

# Type 27 Cylinder Valve Overview

28 October 2020



RVMAP™

Changes are underway to introduce an alternate LPG cylinder valve into leisure-sized LP gas cylinders, including those installed on recreational vehicles.

The current Type 21/POL valve will be replaced by a Type 27 QCC valve on all LP gas cylinders with a capacity up to 25L (nominal 10kg). The new valves will first appear in the market from April 2021 and will be mandatory on new and retested gas cylinders from 1 October 2021.



## Background

For some years there have been a significant number of incidents occurring where gas leakage from LPG gas cylinders associated with outdoor appliances has caused fires, explosions, injury and some deaths. Investigations into the causes of reported incidents, arising from high levels of concern among Fire Authorities and State Coroners, have identified a distinct set of failures that could be prevented by the introduction of a cylinder valve with additional protective and fail-safe features. Cylinder valves with such features are readily available in overseas markets and have been shown to provide significant safety benefits.

The focus of this initiative has always been primarily on outdoor leisure appliances. It was acknowledged that the same problems are not evident in recreational vehicle installations and household plumbed appliances, which was attributed to the installation by licenced gasfitters that is required by the relevant gas legislation and Australian Standards for these installations. However, to implement an effective change throughout the gas industry, the new cylinder valve will need to be applied on all gas cylinders with a capacity up to 25L (nominal 10kg) so will affect recreational vehicle cylinder installations.

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## Background continued

The new valve is a Type 27 QCC valve, to be known as a Leisure Cylinder Connection (LCC27). The main features of the LCC27 valve are:

- Incorporates a check valve, so that gas can only flow when a gas-tight connection is made.
- Large diameter right-handed thread that is able to be connected without the use of tools.
- Rubber seals are located within the body of the gas valve, reducing the incidence of them being damaged or lost.
- Connecting parts include a thermal fuse, which will melt if exposed to excessive heat. This activates the check valve to shut off the gas flow in the event the connection is exposed to a fire.
- Compatible with existing appliance connectors (Type 21 POL connectors) which will assist in the transition process.



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## Compatibility

Compatibility of the new cylinder valve with current pigtail connections was a key lobbying point by Caravan Industry Association of Australia and Caravan Industry Victoria, who participated in early consultations for this project. It was considered vital to the transition process that current RV connections could continue to be used with the new valves. Given the large fleet of recreational vehicles carrying gas cylinders, and the legislative requirements that require modifications to the pigtail fittings to be completed by a licenced gasfitter, it was considered essential to have backwardly-compatible fittings.

It is important to note, however, that the compatibility does not go the other way – new Type 27 hose connections cannot be used with old Type 21 POL cylinder valves. In light of this it is important that the implementation of new fittings is coordinated appropriately.

It is also vital to note that the use of conversion fittings is prohibited in AS/NZS 5601.2 so the use of such fittings would contravene Gas Legislation. Additionally, in practice overseas experience has shown that the use of conversion fittings increased the occurrence of gas leaks, in some cases to levels that exceeded the original problems.

CYLINDER FITTINGS COMPATIBILITY MATRIX		Cylinder Valve	
		Type 21 (POL)	Type 27 (LCC27)
Hose Connection	Type 21 (POL)	✓	✓
	Type 27 (LCC27)	✗	✓

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## Implementation within Caravan Industry (New Product)

### Cylinder valve timeline:

- 1 April 2021: LCC27 cylinder valves are permitted and will begin to appear on new (and retested) LP gas cylinders.
- April – September 2021: both LCC27 and Type 21 cylinder valves will be permitted.
- From 1 October 2021 all new and retested cylinders may ONLY be fitted with LCC27 valves. Type 21 cylinder valves are NOT permitted on new & retested cylinders after this date.

### Hose connections timeline (including pigtail connections):

- 1 October 2021: Both LCC27 and Type 21 hose connections are permitted.
- 1 April 2022: hose connections may ONLY be fitted with LCC27 fittings. Type 21 connections are NOT permitted on new product after this date.

Based on the timelines above, new vehicle manufacturers are recommended to change to the new LCC27 pigtail connections on or after 1 October 2021. Prior to this time, connection to a Type 21 cylinder valve may still be required, which can only be achieved with Type 21 pigtails.

Full details of the timeline and implementation program have been published by the Gas Technical Regulators Committee (GTRC) in their [Technical Guidance Bulletin 14](#).

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## In-Service Installations – Existing Product

Type 21 mating connections on existing installations may remain in operation until the expiry date of the gas cylinder (or any other expiring components). When exchanged or surrendered at their expiry date, cylinders will be updated to LCC27 cylinder valves, which are compatible for continued use with Type 21 pigtail connections.

Note, however, that the full safety benefits and convenience of the LCC27 connection will only be achieved by upgrading the pigtail assembly to the mating LCC27 connection. As part of a gas installation, this work must be conducted by an appropriately qualified gasfitter.

Any questions in relation to this information can be emailed to [rvm@caravanindustry.com.au](mailto:rvm@caravanindustry.com.au).

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