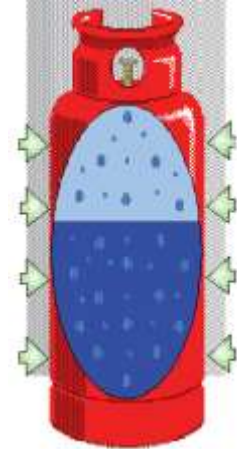


### Using Cylinders

#### What Happens Inside the Cylinder

Calor gas cylinders are specifically manufactured to store Liquefied Petroleum Gas (LPG for short) in its liquid state. The liquid turns to gas very easily and the gas fills the space above the liquid. As gas is drawn off in use, more liquid turns to gas to replace it. An external regulator connected to the supply line between the cylinder and appliance reduces the cylinder pressure and maintains it to the working pressure of the appliance as the cylinder empties until there is no liquid left to turn to gas.



#### The Regulator

A suitably rated regulator must be included in the connection between the cylinder and the appliance. The regulator is precisely set to control the pressure of the supply and **Must Not Be Adjusted**. Replace any regulator, which is not working properly, or after 10 years' of life. **Regulators must be marked BS:EN:12864 or BS:EN:16129**. Any regulator marked BS:3016 will be over 10 years old so should be replaced.

For Caravan Holiday Homes and Residential Park Homes the regulator must have an outlet pressure of 28 mbar for Butane and 37 mbar for Propane and be marked BS:EN:12864 or BS:EN:16129 (for cylinder use) or BS:EN:13785 or BS:EN:16129 when connected to a piped supply. Where an Automatic Change Over Device or Regulator is fitted to multiple Propane cylinder installations, this must have an outlet pressure of 37 mbar and be marked BS:EN:13786 or BS:EN:16129.

Guidance will be given in the manual for your caravan and a label attached to the gas inlet in the gas locker.

For Caravan Holiday Homes and Residential Park Homes The Gas Safety (Installation & Use) Regulations, Regulation 14(2) and 14(4) require an Over Pressure Shut Off (OPSO) protection device to be fitted to protect the downstream pipework supplied by four or more cylinders. Paragraph 178 extends this requirement by recommending that all installation pipework is protected by an Over Pressure Shut Off (OPSO), regardless of the number of cylinders connected. BS:6891:2015 which applies to Residential Park Homes now includes the requirement for an OPSO.

#### Flexible Hoses

Use only marked and certified hoses BS:3212, BS:EN:1763-1 or BS:EN:16436-1 which bear the year and name of the manufacturer as LPG attacks and erodes natural rubber or stainless steel convoluted hoses marked EN:10380. Keep hose lengths as short as possible and less than 2 meters in length. All flexible hoses must be secured with proper hose clips. Make sure that the hoses are kept clear of 'hot spots' and inspect them from time to time. Replace any hose that shows signs of stiffness, wear, cracking, soft spots or other damage. It is recommended that rubber hoses should be replaced after 5 years service life.

BS:6891:2015 requires "where flexible hoses, tubing and associated assemblies conforming to BS 3212, BS EN 1763-1 or BS EN 16436-1 are used they shall be armoured against rodent attack".

### Do's and Don'ts

# Technical Publication

## Using Calor Gas Safely In Your Caravan Holiday Home or Residential Park Home

- **Do** treat a cylinder with care to ensure that it and the valve is not damaged. A damaged valve could result in a leak.
- **Do** always use cylinders properly secured in the upright position, liquid gas could get into the supply pipes with serious results.
- **Do** keep all cylinders in a safe, well ventilated place, outdoors in the open air, away from escape routes, stairs, rubbish, excessive vegetation, combustible and other flammable materials and not near to any corrosive, toxic or oxidant material.
- **Do** return the cylinder when empty or when not in use for long periods.
- **Do** read the operating instructions, emergency actions and labels provided with your appliance and keep them handy for future reference.
- **Do** keep your appliance clean and have it serviced regularly by a competent person. Not only will this help to keep it safe but also means it will burn efficiently and therefore save money.
- **Do** ensure there is an adequate supply of fresh air in the room where your appliance is used. If a room has ventilators or grilles ensure these are open. If a room becomes stuffy, open a window or door immediately.
- **Do** be careful when lifting cylinders. Full cylinders weigh approximately twice the net weight shown on the cylinder.
- **Don't** attempt to disconnect a regulator from a switch-on valve (15kg and 7kg cylinders) if the flame does not go out when the regulator switch is turned off. Leave the appliance alight and call your Gas Supplier or Park Manager.
- **Don't** subject a cylinder to heat, because the pressure inside the cylinder could build up to a point beyond the designed safety limit.
- **Don't** store or use cylinders in cellars or below ground level. Propane (LPG) is heavier than air and if there was an escape of LPG, the gas will collect at low level, can be an asphyxiant, and can become dangerous in the presence of a flame or spark. For the same reason do not store cylinders any closer than 2 metres from untrapped drains, unsealed gullies or openings to cellars.
- **Don't** store or use Propane cylinders (red) indoors, because propane is contained under higher pressure and should only be kept outdoors.
- **Don't** smoke or use a mobile phone when changing a cylinder.
- **Don't** use Propane fuelled appliances at domestic or residential premises unless supplied from an external fixed installation.
- **Don't** attempt to force a regulator of one size on to a cylinder's valve of another size. If you have any difficulties contact your retailer and have the appliance checked.
- **Don't** improvise or modify your gas appliance. Do not let unqualified people tamper with or service your appliance; it could become unsafe to use. Always ask your Calor Gas retailer for advice.
- **Don't** obstruct access to cylinders

### Gas Appliances

There are many central heating boilers, water heaters, fires and cookers as well as leisure appliances that can be used with your Calor gas supply. Many look just like those for use with natural gas. They operate just as efficiently, give the same superb performance, but care must be taken when buying and using them.

