



Health & Safety Publication

INFORMATION ON:-

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2007 (CDG&UTPER)

---

## The Carriage of LPG Cylinders by Road

Calor Gas Ltd. is always concerned for the safety of all its customers.

As part of our ongoing programme of customer safety and service, we produce a series of publications to provide information on safety issues, particularly where new requirements must be met.

This booklet contains information designed to give guidance to Calor Dealers, Stockists and Calor Customers carrying LPG cylinders in connection with their work.

The information in this document is believed to represent good practice at the time of publication. However, no responsibility or liability is accepted by Calor Gas Limited for any loss or damage arising out of the information given. It is important that consumers adhere to all legal requirements, Regulations, Codes of Practice and Standards, particularly, those relating to safety.

© No part of this publication may be photocopied or otherwise reproduced without the prior permission in writing of Calor Gas Limited.

## 1.0 Who do the Regulations Apply to?

The Regulations apply to any person responsible for the carriage by road of dangerous goods (in tankers or packages) in connection with their **work**.

The Regulations impose duties on drivers, employers, vehicle operators and consignors and Safety Advisors (TDGSA) to ensure safe carriage of dangerous goods.

## 2.0 What is meant by a package?

In the case of LPG, which is listed as a Dangerous Substance, a package (sometimes referred to as a 'receptacle') is any cylinder or cartridge of any capacity.

It should be noted that **nominally empty cylinders are treated as full** for the determination of any quantity thresholds.

## 3.0 Do the Regulations apply to the LPG Cylinders in Private Caravans?

**NO.** LPG cylinders being carried in connection with private domestic or leisure activities do not come under these Regulations. However, caravans, with LPG cylinders used in connection with trade or business for work purposes and conveyed by road, must comply with the Regulations.

## 4.0 Are there any other Exemptions from these Regulations?

**YES.** If a vehicle is carrying less than 333 kg of LPG in cylinders it is exempt from part of the regulations.

If LPG in cylinders are being carried for use with equipment that is fitted on the vehicle, e.g. a road planing machine, a bitumen boiler or fixed heating in a vehicle such as a mobile library or playbus, the Regulations **do not** apply.

Additionally the LPG tank in a vehicle which uses the gas as fuel is exempt i.e. Autogas.

A vehicle carrying 333 kg (nett) or less of LPG is exempted from part of the Regulations.

From 31/12/06 drivers of any vehicle carrying more than 333kgs of LPG in cylinders regardless of the vehicles maximum weight must be holders of an ADR Vocational Training Certificate (VTC) in Class 2 “other than in tanks” which must be carried at all relevant times.

## **5.0 What are the requirements of the Regulations?**

### **5.1 Vehicle Construction.**

The vehicle used for conveyance must be properly designed, of adequate strength and good construction, and properly maintained, thus making it suitable for the purpose.

### **5.2 Information.**

The vehicle operator must obtain information from the consignor (who is obligated to provide it under the Regulations) about the hazards of the substance to be carried. This information, together with advice on the action to be taken in an emergency must be provided to the vehicle driver.

The content of the information must reflect hazards advised on Data Sheets and take into account the quantities of LPG carried and severity of any potential accident.

The minimum information to be carried will generally be a Transport Emergency Card (TREM CARD) and a Consignment Note indicating the quantity of LPG and the number of cylinders carried, designation as

- ❖ UN1978, PROPANE, 2.1
- ❖ UN1011, BUTANE, 2.1
- ❖ UN1965, HYDROCARBON GAS MIXTURES, N.O.S, 2.1,

Written information on the consignment of dangerous goods, (LPG) such as the delivery and collection note or on the consignment note, must be held on file for 3 months after the delivery has been completed.

Drivers of vehicles carrying dangerous goods must carry photographic identification as must any member of the vehicle crew.

