AS/NZS5601.2:2013 Gas installations

Part 2: LP Gas installations in caravans and boats for non-propulsive purposes

Comparison 2010 – 2013

Background

Standards are living documents that must reflect progress and innovation within the scope of the relative industry. To maintain currency and relevance they must undergo periodic review.

Australian Standards are developed and reviewed by Standards Australia. To assist with this process, committees are formed by Standards Australia that includes representatives from stakeholders within relevant industries.

The committee responsible for AS/NZS5601 Part 1 and 2 is AG-006. The organisations represented on the committee are listed in the opening pages and include gas appliance/equipment manufacturers, gas companies and technical regulators.

In Queensland, the current preferred Australian Standard for gas fitting in caravans and boats is AS/NZS5601.2:2010 Gas Installations Part: 2 LP Gas installations in caravans and boats for non-propulsive purposes. This standard was recently revised and republished on 16 September 2013.

Queensland legislation is being amended to make the 2013 publication the preferred standard for gas fitting in caravans and boats from 1 July 2014.

This document and proposed trade presentations are being provided by the Department of Natural Resources and Mines to assist the gas industry with the implementation of the new standard.

Availability

Publishing rights for the standards are held by SAI Global. Standards are available from the SAI Global online store or you may be able to purchase printed and DVD versions from your local gas equipment supplier.

Summary

The latest version of AS/NZS5601.2:2013 now includes a 'contents' listing at the start of each section, and the index at the back has been reintroduced. A number of definitions have been reworded and new definitions added to clarify the meaning of some clauses.

Below is an outline of the main differences, but it is not comprehensive and is provided as a guide only. After 1 July 2014 during the design, installation, alteration or certifying of gas systems within the scope of AS/NZS5601.2:2013 part 2 reference must be made to the 2013 version.

Section 1 – Scope and general

AS/NZS5601.2:2010			AS/NZS5601.2:2013		
Clause		**Comment**	**Clause**		**Comment / change**
1.6.1	Definition – accessible	To more clearly define when and where access to gas equipment and fittings is required, a new definition readily accessible has been included	1.7.1	Definition – accessible	2013-1.7.1. Definition of accessible now includes a reference to “testing”. A new definition “readily accessible” has been introduced which requires access without the use of a tool.
			1.7.1.1	Definition – readily accessible	A new definition “readily accessible” has been introduced which requires access without the use of a tool.

Section 2 – Performance-based design and other essential requirements

Section 2 is not a means of compliance. The wording of a number of clauses has been reviewed to provide clarity. Specific considerations are required when applying the requirements of this section. Designers and installers should contact the Petroleum and Gas Inspectorate before any design or installation is undertaken under these clauses.

Section 3 – Means of compliance – Cylinders

AS/NZS5601.2:2010			AS/NZS5601.2:2013		
Clause		**Comment**	**Clause**		**Comment / change**
3.4.1(f)	Cylinder compartments and LP Gas lockers-	Caravans = Allows for 25mm drain in the rear of the compartment and	3.4.1(f),	Cylinder compartments and LP Gas lockers-	Caravans = Allows for a **500mm^2** clear opening instead of a 25mm drain. Also

AS/NZS5601.2:2010			AS/NZS5601.2:2013		
	caravans	also allows an as an option an upper and lower vent in the compartment door, each vent with an area of 10,000mm2 per cylinder.		caravans	allows an as an option an upper and lower vent in the compartment door, each vent with an area of **5,000mm^2** per cylinder. This edition also specifies that the drain opening or the lower compartment door vent cannot be more than 25mm from the compartment base.
3.4.3(h)	Cylinder compartments and LP Gas lockers-boats	**Boats = Ø19mm** drain required in the base of the compartment	3.4.3(h)	Cylinder compartments and LP Gas lockers-boats	**Boats = Ø19mm** drain required in the base of the compartment.
Figure 3.4	Typical LP Gas lockers and cylinder compartments showing vent and drain alternatives	25mm diameter does not state OD or ID, also not consistent with references to other ventilation requirements in mm^2	Figure 3.4	Typical LP Gas lockers and cylinder compartments showing vent and drain alternatives	Figure changed to show Option 1 or Option 2 min. 500mm^2 drain Note: 25mm diameter hole = 491mm^2
3.4.1(h), 3.4.3(j)	Cylinder compartments and LP Gas lockers	Cylinder compartment design and desire for more storage leading to ignition sources and other equipment being stored with cylinders	3.4.1(h), 3.4.3(j)	Cylinder compartments and LP Gas lockers	New sign for caravans and boats to be displayed in or on the cylinder compartment warning that only cylinders and their associated equipment are to be permitted within the compartment

AS/NZS5601.2:2010			AS/NZS5601.2:2013		
Figure 3.5	Combined cylinder compartment / LP locker	Updated to show position of label	Figure 3.5	Combined cylinder compartment / LP locker	Changes to diagram identifies labels and seals required

