Industry Standard Update 076

UKLPG CoP 24 Part 3
Date issued: 2 October 2017

This Industry Standard Update (ISU) provides an overview of the key areas of change arising from the amendments made to the UKLPG Code of Practice 24 Part 3 – 2017, Use of LPG for Commercial Catering Events, Street Food and Mobile Catering.

Introduction

During September 2017, UKLPG published an amendment to UKLPG CoP 24 Part 3[1]. This amended version supersedes the previous version published in 2010, which has been withdrawn.

The amendments to this standard come into effect immediately.

To allow registered businesses time to carry out internal update training to reflect the technical requirements of the amended standard, Gas Safe Register will inspect to the new requirements of this standard from **1 January 2018**. However, this should not restrict businesses from applying the specification sooner.

The following is a brief overview of the general requirements of the amended standard now published as UKLPG CoP 24 Part 3.

General

UKLPG CoP 24 Part 3 has been revised to include guidance covering commercial catering events, street food and mobile catering.

The guidance that was previously contained in Part 4 of CoP 24[2] has been included in Part 3, and Part 4 has been withdrawn.

References to legislation and current standards have been updated throughout.

Section 1: Introduction and Scope

UKLPG CoP 24 Part 3 provides guidance for the use of LPG for the temporary installation of appliances in commercial catering environments, and other such equipment used in the open – eg, gazebos, marquees, tents, market stalls and similar temporary buildings such as –'build-ups', gazebos, marquees and other temporary structures.

Its scope covers the use of mobile catering vehicles and similar commercial units with fixed installations of gas-fired appliances supplied from LPG cylinders or vehicle-mounted tanks, and appliances fuelled by non-refillable gas containers intended for domestic applications.

The CoP does **not** cover:

- Premises with installation pipework within the scope and installed in accordance with BS 6891: 2015[3]
- Service pipework and distribution services
- Pipework contained within an appliance
- Bulk storage vessels
- LPG pipework installed in leisure accommodation vehicles and for accommodation purposes in vehicles in accordance with BS EN 1949: 2011[4]
- Boats, yachts and other vessels
- Gas pipework supplying or within catering establishments covered by BS 6173: 2009[5].

Section 2: Design and Construction

Build-ups, gazebos, tents, stalls and other temporary structures shall be erected in accordance with the manufacturer's or supplier's instructions and located in accordance with UKLPG CoP 24 Part 3.

Where a single appliance is supplied by a single cylinder without a flame supervision device (FSD) in use, ventilation shall be equal in area to that of the longest wall. Additional ventilation shall also be provided by a 150mm high gap at ground level on each of the other walls.

In any self-propelled or towed vehicle, the installation of gas systems, storage of cylinders and vehicle design must conform to relevant regulations. Although the principles and guidance given in BS EN 1949: 2011[4] are outside the scope of BS EN 1949: 2011[4], they shall be followed.

Cylinders shall be restrained and transported upright and the maximum allowable mass of the unit must not be exceeded.

During transportation, cylinders shall only be carried in a suitably designed gas storage locker or compartment which is ventilated, fire-protected and minimises the risk of damage in a road accident.

Cylinder compartments shall be fire-protected by having 30 minutes' fire-resistant walls or lining, and designed so that:

- Access to any connections, changeover devices and pressure regulations is not obstructed
- They are gas-tight to the interior of the unit
- Replacement of cylinders can be made without disturbing the installation or ancillary equipment.

Ventilation in cylinder compartments should be:

- Permanent and provided to the exterior
- Be at high and low level. Low level shall be on the floor or bottom of the wall and the long side of the ventilator should be touching the floor
- No fixed source of ignition should be within a 1m horizontal radius outside the vehicle and from ground level up 0.3m above a housing compartment vent
- Exhaust pipes or any source of heat shall not be within 1m of any housing compartment vent.

If the ventilation to the cylinder compartment is provided at low level only then the free area shall be at least 2 per cent of the compartment floor area with a minimum area of 10,000mm^2. If the ventilation is provided at high and low level, the free area shall be at least 1 per cent of the compartment floor area and not less than 5,000mm^2 at each level.

Access to cylinder compartments shall be from outside the vehicle and designed to enable easy access. Unauthorised access should be prevented when the vehicle is unattended.

