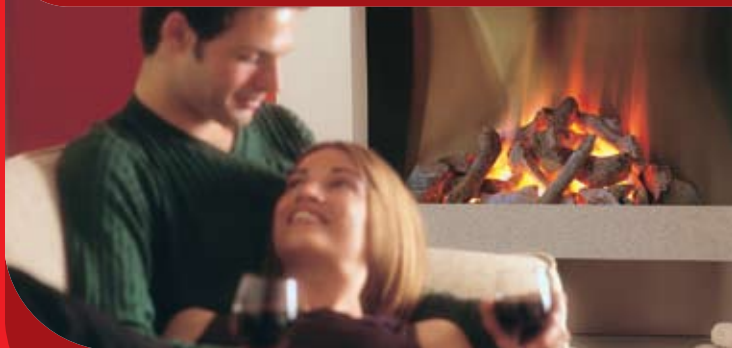


Using **Calor propane** safely



Central Heating • Cooking
Gas Fires • Hot Water
Barbeques • Patio Heaters



This booklet has been prepared to help you enjoy safe, efficient operation from your Calor propane tank or cylinder supply. Read through it carefully, then keep it handy for reference.

Only suitably trained and qualified personnel may install, alter, modify or service gas installations or appliances. Note: In Northern Ireland installers must be registered with the Council of Registered Gas Installers (CORGI).

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**For emergency
information
see inside
back cover**

Please read this booklet
carefully and keep it
in a safe place.



Welcome to the world of Calor

You can now enjoy all the benefits of a modern fuel supply including a wide range of appliances in the latest styles and designs. This booklet offers invaluable information on how to get the very best from your Calor supply.

Calor - the fuel and the service

Calor propane is a liquefied petroleum gas (LPG for short).

If you pressurise propane gas it becomes a liquid taking up only 1/250th of the space. So a lot of fuel can be kept in a small space and can be transported conveniently to wherever it is needed.

Calor is the most experienced supplier of LPG, having supported the domestic fuel market for over 70 years.

Our advanced stock and delivery facilities are specifically developed to ensure a completely trouble-free gas supply at all times.



Preparing for your tank supply

Before a Calor bulk propane tank supply can be installed, certain preparatory work must be done outside your home.

Following the guidelines in this booklet will help to ensure that the installation work can proceed satisfactorily.

THE TANK SITE

Your tank site will have been carefully selected by our salesperson or your Registered Installer. Once this has been agreed by you no further changes should be carried out without first consulting Calor.

Careful consideration will have been given, taking into account not only your preferences but the following important details:-

1. Safe separation distances from other buildings and boundaries.
2. Suitable access for tank delivery.
3. Suitable gas delivery access. (Our tanker driver should be able to see his vehicle and your tank during refilling).

Please ensure that you do not erect any buildings or sheds within the specified separation distances between an installed tank and the buildings and property boundary. (Table A)

If you propose to carry out any building work in the vicinity of the tank, please inform Calor Customer Services Department Belfast 028 9045 5588 or Dublin 1850 812 450.

THE TANK BASE

To support the tank you will first need to arrange for a concrete base to be laid. See Fig 1. This should be:-

1. Positioned exactly as agreed with a Calor representative or Registered Installer.
2. Made of a concrete construction using shuttering with a 4:2:1 sand/stone/cement mixture on a compacted hard core base. (Allow sufficient time for concrete to harden. Protect it from frost in winter. Keep it moist in dry weather).
3. The top should be at or just above ground level and the surface flat and level.



THE TRENCH FOR THE PIPEWORK

Where the supply pipe cannot be laid satisfactorily above ground, it will be placed in an underground trench from the tank into your property. See Fig 2.

Trench preparation:

- Spade width
- 500mm deep (minimum)
- Free of any hard, sharp objects which might damage polyethylene or PVC coated copper pipe.

Please note:

- Digging should start from the tank end nearest the pressure relief valve taking the shortest practicable route to the pipe entry point into the premises.

(This will have been agreed with a Calor salesperson or Registered Installer).

- When filling in the trench the surrounding area should be carefully back-filled with compacted layers of suitable materials to avoid damaging the pipe.
- If the position of the open trench prevents access for the safe delivery of the tank, please do not prepare the trench until after the tank is in position.