Section 4 – Means of compliance – Gas pressure regulators

AS/NZS5601.2:2010			AS/NZS5601.2:2013		
Clause		**Comment**	**Clause**		**Comment / change**
4.1	Suitability of pressure regulators	Regulators were required to **comply with** AS4621 and provide over pressure protection to limit downstream pressure to 14kPa	4.1	Suitability of pressure regulators	Regulators must be **certified to** AS4621 or UL 144 and provide over pressure protection to limit downstream pressure to 14kPa
Comply with: to conform to something; to obey guidelines or regulations; to agree to something			**Certified to**: Formal procedure by which an accredited or authorised person or agency assesses and verifies (and attests in writing by issuing a certificate) the attributes, characteristics, quality, qualification, or status of individuals or organizations, goods or services, procedures or processes, or events or situations, in accordance with established requirements or standards		
4.3	Mounting and support of regulator	Regulator to be located above the cylinder to permit drainage of liquid back into the cylinder. Figure H1 shows the entire regulator above the cylinder valves.	4.3	Mounting and support of regulator	Regulator to be positioned to permit drainage of liquid back into the cylinder
Figure H1		Diagram shows the entire regulator above the cylinder valves. Note	Figure H1		Diagram does not show the entire regulator above the cylinder valves.

AS/NZS5601.2:2010			AS/NZS5601.2:2013		
		"Regulator outlet above height of cylinder valves"			

Section 5 – Means of compliance – Piping and fittings

AS/NZS5601.2:2010			AS/NZS5601.2:2013		
Clause		**Comment**	**Clause**		**Comment / change**
Table 5.1	Materials for consumer piping systems in caravans and boats		Table 5.1	Materials for consumer piping systems in caravans and boats	Stainless steel ASTM A269 grade 316 or 304 assembly can be used as a pigtail between cylinder and regulator
Table 5.1			Table 5.1	Materials for consumer piping systems in caravans and boats	Hose assembly class D and F can be used as a pigtail in addition to class C
Table 5.1			Table 5.1	Materials for consumer piping systems in caravans and boats	Hose assembly class A, B and D can be used in addition to class C between the regulator and appliances
5.2.2	Piping in caravans		5.2.2	Piping in caravans	Shut off valves and hoses must be accessed without the use of a tool; i.e. readily accessible (refer definition)
5.2.2	Piping in caravans	Changes in caravan design and construction	5.2.2	Piping in caravans	Where there is a false bottom to protect the piping,

AS/NZS5601.2:2010			AS/NZS5601.2:2013		
		have resulted in gas piping being run in voids beneath the living space floor			the void between the false bottom and the living space must be sealed from the living space and shall be provided with 500mm^2 ventilation area adjacent to any unions and joints to allow any leaking gas to escape
5.2.3	Piping in boats	To more clearly define when and where access to gas equipment and fittings is required, a new definition readily accessible has been included	5.2.3	Piping in boats	Shut off valves and hoses must be accessed without the use of a tool; i.e. readily accessible (refer definition)
Note: 2.11.2	Use of a hose assembly	Changes in caravan design and construction has increased the number of slide out compartments. Wording has been amended to address this development	Note: 2.11.2	Use of a flexible hose	Wording of 2.11.2 has been amended to include the use of a hose from the regulator to rigid pipe and from the rigid pipe of the caravan to the rigid pipe of the slide out section.
5.2.5	Hose assemblies		5.2.5	Hose assemblies	The wording is not included in the means of compliance (3-9) and requires consultation with the Technical Regulator

AS/NZS5601.2:2010			AS/NZS5601.2:2013		
5.2.5	Hose assemblies	Hose length restricted to 1.5m	5.2.5	Hose assemblies	There is no restriction on hose length. However the hose must be as short as practicable for its intended application to restrict kinking and damage

Section 6 – Means of compliance – Appliances

AS/NZS5601.2:2010			AS/NZS5601.2:2013		
Clause		**Comment**	**Clause**		**Comment / change**
6.2	Restrictions on stowed appliances	Increasing number of stoves / cook tops installed beneath hinged bench top to increase worktop area	6.2	Restrictions on stowed appliances	An informative note explains that a cooking appliance installed beneath an aftermarket lid or cover is considered a stowed appliance
6.8	Space heaters	Becomes 6.9 in AS/NZS5601.2:2013	6.9	Space heaters	Change of clause numbering only, space heaters must be room sealed
No reference to electrical requirements in AS/NZS5601.2:2010			6.8	Electrical requirements	Reflects requirements from AS/NZS5601 Part 1 *Note*: 6.8.2 Australia only
6.1	Refrigerators	Becomes 6.11 in AS/NZS5601.2:2013	6.1	Cooking appliances	