When purchasing a mobile catering trailer or van conversion, the unit shall be provided with:

- A certificate of compliance to BS EN 1949: 2011 issued by a Gas Safe Registered engineer
- A current tightness test certificate in accordance with IGEM/UP/1B[6]
- Written confirmation that all appliances have been installed in accordance with the manufacturer's instructions
- All appliance manufacturers' installation and instruction manuals

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- Service records for each appliance.

Section 3:
Gas Supplies and Siting

Cylinders not in use shall be capped or plugged and only the required number of cylinders to meet the maximum offtake requirements of the appliances (and the equivalent in reserve) should be kept at the unit.

Cylinders shall always be installed in the upright position with valves uppermost and shall be located:

- In the open air
- On a firm, level, hard standing, and restrained to a fixed post or suitably designed cylinder stand
- Where they remain readily accessible at all times
- Where they do not obstruct any means of access or emergency exit
- Where they are reasonably protected against accidental or vehicular damage
- In a designated area where smoking restrictions are in force, with visible signage.

Associated equipment such as manifolds, change-over devices, pressure regulators, etc, shall be located as close as practicable to the cylinder(s).

Cylinders shall not be located:

- Below ground level or in sunken areas
- Less than 1m measured horizontally from fixed sources of ignition, unprotected electrical equipment, excessive heat sources and readily ignitable materials (including oil storage tanks) or apertures in the unit such as doors, openable windows, flue/chimney terminals, etc
- Less than 0.3m measured vertically above the cylinder from fixed sources of ignition, unprotected electrical equipment, excessive heat sources and readily ignitable materials (including oil storage tanks) or apertures in the unit such as doors, openable windows, flue/chimney terminals, etc, unless a non-combustible weather protection hood which does not impair access to valves is provided
- Closer than 2m measured horizontally from untrapped drains, unsealed gullies or openings to cellars. This can be reduced to 1m if an intervening imperforate diversion wall not less than 250mm high is provided
- Next to corrosive, toxic or oxidising materials.

Where between 15kg and 400kg is to be stored, then there should be a separation distance of 1m between buildings, boundaries and fixed sources of ignition. Above 400kg, this distance shall be increased to 3m.

Additional guidance relating to the storage of full or empty cylinders not in use is given in UKLPG CoP 7[7].

If the circumstances mean that it is not reasonably practicable to provide installation pipework from an external cylinder supply then an internal supply may be permissible provided that a suitable and sufficient risk assessment is carried out. Clauses 3.4 and 3.5 provide guidance on the use of LPG cylinders for catering inside commercial premises and inside event premises.

Section 4:
Gas Installation Pipework

The pipe size shall ensure that the pressure drop between the outlet of the pressure regulator and any appliance inlet when the installation is subjected to the anticipated maximum load shall not exceed 2mbar.

Flexible hoses for cookers and ovens should be as short as practicable but in no case exceed 1.5m in length and be either:

- Flexible hose or tubing to BS 3212[8] or BS EN 16436-1[9] (hose) and BS EN 16436-2[10] (assembled). Such hose and tubing should be protected by armour or over-braiding. It should not be used where it could be subjected to temperatures above 60°C
- Stainless steel hose assemblies to BS EN 10380[11]
- Corrugated metallic hose and end fittings to BS EN 14800[12].

This Section includes Figure 1, which provides an example of a typical gas rig for gazebos.

Pliable corrugated stainless steel conforming to BS 7838[13] and BS EN 15266[14] when buried shall have a minimum depth of 600mm.

Underground pipework when routed under temporary flooring shall be protected against rodent attack, mechanical damage, heat and sunlight and not exceed the manufacturer's bend radius.

Tightness testing shall be in accordance with IGEM/UP/1B.

Section 5:
Pressure Regulators and Automatic Changeover Devices

Except as permitted in the following two paragraphs, all regulators and changeover devices shall have over-pressure shut-off protection (OPSO) in order to protect the downstream pipework and appliances from a maximum incidental pressure greater than they are designed to withstand.

Portable and outdoor appliances with a pre-installed regulator and hose, with a heat input of 1.5kgh (21kW) or less, supplied by the manufacturer, may have no OPSO fitted, and shall only be connected to a single cylinder. Operation shall be in accordance with the appliance manufacturer's instructions, with due consideration to the location of use and ventilation requirements.

OPSO protection shall be installed where a regulator is not supplied by the manufacturer with the appliance(s), and the appliance(s) have a capacity of more than 1.5kgh (21kW) and supplied by one or more cylinders connected to fixed pipework assembly or hose assembly in excess of 1.5 metres.