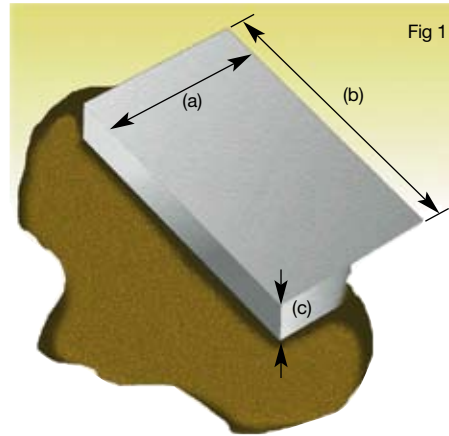


Fig 1

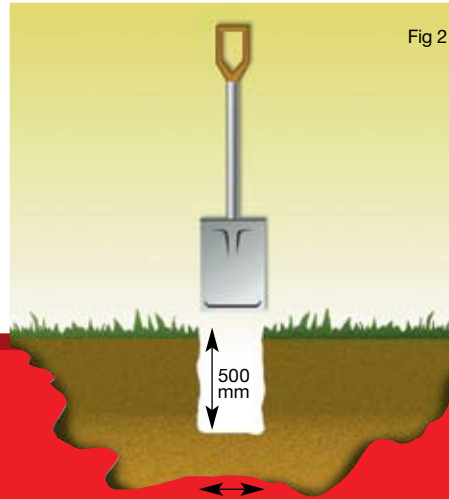


Fig 2

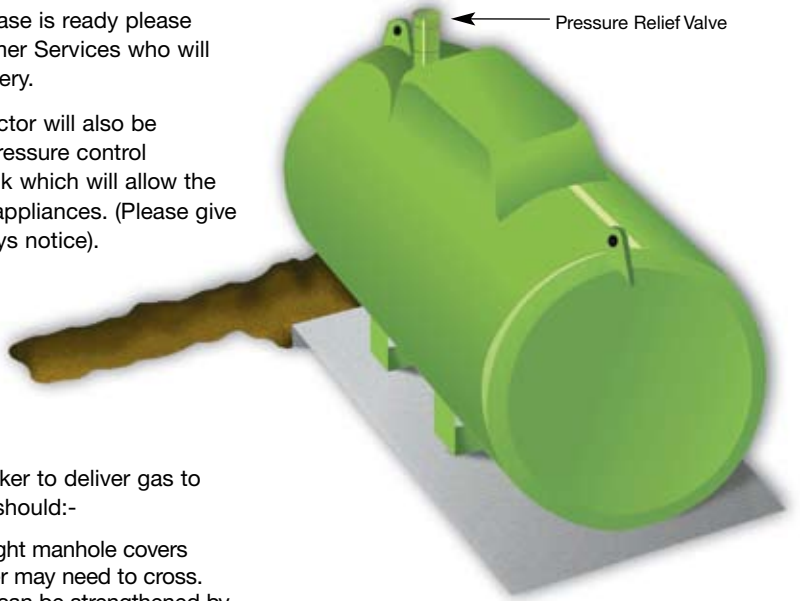
Table A

Tank size	Minimum separation distance between tank, building and property boundary.	Dimensions for concrete base		
		(a) mm	(b) mm	(c) mm
380 litre	2.5m	650	1700	150
1200 litre	3m	1000	2000	150
2000 litre	3m	1000	3100	150
3400 litre	7.5m	1200	3800	150

THE TANK DELIVERY

When the concrete base is ready please contact Calor Customer Services who will arrange for tank delivery.

An authorised contractor will also be organised to install pressure control equipment on the tank which will allow the correct operation of appliances. (Please give at least 5 working days notice).



GAS DELIVERY

To enable a Calor tanker to deliver gas to your tank safely you should:-

- Strengthen lightweight manhole covers which a Calor tanker may need to cross. (Existing manholes can be strengthened by placing a 1m x 6mm thick steel plate over it).
- Provide adequate surfaces where necessary.
- Allow unhindered access.

SUMMARY

1. Lay concrete base
2. Advise Calor Customer Services when ready for tank delivery. (Give at least 5 working days notice).
3. Prepare pipe trenches if necessary.
4. Advise your Registered Installer and Calor when you require final connection to tank and pressure testing of the installation.



How the supply is stored for your home

Propane storage tanks are specially made to store the fuel safely in its liquid state. When a delivery of liquefied petroleum gas (LPG) is made, space is left at the top section of your tank to allow the liquid to turn to gas. (A tank is as full as it should be when it contains 85% liquid).