### **5.3 Training.**

- Drivers carrying more than 333 kg of LPG in cylinders in connection with trade and business are required to receive instruction and training from their employer or vehicle operator. Training must be sufficient to identify hazards that may be encountered and must include the action to be taken in an emergency and the use of fire extinguishers. The extent of training will vary according to the total capacity of the cylinders carried but must include the advice and understanding of information Data sheets, Transport Emergency Cards, Consignment Notes and a practical knowledge of the relevant regulations
- The requirements to train drivers and keep records of that training is laid down in The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2007. They apply to drivers at work carrying any number of cylinders, although there are differing requirements depending on circumstances and quantities and vehicle size.
- These provisions require the driver of a vehicle carrying cylinders containing more than 333 kg of LPG, to be the holder of a Vocational Training Certificate issued by the DVLA, Swansea, obtained by passing the approved exams, which must be carried at all relevant times and presented on demand.
- Drivers should undergo periodic updating of training, and whenever new equipment is introduced or changes in regulations take place and within 5 years of the issue of a VTC.
- Only members of the Vehicle Crew may be carried which means that non drivers carried on the vehicle must also have received an adequate level of training which should be recorded.
- Drivers must have received training in the security of dangerous goods in transport and must be aware of the action to be taken in a security situation.

#### **5.4 Loading and Storage.**

Care must be taken in the methods of loading and storage to ensure no additional hazard is created. Cylinders should be conveyed in an upright condition and secured to prevent undue movement.

#### **5.5 Miscellaneous Equipment**

Where vehicles are carrying more than 333kgs of LPG in cylinders or cartridges, the vehicle and crew must carry the following equipment.

##### **Vehicle**

1 x wheel chock

2 x self standing warning signs

(Amber flashing lamp, triangle, cone)

##### **Crew (per member)**

1 x warning vest (hi vis)

1 x pocket lamp (ATEX rated)

PPE as per TREM Card

#### **5.6 Marking of Vehicles.**

If the vehicle load (quantity of LPG) carried is above 333 kg (nett), orange coloured reflective panels of 400mm base x 300 mm width dimensions must be displayed at the front and rear of the vehicle.

These panels must be removed or covered if **no** LPG is being carried. It is acceptable to display panels if a quantity less than 333 kg (nett) is being carried.

#### **5.7 Fire Precautions.**

The vehicle operator must ensure that the vehicle carries at least the minimum fire fighting equipment defined below and that necessary fire precautions must be taken. "No Smoking" and "no naked lights" rules are enforced whilst loading or unloading.

At least two fire extinguishers must be carried. One suitable for dealing with a fire in the engine or cab of the vehicle and the other suitable for dealing with a tyre, brake or load fire.

The minimum capacity requirements are:-

1 x 2 kg dry powder extinguisher for dealing with an engine / cab fire

plus

1 x 6kg dry powder extinguisher for dealing with a tyre, brake or load fire.

If the maximum permissible weight of the vehicle is 3.5 tonnes or less, the 6 kg dry powder extinguisher may be replaced with a second 2 kg dry powder extinguisher.

**NOTE: From 31/12/2007**

**1x 2kg dry powder extinguisher for engine cabs, plus 1 x 2kg dry powder extinguisher for load on a vehicle up to 3500kg.**

**GVW Vehicles over 3500kg up to 7500kg 1 x 2kg dry powder extinguisher for cab plus 1 x 6 kg dry powder extinguisher for load.**

**Vehicles over 7500kg GVW 1 x 2kg dry powder extinguisher for cab plus a total of 10kg dry powder extinguishers (one fire extinguisher must be a minimum of 6 kgs content) for dealing with load fires.**

## **5.8 Parking and Supervision.**

For vehicles loads above 10,000 kg (nett), the driver must ensure that when parked, the vehicle is in a safe place, as defined, supervised by himself or some other competent person over 18 years old. The supervision requirement is only relaxed where the vehicle can be parked within secure premises, such as a dealers' premises or a secure lorry park.

## **5.9 Transport of Dangerous Goods (Safety Advisers) TDGSA**

As an employer involved in the transport of dangerous goods by road or rail, the Regulations may require you to appoint vocationally qualified safety advisers to advise you on health, safety and environmental matters in connection with the transport of dangerous goods.

These requirements apply where vehicles carry loads in excess of 333kg of LPG in cylinders as detailed below.

Those employers who will be covered are those who:

- ◆ Consign dangerous goods for transport and who load the means of transport themselves;
- ◆ Are operators of road vehicles carrying dangerous goods;

- ◆ Load or unload dangerous goods while they are in transit to their final destination, such as freight forwarders or warehousemen. This category will also cover employers at ports and airports who load/unload dangerous goods onto/off road or rail vehicles, but does not include consignees who **only** unload at the final destination.

