

## HOW DOES LPG WORK?

Liquefied Petroleum Gas (LPG) is stored under pressure as a liquid in a gas bottle. It turns back into a gas when you release some of the pressure in the bottle by turning on an appliance.

## HOW MANY GAS BOTTLES DO I NEED?

Caravans generally have two 47kg propane gas bottles: one in “service” (the one currently being used); and one in “reserve”. When the service bottle runs out, you can use the reserve bottle whilst you order a replacement (therefore providing an uninterrupted supply of gas).

*The bottles alternate between being service or reserve depending on which is being used at the time.*

## HOW ARE THE BOTTLES CONNECTED TO MY CARAVAN?

They are connected by tubing, known as “pigtailes”, to an automatic changeover valve (CHO) and regulator assembly. A gas line runs from the regulator, through an emergency control valve (ECV) and pressure test point, to your appliances.

*The CHO controls which gas bottle is in use and the regulator ensures that gas is delivered at a consistent pressure.*

## HOW SHOULD THE SYSTEM BE SET UP WHEN IN USE?

- 1 Both gas bottles should be turned on (the hand-wheel at the top of each bottle should be fully rotated anti-clockwise).  
*The CHO indicator should be pointing towards the service bottle (see What Happens When The Service Bottle Is Empty?).*
- 2 The ECV should be open (the knob/lever should be in a vertical position, in line with the pipework).
- 3 The boiler should be turned on.

*Every time you go home, you should turn off the boiler, close the ECV and turn off both gas bottles.*

## HOW DO I KNOW HOW MUCH GAS IS LEFT IN A BOTTLE?

If you carefully pour a cup of warm (not boiling) water down the side of the bottle, a line of condensation should appear at the level of the remaining gas. If no line is apparent, you can also wait a few seconds and run your hand down the cylinder - it will feel cool to the touch at the level of the gas. If you see no line and feel no difference in temperature, the chances are the bottle is nearly empty.

*Gas bottles are designed to be full at 80% or just over  $\frac{3}{4}$ . They are oversized so that you get the full measure of gas (the unfilled space, called “ullage”, allows for the natural expansion of the gas during warmer temperatures).*

## WHAT HAPPENS WHEN THE SERVICE BOTTLE IS EMPTY?

The CHO indicator will typically change colour to red and gas will automatically start being drawn from the reserve bottle. *You don't have to do anything, other than call the gas supplier who will replace the empty bottle with a full one and reset the indicator for you so that it points to the bottle currently in use.*

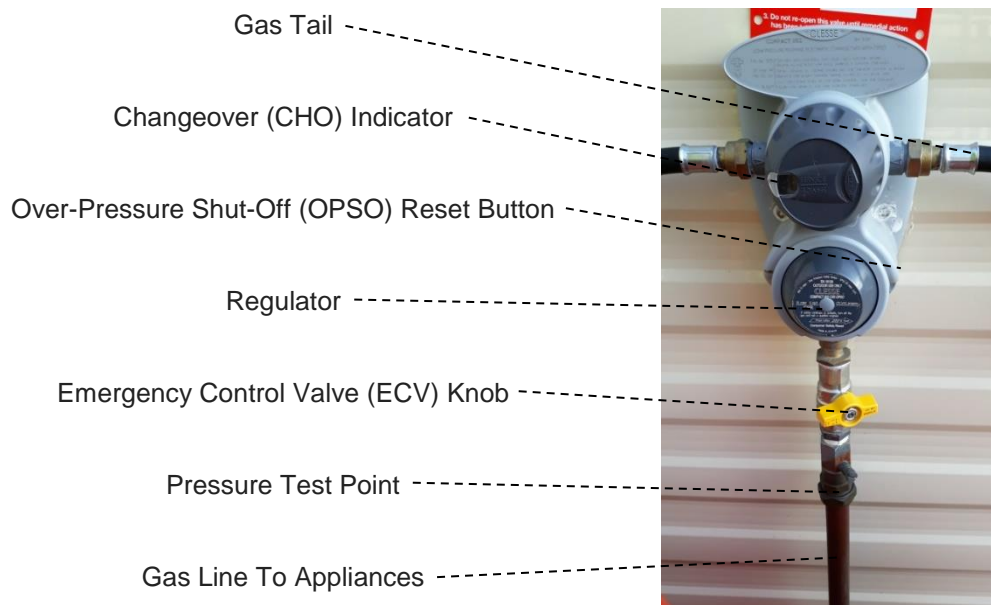
## DO YOU HAVE ANY SAFETY / OPERATIONAL ADVICE?

*When turning the hand-wheels, please do so slowly to avoid over-pressuring the system by shock.*

*Do not hang anything (chains, garden hoses etc) across the pigtailes - this will stress them and shorten their life.*

*Do not store extra gas bottles; we allow a maximum of two bottles per installation.*

## EXAMPLE SETUP (AUTOMATIC SYSTEM WITH OPSO)



Please note that in the photos shown:

The changeover indicator is pointing to the left; ie the left bottle is in service and right bottle is in reserve.

The emergency control valve is closed; ie the knob/lever is in a horizontal position, across the pipework.

### WHAT SHOULD I DO IF THERE IS NO GAS FLOW?

- 1 Check that there is gas in the service bottle.
- 2 Make sure that **both** gas bottles are turned on.
- 3 Make sure that the ECV is open.
- 4 Make sure that the boiler is on.

*If there is still no gas flow at this point, the OPSO (safety) valve has tripped and you will need to:*

- 5 Turn off the boiler and any gas appliances (cooker, gas fire etc) that were in use.
- 6 Close the ECV.
- 7 Turn off both gas bottles (fully rotate the hand-wheels clockwise).
- 8 Locate the OPSO consumer reset, which is a clear plastic button on the side of the regulator. If the OPSO has activated, a red mark will be visible through the button. To reset this, hold the regulator assembly with **both** hands and push the reset button **firmly** with your thumb until it stops. Release the button (which will return to its normal position) and, if successful, the red mark should no longer be visible.
- 9 Turn on both gas bottles.
- 10 Open the ECV.
- 11 Re-set the boiler.

### WHAT IF THERE IS A GAS LEAK?

In the unlikely event that you have a gas leak:

- 1 Turn off the boiler.
- 2 Close the ECV.
- 3 Turn off both gas bottles.
- 4 Call us!

*The smell of gas isn't always indicative of a leak! When gas bottles are almost empty, the residue in the bottom sometimes gives off a gassy odour (mainly inside, at the appliances, but occasionally outside too).*