

# Exchanging Multi Cylinder Installations

## Incorporating Cylinder Installation Defect Reporting (CIDR)

This module will aid you on how to connect and disconnect 47Kg/19kg cylinders, including why and when to report a CIDR.

The regulators shown in the presentation are only an example of those available on the market.



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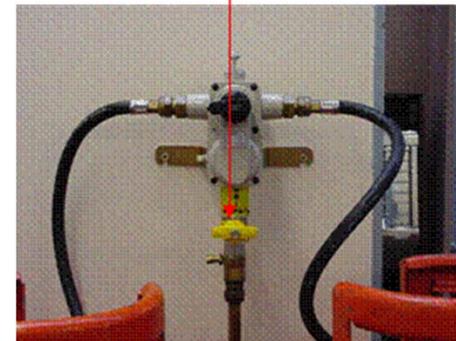


# Multi cylinder installations

- The twin or four pack is normally fitted with an automatic changeover device (ACD) which incorporates a regulator and emergency control valve
- As the LPG is used in the supply cylinders, the pressure will drop to a pre-determined level where upon the changeover device automatically brings the reserve cylinder into use. The indicator arrow turns red when the system has changed over and points to the empty cylinder(s) to be exchanged
- The supply hoses sometimes known as "pigtails" incorporate a non-return valve to enable the cylinders to be exchanged without interrupting the gas supply



Emergency Control Valve



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# Additional Information

- The cylinders are generally arranged in two sets (service and reserve) and linked by a pressure regulator/change-over valve. This valve automatically switches the supply from the service to the reserve cylinders when the gas cylinders are nearly empty without any noticeable interruption of the gas supply.
- If the cylinder supply comprises four or more cylinder the Gas Safety (Installation & Use) Regulations state that an Over Pressure Protection Shut Off device (O.P.S.O) must be provided
- It is Calor policy to provide over pressure protection for all multi-cylinder installations regardless of the number of cylinders provided. This is normally incorporated within the changeover device
- All changeover valves shall be fitted with an emergency control valve after the changeover valve to isolate the cylinder supply
- For safety reasons cylinders should not be padlocked together. In the event of a fire quick removal may be necessary by the emergency services

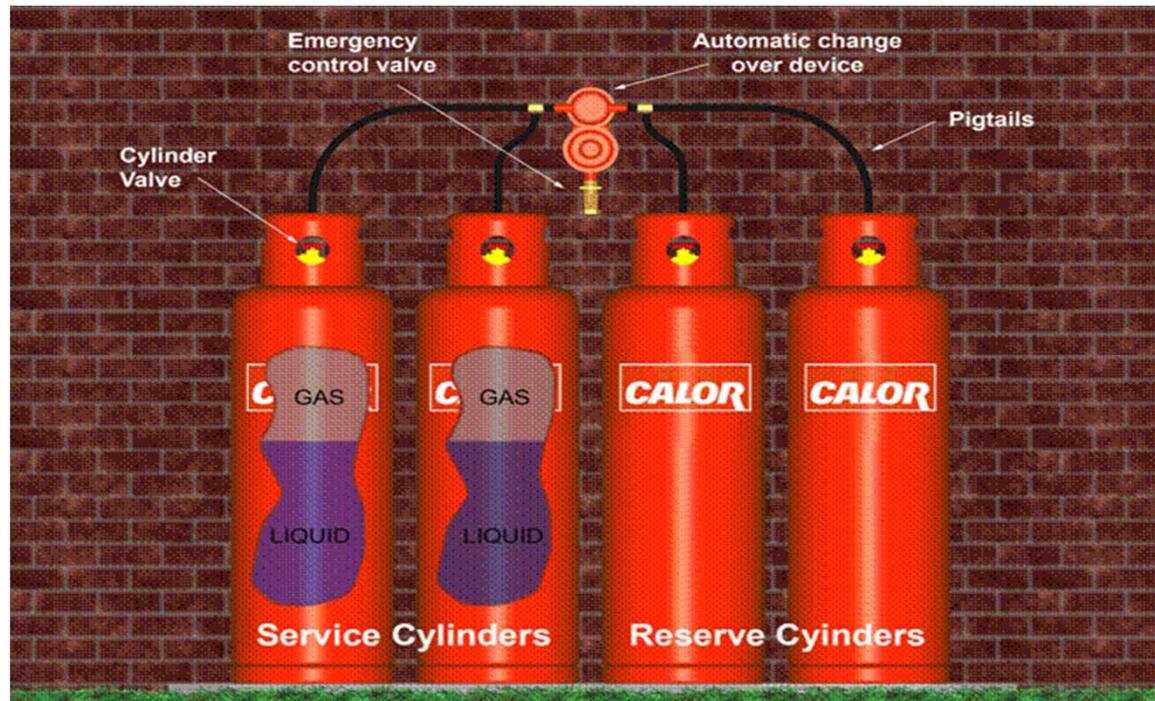


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# Additional Information

- Where necessary suitable protection should be provided against possible damage by persons, animals or vehicles. In this case, it is recommended that cylinders are housed in a purpose designed cage with adequate ventilation and fire resistance. They should remain accessible at all times
- The changeover device should be fitted above the level of the cylinder shrouds as depicted in the drawing below