AS/NZS5601.2:2010			AS/NZS5601.2:2013		
6.9.1	Clearances around gas cooking appliances	Stakeholders requested clarification in this clause	6.10.1	Clearances around gas cooking appliances	Clause has been revised to include additional information Gas cooking appliances shall be installed in accordance with manufacturer's instructions Overhead clearance to range hoods and exhaust fans is taken from the highest part of **the highest burner** and not the hob
6.10.2	Vents (Refrigerators)	No size for vent identified	6.11.2	Vents (Refrigerators)	Vent to be provided at bottom level of compartment to allow LP Gas to escape to outside, 500mm^2
6.10.3	Clearances	No requirement for sealed recess	6.11.3	Clearances	Refrigerators required to be installed in a **sealed recess**
6.10.4	Ventilation	Revised to provide further guidance	6.11.4	Ventilation	In the absence of manufacturer's instructions…
6.13	Spa pool heaters on boats	Requirements from AS/5601.1:2010 Gas Installations – General installations not reflected in the requirements of Part 2	6.13.4 6.13.5 6.13.6	Requirement for pool heater where flow and return water pipes are of plastic	Relevant clauses to reflect requirement from AS/5601.1:2010 Gas Installations – General installations

Section 7 – Means of compliance – Ventilation

AS/NZS5601.2:2010			AS/NZS5601.2:2013		
Clause		**Comment**	**Clause**		**Comment / change**
7.1	General	Reference to accumulation of any LP Gas leakage is an inaccurate reference	7.1	General	Specifies that the ventilation is to prevent condensation and build-up of combustion products or other toxic products *Note*: The ventilation is not designed to prevent the accumulation of leaking gas
7.3.1	Minimum free area	Industry confusion over where the ventilation requirement is to be applied	7.3.1	Minimum free area	Ventilation area is calculated based upon the number of sleeping spaces in the caravan or boat and the total gas consumption of all gas appliances (excluding room sealed appliances) in the space *Note 1* clarifies that the vent area applies to the space in a caravan or boat in which gas appliances are installed and which may be temporarily divided by curtains or doors *Note 4* gives guidance on how much the ventilation area

AS/NZS5601.2:2010			AS/NZS5601.2:2013		
					should be increased by when mesh is placed over vents The use of mesh over vents is mentioned in an informative note
		No requirement for vent warning label in AS/NZS5601.2:2010	7.4.4	Vent warning label	New label required to advise the vent must remain open and clean when gas appliances are in use

Section 8 – Means of compliance – Flues

AS/NZS5601.2:2010			AS/NZS5601.2:2013		
Clause		**Comment**	**Clause**		**Comment / change**
8.4	Location of flue terminals	Clause has been revised to address issues with the installation of an awning and to reflect the covered area requirements of AS/5601.1:2010 Gas Installations – General installations	8.4.2	Termination of a flue under a cover	Reflects the requirements of AS/5601.1:2010 Gas Installations – General installations To be applied if caravan has an awning area attached Addition of Appendix L to cover the use of barbeques and outdoor heaters

Section 9 – Means of compliance – Testing and commissioning

Notes included to refer to Appendix I for guidance for gas appliance commissioning and Appendix K for a checklist for checking installation compliance prior and during commissioning

Appendices

Appendix		Comment	Appendix		Comment
Appendix A	Conversion factors	Appendix A moved to Appendix B	Appendix A	Normative references	Appendix B moved to Appendix A
Appendix F2	Testing gas installations	Testing pressure set to 7 KPa	Appendix F2.1	Testing gas installations	Testing pressure set to 14 KPa
Appendix G	Consumer instructions	Appendix informative	Appendix G	Consumer Instructions	Appendix **Normative**
Appendix H	Method of locating gas pressure regulators	Figure H1 and attached note indicated regulator outlet above cylinder valve, contrary to the requirement of clause 4.3	Appendix H	Method of locating gas pressure regulators	Figure H1 amended and note removed to reflect the requirement of clause 4.3
No Appendix I in AS/NZS5601.2:2010			Appendix I	Guidelines to gas appliance commissioning	Introduction of Appendix I (informative) for commissioning in the absence of manufacturer's instructions
No Appendix J in AS/NZS5601.2:2010			Appendix J	Symbols used in gas control system diagrams	Introduction of Appendix J (informative) to assist with gas system design

No Appendix K in AS/NZS5601.2:2010	Appendix K	Gas installation checklist	Introduction of Appendix K (informative) to assist with gas system compliance assessment
No Appendix L in AS/NZS5601.2:2010	Appendix L	Appliances in outdoor areas	Introduction of Appendix L (informative) to reflect outdoor areas from AS/NZS5601 Part 1
No Bibliography in AS/NZS5601.2:2010	Bibliography		Introduction of Bibliography
No Index in AS/NZS5601.2:2010	Index		Re-introduction of Index, included in 2004 version but removed from 2010 version

For more information, telephone 3199 8027 or email gassafe@dnrm.qld.gov.au or visit www.dnrm.qld.gov.au