You can appoint whoever you wish – an existing employee, yourself, or a consultant – **provided they hold a Vocational Training Certificate (VTC)** obtained by passing approved examinations valid both for the mode of transport (i.e. road or rail or both) and for the class/type of dangerous goods being transported. (LPG is UN Class 2)

The examination regime is administered by the Scottish Qualifications Authority. Advisers will need to pass a ‘refresher’ examination every five years in order to remain qualified.

Your Transport of Dangerous Goods Advisor (TDGSA) will need to:

- ◆ Provide you, when required, with advice on all aspects of the transport of dangerous goods;
- ◆ Monitor compliance with the legal requirements on the safe transport of dangerous goods and related health and safety practices and procedures (including the preparation of accident reports);
- ◆ Ensure the **preparation of an annual report** on your activities concerning the transport of dangerous goods. Such reports are primarily internal documents and so the format and content can vary from employer to employer. As a minimum, though, the contents should summarise the results/conclusions of the safety advisers’ monitoring activities, with a view to assisting compliance with the transport of dangerous goods legal requirements. You will need to keep any such reports for **five years**, and make them available to enforcement agencies on request.

**You do not need to appoint Transport of Dangerous Goods Safety Advisers (TDGSA) if you meet ALL three of the following criteria.**

- ◆ Your main or secondary activity is not the transport of dangerous goods, i.e. where work associated with the transport of dangerous goods is only a minor function of your business. For example, occasional deliveries of small amounts of dangerous goods to a site

by a small building company would not be regarded as being its main or secondary activity (whereas a plant hire company who, along with items of plant, regularly delivers dangerous goods to a site would be regarded as having the transport of dangerous goods as a main or secondary activity); **and**

- ◆ You are only occasionally involved in the transport of dangerous goods, in the region of one or two such transport movements per month; **and**
- ◆ The transport of dangerous goods must not create a significant risk to health, safety and the environment. HSE consider that LPG in amounts greater than 333kg presents significant risk
- ◆ The Regulations governing TDGSA leave it open to you to decide how many safety advisers you need to appoint. In deciding the appropriate number you will need to consider issues such as time, information and facilities the safety adviser(s) will need to fulfil their functions and duties, how many operating sites they will need to cover, and whether they will prepare reports and carry out monitoring themselves or simply ensure others do these things. It is also left open to you to co-operate with other employers in appointing the same safety adviser(s) – this may be particularly useful on sites where more than one employer is involved in the transport, loading or unloading of dangerous goods, such as ports, railway marshalling yards and airports.

## **6.0 Can cylinders be carried in a closed van?**

For safety reasons and to ensure the dispersion of any possible leakage of LPG vapour it is preferable to carry cylinders in an open vehicle. There are occasions when closed vans need to be used and this is permitted but increased safety precautions must be taken.

Adequate permanent ventilation of the load space must be provided and this may require standard vehicles to be modified. (**Adequate ventilation** has been set at a minimum equivalent area equal to 2% of floor area of the load compartment).

Cylinders must not be left on board unnecessarily and should be loaded immediately prior to the journey and removed immediately the destination is reached.



If you are carrying cylinders in a closed van, it is a Code of Practice requirement that at least 3 red diamond flammable gas danger signs are affixed, one to each of the sides and one to the rear of the van.

It is recommended that spare caps and plugs are carried to seal collected/returned cylinders.

All the above advice is described in **LPGA Code of Practice No. 27** and has been agreed with the Enforcement Authorities.

## **7.0 Important Information requested by Police or other Enforcing Authorities**

If requested by a police officer or another Enforcing Authority (i.e. Health and Safety Executive Officer or Vehicle Inspector of the Vehicle Operators Service Agency (VOSA)) the driver must produce documents to identify the Dangerous Substance (LPG), the hazards, emergency action, the quantity carried.

Driver training records must be available for inspection at the drivers home base but it is recommended that if a driver regularly conveys significant numbers of cylinders he should carry with him a copy of his training records or a certificate of training.

