Part 2: Outlet connections (threaded) and stem (inlet) threads is a secondary referenced document which prohibits the use of elastomeric jointing methods (Bullnose fittings) on Type 21 POL connections.

### Want to know more?

This Information Sheet provides an overview of changes and updates to AS/NZS 5601.2: 2020. It is not intended to be a substitute for the whole standard.

The VBA and ESV strongly encourages practitioners to consult the complete standard to ensure they comply with all Deemed-to-Satisfy requirements.

The full text of AS/NZS 5601.2: 2020 can be accessed at:

- <https://www.saiglobal.com/online>
- <https://www.techstreet.com>

If you have questions about or require further information regarding the updated AS/NZS 5601 series, please contact:

#### Victorian Building Authority

1300 815 127

[plumbingtechnicaladvice@vba.vic.gov.au](mailto:plumbingtechnicaladvice@vba.vic.gov.au)

#### Energy Safe Victoria

1800 652 563

[gastechnicalenquiry@energysafe.vic.gov.au](mailto:gastechnicalenquiry@energysafe.vic.gov.au)

### Transition timeline

Connection location	Connection Type	Up to 31 March 2021	From 1 April 2021	From 1 October 2021	From 1 April 2022
<b>Cylinder outlet</b>	Type 21 (POL)	Permitted	Permitted	Not permitted	Not permitted
	Type 27 (LCC27)	Not available	Permitted	Permitted	Permitted
<b>Appliance connector (cylinder quick-connect device)</b>	Type 21 (POL)	Permitted	Permitted	Permitted	Not permitted (Subject to future amendment)
	Type 27 (LCC27)	Not available	Not available	Permitted	Permitted