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# Exchanging 47kg Cylinders

- If the supply cylinder(s) only are empty and the reserve set is still supplying LPG, exchange and reconnect as follows
  - Ensure there are no sources of ignition including mobile phones
  - Turn the ACD knob to point to the reserve cylinders
  - Turn off the supply cylinder valves and disconnect the cylinders
  - Connect the pigtail hoses ensuring the connections are clean and tighten them using the appropriate cylinder spanner
  - Open the cylinder valves on all the cylinders and check for gas soundness using leak detection solution
- If all the cylinders are out of gas and the **CUSTOMER IS IN**
  - Ensure there are no sources of ignition including mobile phones
  - Close the emergency control valve if fitted
  - Check with the customer and ensure all gas appliances and pilot lights are turned off
  - Turn off all cylinder valves and disconnect the cylinders
  - Connect the pigtail hoses ensuring the connections are clean and tighten them using the appropriate cylinder spanner
  - Open the cylinder valves on all the cylinders and check for gas soundness using leak detection solution
  - Open the emergency control valve if fitted



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# Exchanging 47kg Cylinders

## Example (Advice Note 1)

- If all of the cylinders are out of gas and the **CUSTOMER IS OUT**
- Ensure there are no sources of ignition including mobile phones
- Close the emergency control valve if fitted
- If **NO** emergency control valve is present, abort the delivery and leave an advice note similar to that shown opposite

Dear Customer

While you were out we called to exchange your gas cylinders.

Unfortunately we were unable to isolate your gas supply as no emergency control valve is fitted and in the interests of gas safety, as required by the Gas Safety (Installation & Use) Regulations 1998, we have had to abandon the visit.

Could you please call \_\_\_\_\_ to re-arrange delivery

We apologise for any inconvenience caused, this action was taken in the interests of gas safety.

Yours sincerely

(add supplier name and contact details)



Emergency Control Valve (closed)



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# Exchanging 47kg Cylinders

- If an emergency control valve **IS** present follow the steps below
  - Turn off all cylinder valves and disconnect the cylinders
  - Connect the pigtail hoses ensuring the connections are clean and tighten them using the appropriate cylinder spanner
  - Open the cylinder valves on all the cylinders and check for gas soundness using leak detection solution
  - Close all cylinder valves
  - Leave a different advise note and mark on your paperwork the action taken

## Example (Advice Note 2)

Dear Customer

While you were out we delivered gas to your installation and re-instated your gas supply at the regulator.

As we were unable to gain access to your property to advise/assist you to relight your appliances, we have left the installation switched off at the emergency control valve and the vapour off-take valve at the tank.

**To safely re-establish the internal gas supply please follow the procedure detailed below:**

1. Ensure all gas appliances and pilot lights are turned off
2. Open the vapour off-take valve located at the tank
3. Slowly turn on the emergency control valve (usually located on the outside of the building where the gas supply enters the property)
4. Re-light gas pilot lights and appliances in accordance with manufacturers instructions

**Note:**

If any problems arise when attempting to re-light your pilot lights or appliances please contact your local Gas Safe registered installer.

This action has been taken in the interests of gas safety and the safe continued operation of your gas supply. We apologise for any inconvenience this action may have caused you.

Yours sincerely

(add supplier name and contact details)



Typical Emergency Control Valve (open)



Vapour off take valve (on tank)



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# Defect Reporting –Why?

- Access & Egress, manual handling issues – Avoid
  - Steep Steps
  - Flights of steps
  - Slippery and uneven surfaces
  - Soft surfaces such as grass, Earth etc.
  - Any physical obstruction such as drainpipes
  - Confined spaces
- Cylinder Location
  - Located against a wall or structure of the building with at least 30 minutes fire resistance
  - 60 minutes if the fire wall forms part of residential accommodation
  - Fire walls should be at least as high as the highest cylinder stored but should not be less than 2 metres high.
  - Positioned on firm ground in a well-ventilated area
  - Accessible at all times
  - Where they do not obstruct access and egress
  - Sited in a area protected from accidental damage by vehicles, animals or interference by persons