HOW DOES GAS IN LIQUID FORM CHANGE TO GAS?

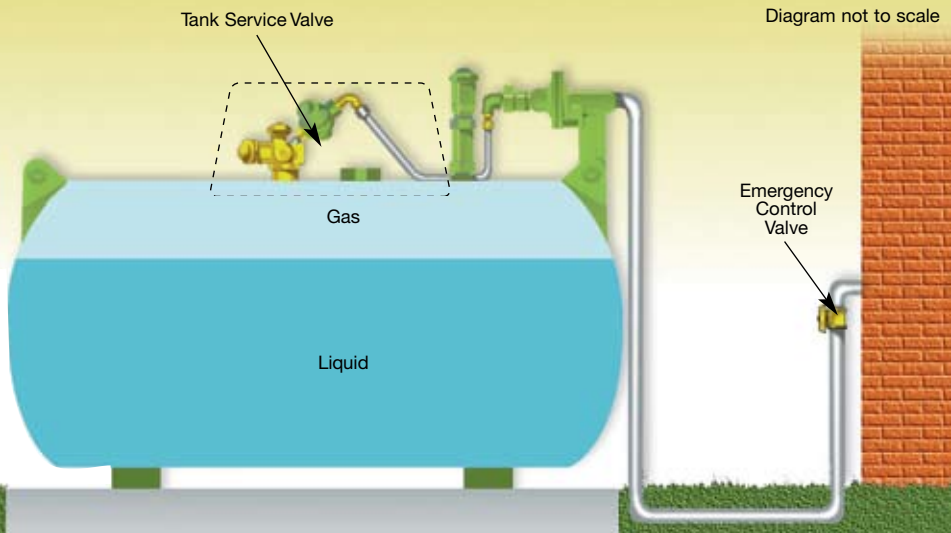
The liquid very easily changes to gas which fills the space above the liquid in the tank. (See diagram). As gas is drawn from the tank, the pressure inside reduces slightly allowing more liquid to turn into gas while, at the same time, maintaining the pressure in the vessel.

In order for the liquid in the tank to change into a gas some warmth is required. This warmth is provided by the atmosphere around the tank. (Even on a cold day there is still enough warmth in the atmosphere to

generate this process). Sometimes you will notice the effect of this as condensation on the outside of your vessel - this could be compared to the effect you might see on the outside of an open, cold "fizzy" drink bottle.

You may also hear slight sounds from the tank and pipes which is caused by the flow of gas through the regulators.

Your installation is equipped with a two-stage pressure reduction system which is normally mounted directly on the tank. This makes sure that gas is supplied into your home at constant pressure, however much fuel is in the tank. If you leave your house unattended for any length of time such as during holidays, it is sensible to turn off all your gas appliances and the emergency control valve. (See diagram). It is not recommended to turn off the tank service valve.



All you need to know about your tank installation

CALOR'S RESPONSIBILITIES AFTER THE TANK HAS BEEN INSTALLED

The propane storage tank and its fittings are the property of Calor Gas. The tank and its fittings will undergo periodic inspections and it is for this reason that you are asked:-

- Not to fit your own lock on the valve cover as it prevents us filling or inspecting your tank if you are unavailable. - Calor drivers and fitters have keys which specifically fit each lock.
- Please do not paint the tank and/or fittings or obscure any signs and labels.

YOUR RESPONSIBILITIES AFTER THE TANK HAS BEEN INSTALLED

There is no danger from a storage tank, but there are risks if reasonable precautions are not taken.

Please:

- Do not allow vehicles to approach too near the installation. Pipework can be damaged by manoeuvring cars or lorries which could cause a gas leak.
- Do not surround the tank with flammable materials (including long grass) which can ignite and result in overheating of the tank.
- Do not 'box in' or hide the tank. If you wish to screen it, evergreen shrubs or small conifers may be planted on one side but please ensure that there is at least 1 metre of space between the tank and any mature plants.
- Do not conceal the tank with sheds or fences that are too close.



PIPEWORK

The pipework laid from the tank into your premises is your property. It has specifically been selected for LPG use.

Please:

- Do not allow unqualified persons to modify the pipework - it is illegal to do so in Northern Ireland.
- Do not cover any 'above ground' pipework with soil.
- Do not paint valves or regulators.
- Do not attach anything to the pipework or tank e.g. rope.
- Do not tether animals or pets to the gas tank or gas cylinder or gas pipework.
- Be careful when mowing not to hit the pipework.