Pressure regulators and safety devices incorporating full vent relief valves shall not be used that could discharge LPG vapour inside a commercial premises or an event premises.

Where changeover devices are used, non-return valves at the high-pressure inlet shall be incorporated to prevent a discharge of gas when changing cylinders.

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Section 6:
LPG Appliances
Appliances shall have all burners protected by flame supervision devices.

Appliances should be installed in accordance with The Gas Safety (Installation and Use) Regulations 1998[15], the manufacturer's instructions and any other relevant British Standard(s).

Appliances should be used and maintained in accordance with the manufacturer's instructions. Flexible hoses should be examined regularly for damage or wear and replaced as necessary.

This Section contains images of boiling rings with flame failure devices (FFDs).

Additional guidance has been included to provide guidance for grillers and toasters, bain maries, and barbeques.

Section 7:
LPG Generators
This Section has been expanded to include guidance for built-in generators and stand-alone generators.

Section 8:
Ventilation and Flues
It is strongly recommended that every mobile unit has a CO alarm. Such alarms should comply with BS EN 50291[16] and carry the appropriate conformity marking. CO alarms should be installed, checked and serviced in accordance with the manufacturer's instructions.

A CO alarm conforming to BS EN 50292[17] may be used as a secondary line of defence in gazebos and temporary housings but these types of housing should still comply with the guidance provided in IGEM UP/19[18] and EH40[19].

Carbon dioxide (CO_2) detection aligned with recommendations of IGEM/UP/19 and EH40 with regard to the levels of CO_2 shall be installed inside the vehicle according to manufacturer's instructions. Serving and ventilation hatches shall be interlocked to the gas supply in order to prevent the appliances operating until the hatch is open unless there has been specific ventilation designed and is permanent to allow the safe operation with the hatch closed.

In mobile units, free ventilation should be provided at a rate of at least 250mm^2 for each 1kW input rating of all appliances, or 1000 mm^2, whichever is the greatest. This should be divided equally between ventilation openings at high and low level.

Where gas-fired catering appliances are used in build-ups, gazebos, marquees, tents, stalls or other temporary structures, the provision of adequate ventilation is necessary when supplying or installing appliances.

Timber buildings, kiosks and enclosures to house appliances are considered to be permanent structures. Flues and canopies with safety interlocked gas supplies shall be provided if required by the appliance manufacturer's instructions.

The flue shall be constructed from non-combustible materials and shall be separated from combustible materials by at least 25mm. The flue shall be fixed firmly to the vehicle and capable of withstanding vibration during movement of the vehicle. It should be capable of venting fumes away at high level and away from any openings in the vehicle.

Where fitted in marquees, the canopy shall overhang the appliances by 250mm on each side and the front. The flue or canopy shall be mounted and secured to a firm base, with all cables, fixtures and fittings routed not to pose either a fire risk or trip hazard.

Any flue system shall be installed in accordance with the appliance manufacturer's installation instructions and terminated so the products of combustion can discharge safely at all times, with no re-entry into the catering area. When flue systems are used in event premises, a suitable and sufficient risk assessment shall be carried out to determine the minimum levels of ventilation required.

Where forced mechanical extract canopies are installed, they must be electrically interlocked with the canopy, so that if the draught in the canopy fails to meet the minimum extract requirements, the appliance is prevented from operating. It must not be possible to override this safety interlock.

Section 9:
Maintenance
Gas appliances and flues must be maintained in a safe condition. It is recommended that servicing is undertaken in accordance with the manufacturer's instructions with a minimum frequency of 12 months. Where appliances and flues are subjected to frequent use, consideration should be given to servicing every six months.

Before daily catering commences, the cylinders, pipework and appliances shall be checked by a competent person. Checks will consist of visual inspection of flexible hoses, joints and connectors in pipework, and flame picture according to manufacturer instructions of any visible burners.

Any suspected gas escapes can be traced by the use of a suitable leak detection fluid. If any escapes are found, the competent person will turn off the gas supply and contact a Gas Safe gegistered engineer for repair and retest.

Where a catering vehicle or catering equipment is provided on hire in the course of a business, there shall be a duty on the business hiring the equipment to ensure the installation is safe for use, and compliance documentation is current.

Section 10:
Competency and Training
A Clause has been added which states that the gas engineer shall examine all appliances to ascertain their make and model.