When buying a gas appliance it is important to ensure it is suitable for use with Calor propane and/or butane. You should purchase appliances that bear the CE mark and have been designed for use in caravans.

Many accidents caused by faulty gas appliances involve those which may have been purchased second-hand. Special care is needed if you buy a second-hand gas appliance. Have it checked by a competent installer for safety. **If you have any doubts don't buy.**

### Installation of Appliances

It is required by law to use installers which display the Gas Safe symbol and are registered to undertake to work to the highest standards of safety. Amateurs and DIY 'experts' can put you and your family at risk and face prosecution. Don't take that risk, use the professionals.

A list of recommended installers who can install LPG appliances can be obtained from Gas Safe **0800 405 5500**.



There is a saying 'If all else fails, read the instructions'. For your own health and safety you must read the instructions and labels first, then keep them handy for reference. If there is anything you're not certain about concerning your installation please contact your installer. For advice about any other LPG appliance, please contact your Calor Dealer or appliance manufacturer.

### Servicing Appliances

Gas appliances should be serviced regularly to keep them in a safe and efficient condition. Properly maintained appliances are safe in use and are no cause for concern.

**Central Heating Boilers/Hot Water Circulators:** Boilers and water heaters should be serviced at least once a year. Your Gas Safe registered Central Heating Installer will normally undertake this work. Alternatively, contact Gas Safe, for details of Gas Safe registered installers in your area.

**Other Appliances:** Cookers and fires etc. should be serviced at least once a year.

### Modifications

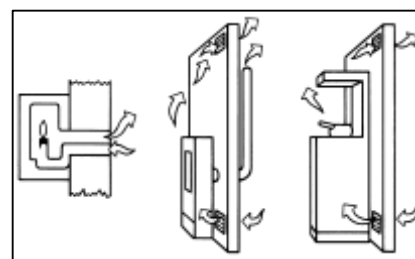
Never improvise with gas equipment, if you want your installation changed or extended in any way, please contact your Installer.

**Do not let unqualified people tamper with your appliances or installation.** Appliances for use with Calor propane are designed and built to very high standards – any adjustments or modifications could impair their safety and nullify manufacturers' guarantees.

### Ventilation and Flues

Occasionally chimneys or flues can become fully or partially blocked due to broken bricks, birds' nests or soot. This will cause the products of combustion to spill into the room polluting the air with toxic fumes. It is important that chimneys and flues are checked regularly and that they are NEVER BLOCKED.

Like you, appliances need air or rather the oxygen in the air. There must be adequate supply of fresh air for appliances to work properly, and the products of combustion must be removed.



There are three types of appliances for use in caravans: those with a room sealed flue, such as some kinds of fires and central heating boilers; those that need an ordinary flue, such as boilers, water heaters and some types of radiant fires; and those that do not have a flue, such as a cooker or hotplates or refrigerators.

With room sealed flue system, air for combustion and the products of combustion are kept sealed from the room atmosphere. By law, room sealed flued appliances should be used in bathrooms/shower room. It is also advisable to use this type of appliance in bedrooms.

Never use an open flued water heater installed in the bathroom while in the bath. Always turn off the heater before getting into the bath and ensure there is good ventilation at all times while the heater is in use.

# Technical Publication

## Using Calor Gas Safely In Your Caravan Holiday Home or Residential Park Home

When using flued and flueless appliances, it is essential to ensure that ventilation is adequate.

If the room has ventilators or grilles, make sure they are NEVER BLOCKED. Most rooms have fresh air entering around doors and windows – but if a room becomes stuffy, open a door or a window immediately.

### IF IN DOUBT – SEEK ADVICE.

#### SERVICING IS NEEDED TO ENSURE:

- Flues and heat exchangers are not blocked.
- Air inlets are clear.
- The gas consumption is correct.
- Safety devices are working correctly.
- The appliance is safe for further use.

#### Carbon Monoxide – The Facts

- When gas does not burn properly, poisonous carbon monoxide fumes may be produced.
- You cannot see or smell carbon monoxide fumes. They are invisible, odourless, colourless and tasteless.
- Fumes from partially burnt gas kill more people than fires and explosions from unburnt gas.
- Faulty gas appliances, poor ventilation and incorrect flues may produce carbon monoxide.
- The danger signs on gas appliances are stains, deposits of soot and excessively yellow or orange flames.
- Carbon monoxide can cause drowsiness, dizziness, headaches, watering eyes, chest pains or palpitations, sickness, stomach pains or diarrhoea. Unfortunately, these are vague symptoms produced by many other causes such as influenza and food poisoning.
- You should seek medical advice if you persistently suffer from any of the symptoms listed above after being in a room where any gas burning appliance is in use and, of course, have your gas installation checked by a competent installer.
- **Remember, gas appliances which are designed, installed and used correctly, regularly serviced, and properly ventilated and flues are completely safe.**
- **Carbon Monoxide detectors (complying with BS:EN:50291) are widely available and it is recommended that every property has one.**

#### Please Remember

- **Never** block ventilators
- **Always** check regularly that flues are clear
- **Always** read the installation and operating instructions for your appliances carefully.
- **Always** use a Gas Safe registered installer to install or service your gas appliances.
- **Never** use a cooker as a means of heating. Always ensure there is adequate ventilation while cooking.
- **If** you think your gas appliance is not working properly do not use it. Contact a Gas Safe registered installer for professional advice.
- **Ring** the Calor Gas Emergency Service number **03457 444 999** if an emergency occurs

The information in this document is intended to give guidance and believed to be accurate and represent good practice at the time of publication. It does not replace the need to consult other formal documents where further information may be required.

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