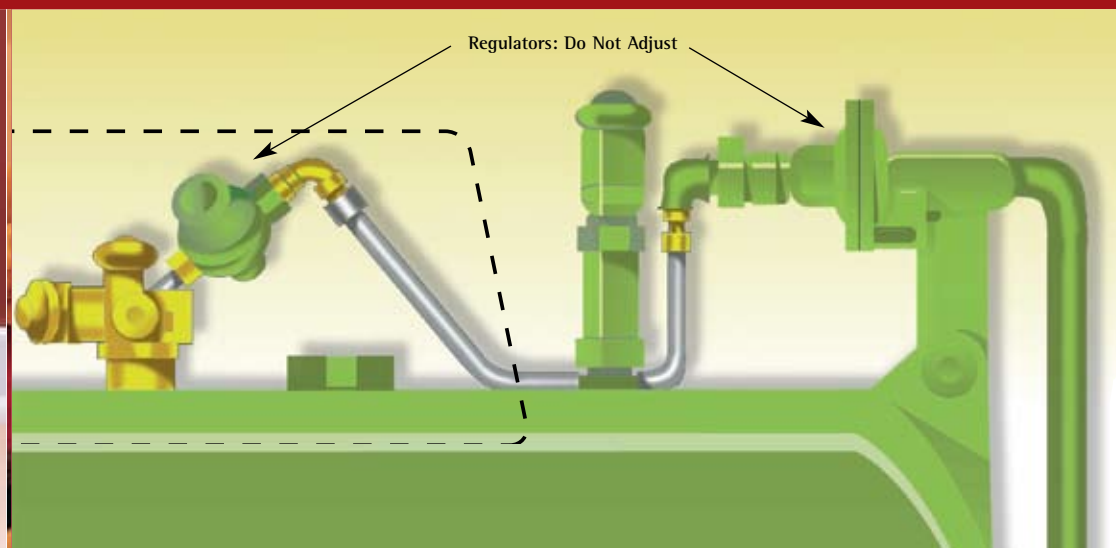
- Remember to be careful if you are digging near any underground pipework.
- Make periodic checks for any damage or obvious leaks. If in doubt contact Calor Customer Services.

ALTERATIONS

Your tank has been sited with consideration to separation distances from buildings and boundaries.

If you intend building any structure, for example a garage or house extension near the tank or over the gas supply pipe, please contact Calor Customer Services for advice.

Belfast 028 9045 5588 or
Dublin 1850 812 450.



THE PRESSURE REGULATORS

The regulator system, situated at the tank, is owned and maintained by Calor and is of the latest design, incorporating safety features known as underpressure and overpressure shut offs (UPSO and OPSO).

The system precisely controls the gas supply pressure at the constant level requirement for your appliances.

It will automatically shut off the gas supply into your home in the unlikely event that this pressure becomes unacceptably low or high.

The regulators are set and sealed when they are installed and should give many years of trouble-free service.

Important:

Regulators must not be altered except by a qualified Registered Installer.

YOU WILL BE AWARE IF ANY OF THESE THREE CONDITIONS HAS OCCURRED

The underpressure shut off (UPSO) could operate and stop your gas supply under any of the following conditions:

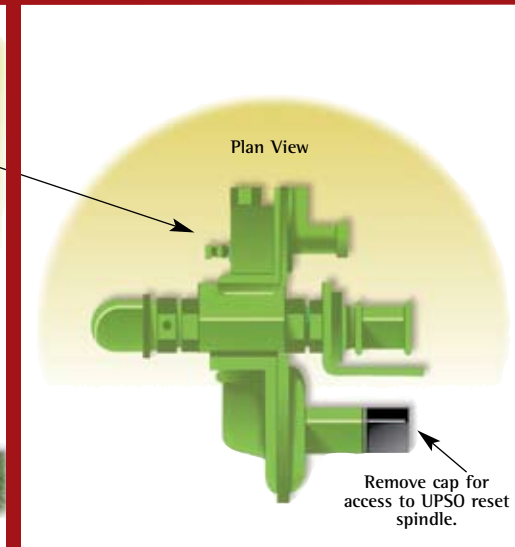
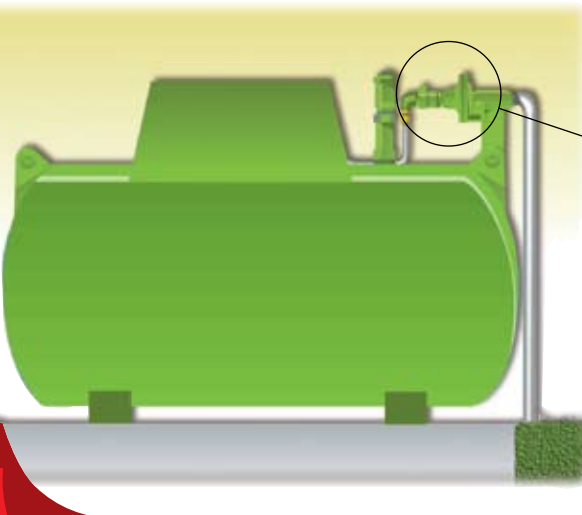
1. The tank was allowed to become empty and has been refilled.
2. The red isolation valve (under the tank hood) has been turned off.
3. The gas supply to the house has been disconnected and then reconnected.