The original Vocational Training Certificate (Class 2 other than in tanks) must be carried at all times whilst on duty.

On request the name of the appointed Transport Dangerous Goods Safety Advisor (TDGSA) must be given.

**Note: LPG, propane and butane have been categorised as Transport Category 2, in the Regulations.**

## **8.0 References**

The following publications are available from HSE Books, PO Box 1999, Sudbury, Suffolk. Tel: 01787 881165.

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2004.

The following publication is available from Liquefied Petroleum Gas Association, Pavilion 16, Headlands Business Park, Salisbury Road, Ringwood, Hampshire, BH24 3PB, TEL: 01425 461612.

Code of Practice 27 – Carriage of LPG Cylinder by Road (2004).

Orange Plates and Transport Emergency Cards are obtainable from:

Designed for Safety

Corbiere House

Bourne End Lane

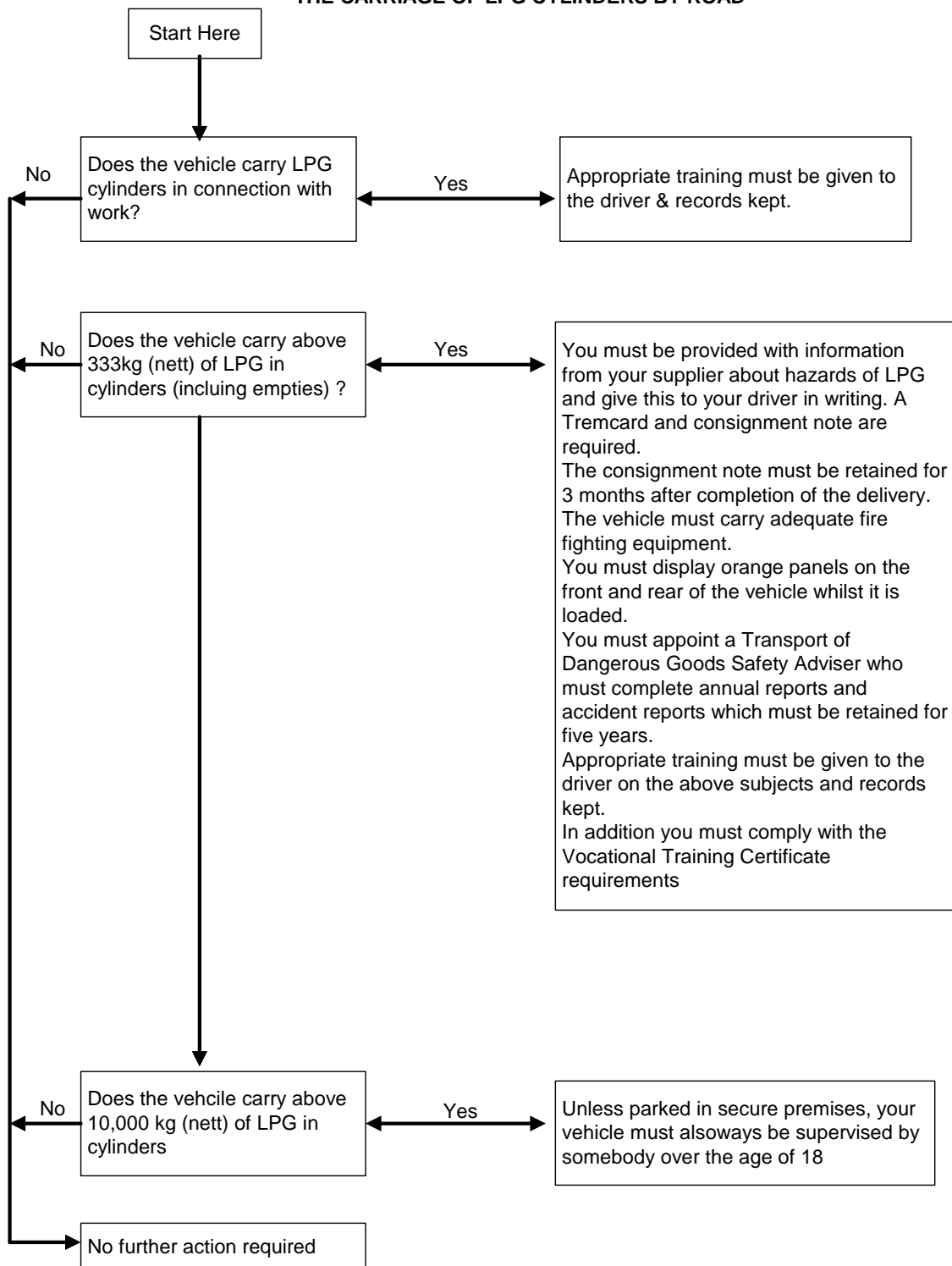
Hemel Hempstead

Herts HP1 2RN

TEL: 01442 875071

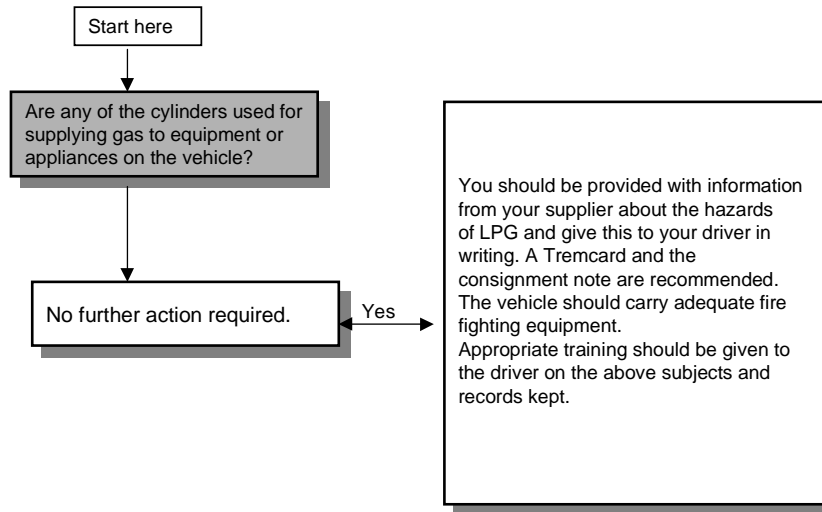
Further copies of this publication are available FREE of charge from Calor Gas Ltd.

