

Changes to gasfitting standards

Frequently Asked Questions

LEISURE CYLINDER CONNECTION TYPE 27 VALVE (LCC27) AND MATING CYLINDER QUICK CONNECT DEVICE

What size LPG cylinders does the change to the LCC27 valve affect?

The change to the new Type 27 valve will affect leisure cylinders only (normally, 9kg or 4.5kg cylinders).

Larger cylinders will continue to use the current Type 21 valve (POL fitting). Typically, larger cylinders (for example, 45kg cylinders) are changed by trained professionals to reduce the risk of leakage at the connection. Because the Type 27 valve incorporates a back check valve, restriction to gas flow would be a problem when operating gas appliances with high gas consumption from larger cylinders.

Does the change only apply to the cylinder valve or also to the appliance/pigtail connection?

The appliance/pigtail connection will change also. The new connection is referred to in AS/NZS 5601.2: 2020 as a “cylinder quick-connect device”.

Why is the change to the LCC27 valve and quick-connect device occurring?

The change is designed to reduce the number of injuries and fatalities caused by LP gas leaking at the cylinder connection when consumers are using leisure cylinders with the current Type 21 valve and mating POL fitting. The new LCC27 valve incorporates a back check valve that will prevent gas flow even when the LPG cylinder valve handle is in the open position unless the appliance is connected to the valve.

When will the new LCC27 valve and cylinder quick-connect device be available?

The LCC27 valve will be supplied to the market from 1 April 2021. There will be a 6-month period where new cylinders can be manufactured with either the current Type 21 valve or the new LCC27 valve. Cylinders manufactured after 1 October 2021 can only be manufactured with the new LCC27 valve. Appliances manufactured after 1 April 2022 can only be manufactured with the “cylinder quick-connect device”.

Will the change affect existing leisure cylinders and appliances/pigtails?

Leisure cylinders are re-tested every 10 years based upon the date stamped on the cylinder collar. If the date has elapsed on an existing empty cylinder, then the cylinder will be re-tested at a gas cylinder test station and, at that point, the old Type 21 valve will be removed and replaced with the new LCCV27 valve.

The LCC27 valve incorporates an external right-hand thread for mating with the new “cylinder quick-connect device” and an internal left-hand thread to mate with the existing POL fittings. Therefore, existing appliances/pigtails with POL fittings can be connected to the new valve without any change.

If I buy a gas appliance/pigtail which uses the new quick-connect device from 1 April 2022, will I be able to connect to the current Type 21 valve or can I use an adaptor?

No. You should return your cylinder with the Type 21 valve to your local SWAP'n'GO and replace it with a cylinder which has the new LCC27 valve. The use of Type 21 adaptors (POL) is not permitted because they increase the possibility of gas leaks.

Is the plastic nut on the “cylinder quick-connect device” UV-stable?

The plastic nut must be designed to comply with the requirements of “AS 4627 Quick-connect devices for gas”, including exposure to ultraviolet (UV) light. These requirements are based upon the North America requirements to standards “UL 2061 Standard for adaptors and cylinder connection devices for portable LP gas cylinder assemblies” or ANSI Z21.81.

The Type 27 cylinder quick-connect device includes thermal protection which enables the cylinder valve to isolate the gas supply if the cylinder connection is on fire.

Do you have to change existing gas appliances and hose assemblies with POL fittings once the new LCC27 valve is in the market?

No. The LCC27 valve is backward-compatible, so POL fittings on existing appliances and hose assemblies can still be connected.

Why are the cylinder quick-connect devices being mandated on appliances 12 months after the introduction of the LCC27 valve?

The 12-month period is being provided to allow sufficient time for cylinders with LCC27 valves to enter the market.

Will LPG cylinder gauges still be able to be used once the change-over occurs?

LPG cylinder gauges with a Type 21 POL connection can still be used on the new LCC27 valve because the valve includes an internal left-hand thread.

AS/NZS 5601.2: 2020 FOR CARAVANS

Can an exhaust pipe be classified as an ignition source?

Yes. The exhaust pipes of diesel/petrol campers and recreational vehicles (RVs) have the potential to backfire and ignite LP vapour. Therefore, a minimum clearance of 1500mm must be achieved. Do the changes to clearances between gas cooker and rangehoods apply to new or existing installations?

The 650mm minimum clearance applies for new installations only. A lesser clearance is allowed if that appliance has been certified, or approved by Energy Safe Victoria (ESV). A cooker that has been replaced in an existing caravan can have the same minimum 600mm clearance unless the manufacturer’s installation instructions specify a greater clearance.

What type of piping and jointing systems can be used in caravans?