Important:

If the gas supply has been cut off for any other reason, contact Calor Emergency Service immediately.

Belfast: Anytime 0845 075 5588.

Dublin: Daytime 1850 812 450.
Evening 01 269 4800.



RESETTING THE UNDERPRESSURE SHUT OFF (UPS0)

You can reset the UPS0 yourself by carrying out instructions 1 to 8 below.

1. Close all gas appliance valves and the outside emergency control valve.
2. Check that the red isolation valve under the tank hood is fully open. (Turn anticlockwise to open if it is fully or partly closed).
3. Remove cap on regulator (see diagram).
4. Grip spindle firmly and pull. (You should hear and feel the regulator resetting itself).
5. Release spindle gently.
6. Replace cap.
7. Slowly open the outside emergency control valve.
8. Re-light any permanent pilots and check that all appliances will light. This will ensure that the gas supply has been re-established.

Note:

If the gas supply has not been successfully re-established, repeat steps 1 to 8.

Important:

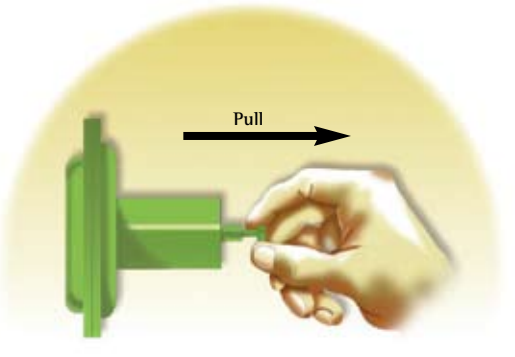
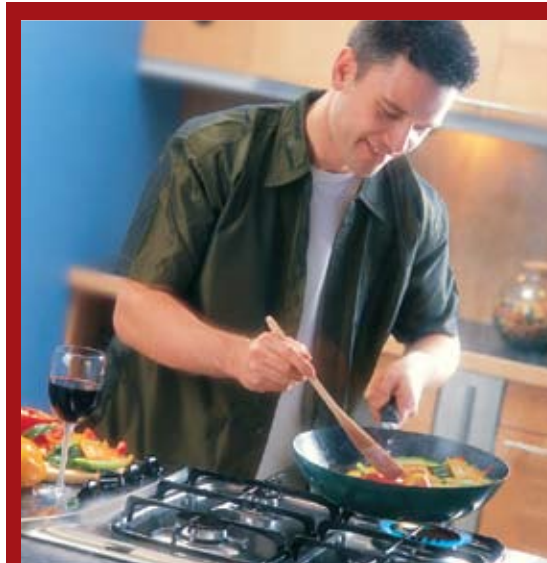
If your gas supply is not re-established after two attempts, or if you have any difficulty, contact Calor Emergency Service immediately.

GAS DELIVERIES

Liquefied petroleum gas (LPG) is pumped from a Calor tanker into your tank through a special meter which measures the litres of liquid delivered. As the volume of gas delivered is affected by temperature the meter automatically takes account of this and you are charged via an invoice, for the fuel energy supplied.

Calor tanker drivers are trained and experienced in all aspects of gas delivery. If the driver is unable to make a delivery, at any specific time or for safety reasons, he/she will return to make the delivery as soon as possible. A Calor driver can also make deliveries to your installation even if you are not at home.