THE CARRIAGE OF LPG CYLINDERS BY ROAD

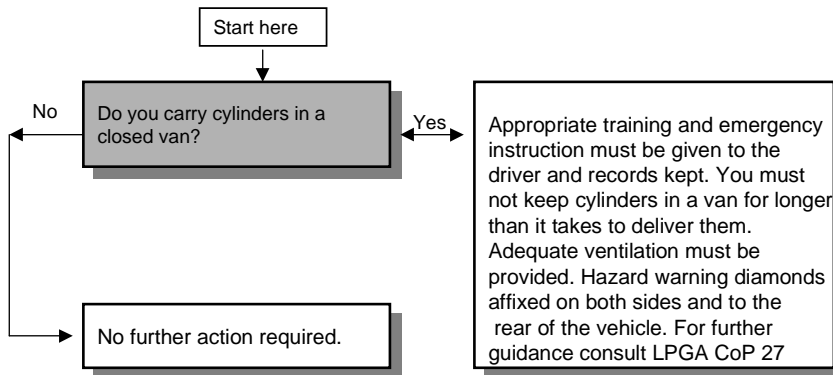


THE CARRIAGE OF LPG CYLINDERS BY ROAD

LPG Cylinders for Fuelling Appliances.



LPG Cylinders in Closed Vans



TRANSPORT EMERGENCY CARD (Road)		
	UN CLASS	SUBSTANCE IDENTIFICATION No. (UN No.)
BUTANE	2	1011
PROPANE	2	1978
HYDROCARBON GAS MIXTURES, LIQUEFIED N.O.S.	2	1965

<b>Cargo</b>	<b>BUTANE, PROPANE or HYDROCARBON GAS MIXTURES, LIQUEFIED N.O.S.</b>
<b>Characteristics</b>	Colourless, normally odourised, liquefied pressure gas. Maybe odourless as aerosol propellant Spilled liquid is at very low temperature and evaporates quickly. The gas is invisible, heavier than air and spreads along the ground. Can form an explosive mixture with air. Heat will cause a pressure rise in tanks and may cause the relief valves to open with a risk of ignition of the discharge. In extreme cases there is a risk of bursting and explosion. Liquid contact can cause skin burns and severe damage to the eyes.
<b>Protective Devices</b>	Boots and plastic or rubber gloves. Goggles, giving complete protection to eyes.