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# Must Not Be Sited

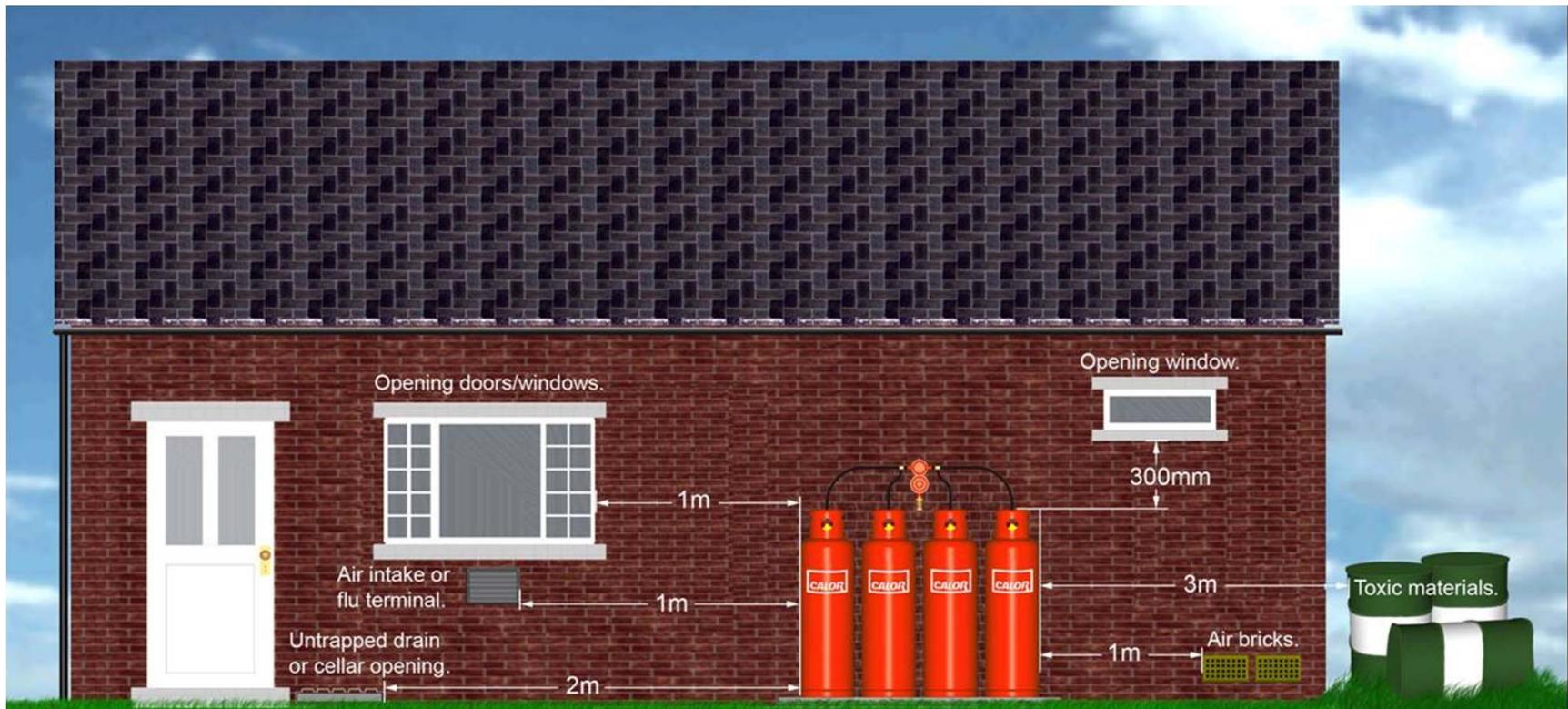
- Area not free from flammable materials overgrown vegetation or weeds
- In any cellars, basements or sunken areas
- Less than 1 Metre measured horizontally from
  - Fixed sources of ignition
  - Unprotected electrical equipment
  - Excessive heat sources
  - Doors, air bricks, ventilation ducts open able windows
- Not less than 0.3 metres measured vertically from valves to the above
- Closer than 2 Metres measured horizontally from
  - Untrapped drains
  - Unsealed gullies
  - Openings to cellars
- Not within 3 metres of any corrosive, toxic or oxidising materials
- Not within 7.5 metres of a liquid oxygen installation
- Further information is contained in UKLPG Codes of Practice No.7



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# Diagram



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# Equipment

- Hoses – Check for
  - Hose flexible and free from cracks
  - Must be to a British Standard
  - Must show British Standard Date mark
  - Recommended 10 years maximum age
  - Ends must be crimped and secure
  - Length must be approx 70cm
  - Thread connections must not be damaged
- Regulator and Pipework – Check for
  - Corrosion
  - Defective / Damaged
  - Emergency Shut Off Valve Not Fitted
  - Safety Tag Not fitted
  - Automatic changeover devices should be replaced if a date stamp of 20 years or older