Deliveries are arranged so that you should never reasonably be without gas. A contents gauge on the top of the tank indicates the amount of gas in the tank. After a gas delivery the gauge will usually indicate about 85% full. The protective plastic cap can be lifted up to make the gauge easier to read.



Preparing for your cylinder supply

Before a gas cylinder supply is installed certain preparatory work must be done outside your home.

Following these guidelines will help to ensure that the installation work can proceed satisfactorily.

Whilst most of the information refers directly to multiple cylinder installations, the principles apply to a single cylinder installation.

However, to ensure continuity of gas supply, at least two cylinders are recommended to be installed.

THE CYLINDER SITE

Your cylinder site will have been carefully selected by your Calor salesperson or your Registered Installer. Once this has been agreed by you no further changes should be carried out without first consulting Calor.

Careful consideration will have taken into account not only your preferences but the

following important details:

1. The safe situation of the site.
2. The ease of access for your Calor retailer when changing cylinders.

THE CYLINDER BASE

The cylinders require a suitable base which should be:-

1. Hard standing base of paving slab or concrete 1800mm x 460mm x 50mm deep for a 4 cylinder installation.
 2. Surface area should be level and clean.
- Arrangements should be made to protect the cylinders from accidental damage or interference from persons, vehicles or animals.
 - Allow sufficient time for concrete to set before ordering cylinders from your Calor retailer.



How a cylinder supply operates

CALOR'S RESPONSIBILITIES AFTER THE CYLINDERS HAVE BEEN INSTALLED

A cylinder valve and pressure relief valve are fitted to each cylinder. These controls and the cylinder are Calor's property and responsibility. Calor look after them by making periodic inspections. Calor ask that you don't paint over the cylinders, or obscure the signs and labels.

YOUR RESPONSIBILITIES AFTER THE CYLINDERS HAVE BEEN INSTALLED

There is no danger from a cylinder installation but there are risks if reasonable precautions are not taken.

- Do not allow vehicles to approach too near the installation. Pipework can be damaged by manoeuvring cars or lorries which could cause a gas leak.

- Do not surround the cylinders with flammable materials, (including long grass), which can ignite and result in overheating of the cylinders.
- Do not conceal the cylinders with sheds or fences which are too close.
- Provided the free ventilation around the cylinder is not obstructed, it is satisfactory to have a slatted screen, flowers or shrubs near to the installation.

THE PIPES

The pipes from the cylinder installation to your home are specified for an LPG supply and are your property.

Never allow non-qualified people to modify the pipework - it is illegal in Northern Ireland*

*(Ref Gas Safety [Installation and Use] Regulations N.I. 1997)

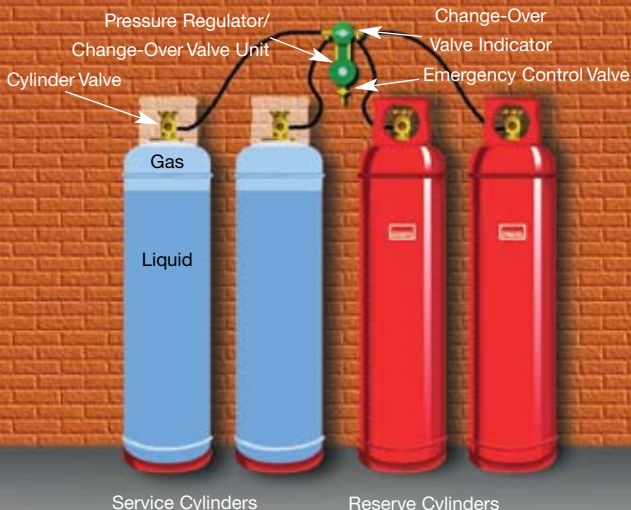


Diagram Not To Scale

All you need to know about your cylinder installation

THE PRESSURE REGULATOR /CHANGE-OVER VALVE UNIT

The unit and associated tubing is your property and comprises of:

The Pressure Regulator.

This regulator is of the latest design. Its function is to reduce the pressure of the gas in the cylinders to the precise and constant level required for the correct operation of your appliances. The regulator is set and sealed when it is installed and should give many years of trouble-free service.

It must not be altered except by a qualified person.

The Change-Over Valve.

This valve operates the gas supply from the service cylinders. The reserve cylinders are brought into use automatically when the service cylinders are empty.