**EMERGENCY ACTION BY DRIVER**

- Notify emergency services immediately stating nature of incident
- If possible, move vehicle to open ground.
- Stop the engine.
- No naked lights. No smoking.
- Warn other road users.
- Keep public away from danger area.
- Keep upwind.
- If safe to do so, isolate leaks and extinguish fire.

**EMERGENCY SERVICES ACTION**

<b>Road Accident or Spillage</b>	<ul style="list-style-type: none"> <li>• If possible, move vehicle to open ground.</li> <li>• Contain leaking liquid with sand or earth, allow to evaporate.</li> <li>• Sewers must be covered and basements evacuated.</li> <li>• Warn inhabitants of explosion hazard.</li> <li>• In event of gas cloud, breathing apparatus may be required.</li> <li>• Use only explosion-proof or intrinsically safe electrical equipment.</li> </ul>
<b>Fire</b>	<ul style="list-style-type: none"> <li>• Keep containers and tank vapour space cool by spraying with water if exposed to fire.</li> <li>• Do not extinguish a leaking gas flame unless absolutely necessary</li> <li>• Consult an expert for advice whether to extinguish using dry chemical or foam.</li> <li>• Do not use water jet.</li> <li>• Use water spray to disperse gas vapour.</li> </ul>
<b>First Aid</b>	<ul style="list-style-type: none"> <li>• Carefully remove contaminated clothing unless adhering to skin. Flush affected skin areas with tepid water.</li> <li>• Seek medical treatment when anyone has symptoms apparently due to inhalation or contact with skin or eyes.</li> </ul>

**Contact**

**Telephone**

This card is prepared from the best information available. No responsibility is accepted that this information is adequate or correct in all circumstances.	Operator logo or stamp
Published by Health & Safety Department, Calor Gas Limited. Ref: H&S/TECR/V2 04/04	

## Carriage of Dangerous Goods Regulations and LPG CYLINDERS

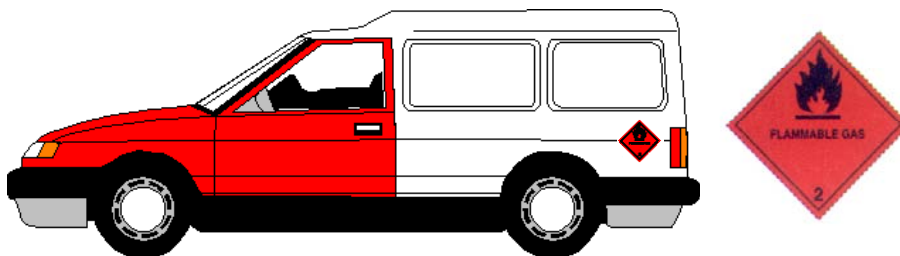
### VEHICLE MARKINGS SUMMARY

All vehicles conveying 333kg or more of LPG **MUST** display two orange plates. These may be displayed when carrying below 333kg of LPG but **MUST** be removed or covered when the vehicle has had all LPG containers offloaded.

Orange-coloured panel, normally 400mm wide, 300 mm tall with 15 mm black borders, fixed in a vertical plane to the front and rear of the vehicle.



Closed Vehicles must display three hazard diamonds of an approved pattern, one on each side and one to the rear of the vehicle, when carrying LPG cylinders.



All general enquiries contact

Calor Gas Limited  
Athena House  
Athena Drive  
Tachbrook Park  
Warwick CV34 6RL

Tel: 01926 330088  
[www.calorgas.co.uk](http://www.calorgas.co.uk)

**CALOR GAS EMERGENCY SERVICE**  
**0845 7 444999**

**(ALL CALLS CHARGED AT LOCAL RATE.)**

PUBLISHED JOINTLY BY: THE HEALTH & SAFETY AND TDGSA. WARWICK