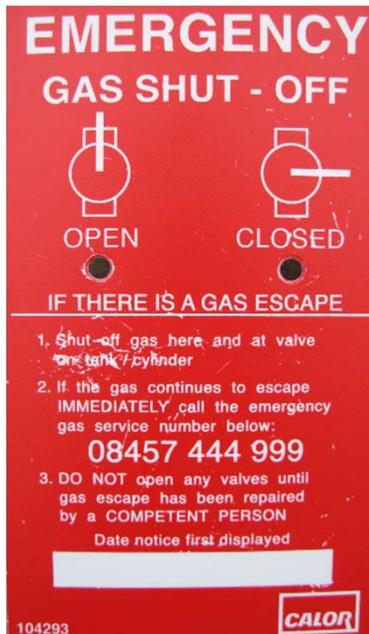


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# Replace signage and tags

- Please contact your cylinder sales representative for signage and tags



**EMERGENCY  
GAS SHUT - OFF**

 **OPEN**       **CLOSED**

**IF THERE IS A GAS ESCAPE**

1. Shut off gas here and at valve on tank/cylinder
2. If the gas continues to escape IMMEDIATELY call the emergency gas service number below:  
**08457 444 999**
3. DO NOT open any valves until gas escape has been repaired by a **COMPETENT PERSON**  
Date notice first displayed

104293 



**SAFETY WARNING**

We consider your gas installation is potentially unsafe and we have taken the precaution of turning it off for your safety.

**AT RISK**

It must not be turned back on until a Corgi qualified gas engineer has carried out remedial work on the gas installation to render it safe to use. It is an offence to continue using an unsafe gas installation under THE GAS SAFETY (INSTALLATION AND USE) REGULATIONS

**DO NOT REMOVE THIS LABEL**

Comments:

 Date:



For gas delivery call  
**0800 662 663**

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# Cylinder Installation Defect Report

- Please contact your cylinder sales representative for Installation Defect Reports.

CDP0115:Layout 1 30/6/08 11:24 Page 1



**Cylinder Installation Defect Report** Wire ID:

In the event of any gas leaks all cylinder valves should be turned off and the yellow isolation valve on the gas line shut off.  
If you cannot stop a leak immediately call the National Emergency Number 0845 7 444 999

Customer Name: \_\_\_\_\_ Date:

Post code: \_\_\_\_\_

DP number:

Safety warning label attached?

Installation Type: 2 Cylinder   
multiple Cylinder

Tick relevant box only if there is a defect

<b>1 Hoses (Replace if Defective)</b>	<b>3 Regulator</b>
a) Hose(s) more than 10 years old <input type="checkbox"/>	a) More than 20 years old <input type="checkbox"/>
b) Leaking Gas <input type="checkbox"/>	b) Not Fitted Securely <input type="checkbox"/>
c) Hoses Cracked or Not Flexible <input type="checkbox"/>	c) Defective / Damaged <input type="checkbox"/>
d) Hoses Strained or Pulling <input type="checkbox"/>	<b>4 Cylinder Storage</b>
e) Hose Ends Not Crimped & Secure <input type="checkbox"/>	a) Cylinders not on a Firm Standing <input type="checkbox"/>
f) Thread Connections Damaged <input type="checkbox"/>	b) Regulator Below Cylinder Valve <input type="checkbox"/>
Number of Hoses Replaced: <input type="text"/>	c) Not Complying with Storage Regulations <input type="checkbox"/>
<b>2 Emergency instruction tag (Fit if missing)</b> <input type="checkbox"/>	

**5 Cylinder Access Issues**  
Describe any problems:

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**Dear Customer,**



Whilst at your premises today our driver carried out your free safety check\*, As a result we have noted the following issues:

- 1) The hoses were found to be sub-standard and have now been replaced for your safety. The cost of this is £.....
- 2) Your installation was found to be sub-standard and is likely to require upgrading. To avoid possible disruption to your gas supply please contact our office to discuss what is required:
- 3) Unfortunately we were unable to deliver your gas due to safety concerns. Please contact our office urgently:
- 4) In the interests of your safety we have shut off your gas supply. The supply should not be re-established until your installation has been inspected by a qualified CORGI registered gas engineer.

Driver signature: \_\_\_\_\_ Date: \_\_\_\_\_

For further advice and help contact us on 0800 662 663 quoting your delivery point number

\*Please note that the cylinder installation safety check is a 'visual inspection' only with its sole purpose being to identify any visible defects at the time of inspection which may affect the safe operation of the equipment. Calor cannot guarantee your gas supply equipment is safe to operate and recommends that all equipment is inspected regularly by a fully qualified CORGI registered gas engineer.



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# Thank you for taking the time to view this training advice.

**For more information, contact your  
Manager or Supervisor.**

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