

Correct as at 24th June 2026. It may be superseded at any time.

Extract taken from: Alternative fuel system certification > LPG inspection > Fuel system components

## 1-5 Fuel system components

### Reasons for rejection

#### Mandatory equipment

1. A component listed in Table 1-5-1 is missing.
2. An item in Table 1-5-1 is not mounted directly on the container without any intermediate pipe or fitting, except for those components associated with a remote filling arrangement or an automatic fuel shut-off device fitted to containers manufactured prior to January 1994.

#### Filler connection

3. The filler connection cap is:
  - a) missing, or
  - b) not held captive by a strap or similar device where it would be practicable to do so.
4. The sealing washer is missing.
5. The filler connection is not protected by the body panel or by something equivalent.
6. An automatic fuel limiting valve is fitted and a notice is not displayed at the filler connection that reads AFL FITTED.

#### Safety valve system

7. A safety valve:
  - a) is mounted with another valve between it and the container, or
  - b) discharges towards or into a passenger compartment, or
  - c) discharges directly on:
    - i. the container, or
    - ii. bystanders, or
    - iii. adjacent vehicles, or
  - d) does not discharge either:
    - i. into a compartment or sub-compartment, or
    - ii. vertically upward with a tolerance of 45° from the vertical.

#### Permitted equipment

8. An automatic fuel shut-off device is fitted and:

- a) it is not mounted directly on the container, or
- b) there is no fuel filter between it and the container.

### **Condition**

- 9. A fitting is not in safe working condition (Note 1).
- 10. The wording on a label in Table 1-5-1 is not clearly legible.

### **Filler connection**

- 11. The coupling is damaged or contains foreign matter.
- 12. The condition of the sealing washer is unsatisfactory.
- 13. The filler connection housing is not soundly attached to the vehicle.
- 14. The remote fill line is damaged or twisted.

### **Hydrostatic relief valve**

- 15. A hydrostatic relief valve is damaged, blocked or has been tampered with.

### **Note 1 Definitions:**

**Automatic fill limiter** means a provision in the filling system which automatically terminates filling when a predetermined liquid level in the container has been reached.

**Automatic fuel shut-off device** means a provision for automatically shutting off the fuel supply unless certain essential conditions exist.

**Contents gauge** means a gauge which gives a visual indication of the liquid content of the container. This may be read at the container or remotely.

**Excess-flow valve** means a valve normally in the open position which closes automatically when flow in a specified direction exceeds a predetermined limit.

**Hydrostatic relief valve** means a valve whose purpose is to relieve and prevent overpressure in any fuel service line carrying LPG liquid.

**Safety valve** means a valve which automatically discharges vapour into the atmosphere so as to prevent a predetermined pressure being exceeded. It is activated by the static pressure upstream of the valve.

**Service valve** means a manually operated shut-off valve fitted on the container which can open or shut-off the LPG supply to the engine for maintenance servicing or emergency requirements.

**Table 1-5-1. Mandatory and permitted LPG alternative fuel system components (Note 1)**

Mandatory LPG alternative fuel system components	Permitted LPG alternative fuel system components
<p>Filler connection</p> <p>Filler cap</p> <p>Filler non-return valve system</p> <p>Automatic fill limiting valve (Note 2)</p> <p>Service valve (fittings to NZS 5422: 1987, Part 1 must have a permanent label with the words SERVICE VALVE or similar)</p> <p>Excess flow valve</p> <p>Safety valve</p> <p>Contents gauge with a label adjacent to the bleed valves with the words STOP FILLING WHEN LIQUID APPEARS</p>	<p>Automatic fuel shut-off device, mounted directly on the container, with a fuel filter between it and the container that is capable of removing from the fuel all particulate matter that could cause malfunction of the automatic fuel shut-off device or pressure regulator</p> <p>Hydrostatic relief valve</p> <p>Any component that forms part of the originally certified LPG alternative fuel system</p>

## Summary of legislation

### Applicable legislation

- [Land Transport Rule: Vehicle Standards Compliance 2002](#)
- [Land Transport Rule: Vehicle Equipment 2004](#)
- AS/NZS1425: 2003, section 3.3.

### Mandatory equipment

1. An alternative fuel system with a fixed LPG container must be fitted with the components in column 1 of Table 1-5-1.
2. The components in Table 1-5-1 must be mounted directly on the container without any intermediate pipe or fitting, except for those components associated with a remote filling arrangement.

### Filler connection

3. The filler connection must have:
  - a) a cap that is captive (where practicable), and
  - b) a sealing washer.
4. The filler connection must be recessed below the body panel or be provided with equivalent protection.
5. If an automatic fuel limiting valve is fitted, a notice must be displayed at the filler connection that reads AFL FITTED.

### Safety valve system

6. A safety valve:

- a) must be mounted with no valve between it and the container, and
- b) must not discharge towards or into a passenger compartment, and
- c) must not discharge directly on:
  - i. the container, or
  - ii. bystanders, or
  - iii. adjacent vehicles.
- d) must release gas:
  - i. into a compartment or sub-compartment, or
  - ii. vertically upward, with a tolerance of 45° from the vertical, at a remote discharge point.

### **Permitted equipment**

- 7. An LPG alternative fuel system may be fitted with the components permitted in Table 1-5-1.
- 8. An automatic fuel shut-off device, if fitted, must be mounted directly on the container, with a fuel filter between it and the container that is capable of removing from the fuel all particulate matter that could cause malfunction of the automatic fuel shut-off device or pressure regulator.

### **Condition**

- 9. Container fittings must be in safe working condition.

### **Filler connection**

- 10. The coupling must be in sound condition and free of foreign matter.
- 11. The sealing washer must be in satisfactory condition.
- 12. The filler connection housing must be soundly attached to the vehicle.
- 13. The remote fill line must not be damaged or twisted.