Copper, stainless steel and hose assemblies can be used in a caravan gas system as per Table 5.1 of AS/NZS 5601.2: 2013 and Table 5.1.4.3 of AS/NZS 5601.2: 2020.

From 1 April 2021, AS/NZS 5601.2: 2020 version must be used.

Is a compliance certificate required to be issued for all gas work?

A compliance certificate must be issued within 5 days of completion of the plumbing work when:

- the total cost of the plumbing work (including parts and labour) is \$750 or more
- it involves the installation, relocation or replacement of any gas-using appliance
- it involves the conversion of a gas-using appliance for use with a different gaseous fuel
- consumer gas piping has been installed, modified or relocated.

What is the recommended size in the compartment drainpipe?

Clause 3.3.1(f) of AS/NZS 5601.2 specifies the drain requirements for cylinder compartment or LP gas locker.

- Option 1 – compartment drain 500mm²

- Option 2 – 5000mm² minimum upper and lower ventilation requirements.

When do the new requirements for caravan vapour barrier come into effect?

From 1 April 2021, AS/NZS 5601.2: 2020 must be complied with, including requirements around caravan vapour barriers. A longer transition time applies (from 1 October 2021) for requirements relating to cylinder quick-connect devices.

Is a caravan located in a permanent location (for example, caravan park) with their tow hitch and wheels removed and on blocks regarded as a caravan or dwelling?

Clauses 1.1, 1.2 and 1.3 of AS/NZS 5601.2 specify the scope and definitions for LP gas installations in caravans and boats. A caravan located in a permanent location with the tow hitch and wheels removed is considered a dwelling, so any gasfitting work must comply with AS/NZS 5601.1.

For press-fit fittings, what happens to existing and previous installations in caravans? Is there a safety recall to retrofit the existing gas system?

The use of press-fit connections has been prohibited since at least 1995. Clause 5.1.4.4 of AS/NZS 5601.2: 2020 makes it clearer that press-fit connections are prohibited.

Boats and caravans installed with press-fit connections will be deemed noncompliant and must be rectified by the installing gasfitter.

Can a parallel threaded type fitting be used on a caravan or must it be a British Standard Pipe Thread (BSPT) fitting?

An external parallel thread to an internal parallel thread may be used on a caravan provided approved jointing methods are used such as a permanent quick setting compound.

Who is the responsible regulator (VBA or ESV) for BBQ trailers?

Barbecue (BBQ) trailers or catering vehicles are regulated as complex installations. Gasfitters working on these vehicles must submit their application to ESV prior to gasfitting works to ensure the installation is ESV-approved.

QUESTIONS RELATING TO AS/NZS 5601.2: 2020 FOR BOATS

Can press-fit fittings vibrate-free?

Yes. The Victorian Building Authority and Energy Safe Victoria are aware of instances where press-fit connectors have come loose due to vibration. The new standard reconfirms the prohibited use of press-fit fittings on house boats and caravans.

What are the options other than press-fit connections for caravans and boats?

The options that are available for connecting copper on caravans and boats are flared compression and capillary (soldered) fittings.

Does the prohibition on the use of press-fit apply to caravans and boats?

Yes. The prohibition of press-fit connections covers caravans and boats.

Does the prohibition on the use of press-fit apply to all types of press-fits?

Copper press-fit connections are prohibited from use in caravans and boats.

Multilayer gas piping systems are also prohibited from use in caravans and boats.

If I cannot install permanent ventilation in the correct position, do I need a CO detector?

You are required to install permanent ventilation in the correct position. If it is impractical to use the boat without covering the permanent ventilation, a carbon monoxide (CO) detector will be required.

Will the prohibition of B press copper fittings affect all gasfitting installations (AS/NZS 5601.1 and AS/NZS 5601.2)?

Currently, there is no intention to prohibit press-fit fittings on fixed gas installations (AS/NZS 5601.1).

If the second stage regulator is at the LP cylinder, can the entire boat be run in hard drawn copper?

If the installation is on a houseboat that will be used on inland waters, the entire installation can be hard drawn copper.

Does the updated standard (AS/NZS 5601.2: 2020) apply to retrofits on caravans and boats?

If you are modifying a gas installation, the requirements of the new AS/NZS 5601.2:2020 will apply to that part of the installation.

What is the timeframe for press fittings?

The use of press-fit connections has been prohibited since at least 1995. Clause 5.1.4.4 of AS/NZS 5601.2: 2020 makes it clearer that press-fit connections are prohibited.

Boats and caravans installed with press-fit connections will be deemed noncompliant and must be rectified by the installing gasfitter.

Want to know more?

This Information Sheet provides an overview of changes and updates to AS/NZS 5601.1: 2013. 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 Amendment 4 to AS/NZS 5601.1: 2013 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:

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