If the CE mark cannot be located, and there is no other indication that the appliance was CE marked, the registered engineer should assess the safety of the equipment and classify it appropriately against the Gas Industry Unsafe Situations Procedure.

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Where additional safety devices are required, these may be fitted, provided that they do not result in the appliance no longer conforming to relevant standards to which it claims to comply (eg, CE marking). Flame failure protection devices, for example, may be retro-fitted in accordance with the guidance issued by Gas Safe Register in Technical Bulletin 044 – *Flame failure protection on new and previously used gas catering equipment*.

Section 13: Parking During Use

Where damage to the catering unit, cylinders and associated equipment from vehicular traffic is a possibility, precautions against such damage shall be taken with the measures above.

Appendix A: Safe Handling and Properties of LPG

A table has been added to this Appendix which provides guidance on Workplace Exposure Limits (WEL).

Appendix B: Legal and Contractual Responsibilities

This new Appendix provides information relating to legislation in force at the time of publication and provides guidance on contractual responsibilities.

Summary

As previously stated, this Industry Standard Update is only a brief overview of the information contained in the amended standard. Registered businesses should be aware that they have a responsibility to ensure that they are fully apprised of all of the requirements of the whole published standard and its practical application.

Bibliography

(1) UKLPG CoP 24 Part 3: 2017 *Use of LPG for Commercial Catering Events, Street Food and Mobile Catering*

(2) UKLPG CoP 24 Part 4: 1999 *Use of LPG for Catering at Outdoor Functions (Withdrawn)*

(3) BS 6891: 2015 *Specification for the installation and maintenance of low pressure gas installation pipework of up to 35mm (R1¼) on premises*

(4) BS EN 1949: 2011 + A1: 2013 *Specification for the installation of LPG systems for habitation purposes in leisure accommodation vehicles and accommodation purposes in other vehicles*

(5) BS 6173: 2009 *Specification for installation and maintenance of gas-fired catering appliances for use in all types of catering establishments (2nd and 3rd family gases)*

(6) IGEM/UP/1B Edition 3 *Tightness testing and direct purging of small Liquified Petroleum Gas/Air, Natural Gas and Liquified Petroleum Gas installations (Communication 1759)*

(7) UKLPG CoP 7: 2004 *Storage of Full and Empty LPG Cylinders and Cartridges*

(8) BS 3212: 1991 *Specification for flexible rubber tubing, rubber hose and rubber hose assemblies for use in LPG vapour phase and LPG/Air installations*

(9) BS EN 16436 – 1: 2014 + A1: 2015 *Rubber and plastic hoses, tubing and assemblies for use with propane and butane and their mixture in the vapour phase. Part 1 Hoses and tubing*

(10) BS EN 16436 – 2: 2016 *Rubber and plastic hoses, tubing and assemblies for use with propane and butane and their mixture in the vapour phase. Part 2 Assemblies*

(11) BS EN ISO 10380: 2012 *Corrugated metal hoses and hose assemblies*

(12) BS EN 14800: 2007 *Corrugated safety metal hose assemblies for the connection of domestic appliances using gaseous fuels*

(13) BS 7838: 1996 *Specification for corrugated stainless steel semi-rigid and associated fittings for low-pressure gas pipework of up to DN 50*

(14) BS 15266: 2007 *Stainless steel pliable corrugated tubing kits in buildings for gas with an operating pressure up to 0.5 bar*

(15) HSE L56 – *Safety in the installation and use of gas systems and appliances – Approved Code of Practice and Guidance to the Gas Safety (Installation and Use) Regulations 1998. This document is available at: http://www.hse.gov.uk/pubns/priced/l56.pdf*

(16) BS EN 50291-1: 2010 + A1 2012 *Electrical apparatus for the detection of carbon monoxide in domestic premises. Test methods and performance requirements*

(17) BS EN 50292-2: 2010 *Electrical apparatus for the detection of carbon monoxide in domestic premises. Electrical apparatus for continuous operation in a fixed installation in recreational vehicles and similar premises including recreational craft. Additional test methods and performance requirements.*

(18) IGEM/UP/19 *with amendment 2015 Design and application of interlock devices and associated systems used with gas appliance installations in commercial catering establishments (Communication 1777)*

(19) EH40/2005 *Workplace exposure limits (This document is available at: www.hse.gov.uk/pUbns/priced/eh40.pdf*