The indicator begins to show red when the pressure drops in the service cylinders, becoming fully red when the cylinders are empty. At this point, the valve changes over automatically and draws gas from the reserve cylinders. Turning the control knob to point to the full cylinders isolates the empty cylinders and changes the indicator back to white.

The valve maintains a constant gas pressure and ensures no interruption in service when the supply cylinders are empty or during their replacement.

DOS AND DON'TS

DO always treat a cylinder with care. Do not store it on its side because the valve could be damaged, resulting in a leak which could be serious.

DO always use a cylinder upright. Horizontally, liquid fuel could get into the supply pipes, with serious results.

DO always site cylinders where there is ease of access to facilitate changing and quick removal in case of necessity.

DO NOT subject a cylinder to heat, because pressure inside the cylinder could build up to a point beyond the designed safety limit.

DO NOT store or use cylinders in cellars, adjacent to open drains and basement areas or below ground level. Calor propane is heavier than air so, if there is a leak, the gas will collect at a low level and become dangerous in the presence of flame or a spark.

DO NOT store or use propane cylinders:

- Indoors residentially.
- In any positions subject to extremes of temperature.
- In proximity to possible sources of ignition in the event of an accidental discharge of gas.
- Immediately adjacent to a flue terminal, ventilation opening, door or window.
- Where there is a risk of impact from vehicles.

CHANGING CYLINDERS

In normal circumstances you will not need to be involved in the changing of cylinders. This will be done by your Calor retailer. However, should the need arise at any time, make absolutely sure that there are no sources of ignition nearby - bonfire, mobile phone, lit cigarettes, etc. - and observe the following procedure; (see diagram):

Disconnecting a cylinder

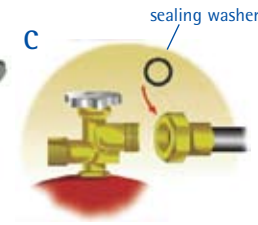
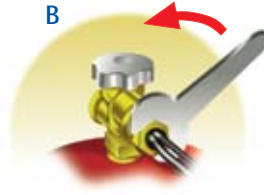
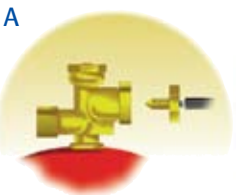
1. Turn the cylinder valve OFF, (clockwise rotation).
2. Never remove the connection with the cylinder valve open.
3. Remove the connection with the spanner, (left-hand thread).
4. Replace the protection plug into the empty cylinder, or part-full cylinder, if not in use.



Connecting a cylinder

There are two different types of hose/cylinder connection systems. One has a left hand nut (male thread) and Bullnose connection (see diagrams A and B). The other type has a left hand nut (female thread) and black sealing washer (diagrams C and D). Refer to the following diagrams for connecting and disconnecting procedures.

1. Check that the cylinder hand-wheel valve is off by turning clockwise.
2. Remove the protection plug, and keep for later use.
3. Inspect the bullnose connection or black sealing washer and check that it is clean and undamaged before connection. Replace washer if faulty.
4. Fit the connection to the cylinder, using the correct spanner, (left-hand thread). The connection must be tight.
5. When gas is required, turn hand-wheel valve anticlockwise to the full extent.



All you need to know about your gas appliances

ENJOY YOUR NEW GAS APPLIANCES

There is a wide range of appliances available to you for central heating, cooking, water heating, tumble drying and coal effect gas fires.

These appliances are highly efficient. Please make sure that they have been installed by competent people.

Calor strongly recommends that you read all instructions and labels and keep them handy for reference. If there is anything you are not certain about concerning your central heating system please contact your Registered Installer. For advice about any other appliances you may be operating from your Calor installation, please contact your Calor retailer or supplier.

SERVICING

Gas appliances should be serviced regularly to keep them in a safe and efficient condition. Properly maintained appliances are safe to use.

Central heating boilers and water heaters should be serviced at least once a year. Telephone Calor Gas Customer Services for details.

Other appliances: Cookers and fires etc. should be serviced at least once every year. Your Calor retailer will normally undertake this work, or alternatively telephone Calor Customer Services for details.

Landlords are required to ensure that each appliance owned by him/her in premises let by him/her is checked for safety at least once a year.

MODIFICATIONS AND ADJUSTMENTS

Never improvise with gas equipment. If you want your installation changed or extended in any way, contact a suitable qualified person - Corgi registered in Northern Ireland.

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 of safety - any adjustments or modifications by unqualified people could impair that safety and nullify manufacturers' guarantees.



LEAKS

Calor propane has a special additive to give it a distinctive smell - and so help with the detection of leaks. The smell is very pungent so that even the smallest leak is detectable.

- Never look for a leak with a naked light.

WHAT TO DO IF A LEAK IS SUSPECTED

- Shut all valves on the tank or cylinders and the emergency control outside the house.
- Open all doors and windows.
- Make sure there are no naked flames or sources of ignition around.
- Ring Calor Gas Emergency Service

VENTILATION

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

There are three types of appliances:

- those with a balanced or powered flue, such as some kinds of central heating boiler;
- those that need an ordinary flue, such as boilers and some types of radiant fire;
- those that do not have a flue, such as a cooker.

With the balanced flue system, air for combustion and the products of combustion are kept sealed from the room atmosphere. When using flued and unflued appliances, it is essential to ensure that ventilation is adequate, (see diagram). If the room has ventilators or grilles, make sure that 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.



For safety's sake...

Shut all valves on tank or cylinders and the emergency control valve outside the house.

DO turn off all gas appliances, cylinder valves and the emergency control valve when leaving your home unattended e.g. holidays.

DO keep rooms where gas appliances are operating properly ventilated.

DO make sure the tank or cylinder installation is free from potential fire hazards.

DO arrange for regular servicing of all your gas-burning appliances.

DO NOT allow non-skilled people to service or modify appliances or pipes - it is illegal in Northern Ireland.

DO NOT store or use cylinders below ground level.

DO NOT paint the tank, cylinders, valves or regulators.

DO NOT allow vehicles to manoeuvre too close to the tank or cylinder installation.

DO NOT adjust regulator/s if the gas pressure of the appliance burners is too high or low -

Telephone Calor Customer Services for advice.

*Other than for Emergency Service, ring the Calor Customer Services Department listed on the back of this booklet, if you have any doubts at all.

Ring Calor Gas Emergency Service.

Belfast: Anytime 0845 075 5588

Dublin: Daytime 1850 812 450.
Evening 01 269 4800.

FIRE PRECAUTION

DO NOT Place clothes over gas appliances. Apart from the fire hazard, their presence could affect the efficiency of the appliance.

FLUEING

Occasionally chimneys or flues can become 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 they are Never Blocked.

CALOR AND YOUR SAFETY

DO notify your household insurers of your LPG tank or cylinder installation.

DO NOT put your own padlock on the tank cover.

DO NOT impede access to the tank or cylinders.

This booklet covers current practice and may not show the exact equipment on your premises.

If you are in doubt about the operation of any part of your Calor system please contact Calor Customer Services Department.

Belfast 028 9045 5588 or
Dublin 1850 812 450.

IF YOU SUSPECT A GAS LEAK OR SMELL GAS



DO turn off gas supply at tank, cylinder or meter and **DO** turn off all gas appliances



DO open all doors and windows



DO ring the Calor Gas Emergency Service telephone number listed below.



DO NOT touch any electrical plug/light switches



DO NOT smoke or use naked flames

CENTRAL HEATING SYSTEM FAULTS

Please ring your Registered Installer if your central heating system has a fault, even though you still have gas in either your tank or cylinders.

FIRE

1. Shut all valves on tank or cylinders and emergency control valve outside the house.
2. Call Fire Brigade and refer to presence of LPG tank/cylinders.
3. Keep tank/cylinders cool by waterspray, if possible.
4. Ring the Calor Gas Emergency Service number below.

GAS SUPPLY FAILURE

Do check you have gas in tank / cylinders.

If you have no gas:

1. Do turn off tap at each appliance.
2. Do shut all valves.
3. Ring Calor Gas for tank supply or your Calor Dealer for cylinder supplies.

If you have gas, contact Calor Gas on the following numbers.

Belfast: Anytime 0845 075 5588.

Dublin: Daytime 1850 812 450.

Evening 01 269 4800.

CALOR EMERGENCY NUMBERS:

BELFAST: Anytime 0845 075 5588

DUBLIN: Daytime 1850 812 450

Evening 01 269 4800

Calor Gas Northern Ireland Limited
Airport Road West, Sydenham,
Belfast BT3 9EE
Tel (028) 9045 5588

Calor Teoranta
Long Mile Road, Dublin 12
Tel 1850 812 450

Email info@calorgas.ie
Web www.calorgas.ie

