

The silent KILLER

John Wickersham looks at the importance of fitting a carbon monoxide alarm in your caravan



Any gas appliance can get out of adjustment and a qualified gas specialist is able to verify safe operation

Make no mistake, carbon monoxide (CO) can be a killer. A number of CO-related deaths have been reported in the media recently, and in May the fumes from a disposable barbecue were being blamed for the death of a teenage girl on a camping holiday.

Even a barbecue that appears to have been put out continues to be a CO hazard if there is insufficient ventilation, so please keep them out of your caravan awning.

COOKING AND HEATING GAS APPLIANCES

A more common source of CO is a poorly-performing gas appliance – one of many reasons why caravans and

motorhomes should be periodically submitted for habitation service work. Bumpy roads can shake up fittings in a caravan or motorhome, which can in turn result in a gas cooker or heater getting out of adjustment. This means that the appliance might then draw an incorrect air/gas mixture which could upset the flame on a burner and, if there's incomplete combustion, lead to the emission of CO.

That is one reason why open-flame space and water heaters, once fitted in caravans and motorhomes, have been superseded by room-sealed systems. The advantages of these modern appliances are that their burners are housed in a sealed enclosure, the combustion air is drawn from outside, and exhaust gases are duly expelled via an air-tight flue.

In contrast, a caravan's oven, grill and hob have exposed gas burners and must *never* be left alight to provide additional heating after cooking.

MALFUNCTIONS

Despite the importance of habitation checks, some caravan and motorhome owners don't have them done – they probably don't realise that burners on a cooker can get out of adjustment.

Indications of CO emissions include yellow streaks in a burner flame and saucepans being coated in excessive sooty deposits. However, there's little else to indicate a problem as CO has no smell, no 'taste' and no potential to cause irritation.

Mindful of potential risks, the National Caravan Council (NCC) decided that from 1 September 2011,

new caravans and motorhomes submitted for NCC certification should be fitted with a CO alarm as standard.

TYPES OF CO ALARM

To meet NCC requirements, caravans and motorhomes have to be fitted with a Type B CO alarm that complies with the BS EN 50291 standard.

INFORMATION

Common symptoms of CO poisoning

- Headache
- Dizziness and nausea
- Vomiting
- Tiredness and confusion
- Stomach pain
- Shortness of breath

Source: nhs.co.uk/conditions/carbon-monoxide-poisoning



Above left: the safe operation of gas appliances should be confirmed by arranging a habitation service

Above: a qualified gas engineer can draw information about a burner's operation by the colour and shape of a flame

Left: products should bear a date with an indication when a replacement unit needs to be fitted

Right: this CO detector gives both an audible and visual warning if carbon monoxide is detected



Although 230V devices are available, the preferred type installed in touring vehicles employs internal batteries that offer a typical life of five or more years. Note: Type B alarms offer both visible and audible warnings.

The electro-chemical sensors used in these units also have a limited lifespan – therefore, it is recommended that a CO alarm is replaced every 5-7 years after manufacture or in accordance with the unit's instructions, so be sure to check the manufacturing date on an alarm's label.

An NCC guide on CO alarms points out that some devices have a test, re-set or silence button and adds with concern that BS EN 50291 currently doesn't require a product to reactivate automatically. So, some devices might need to be re-set by the owner.

INSTALLATION GUIDANCE

Few caravans and motorhomes have a CO alarm, so as an owner you might

want to install one. Unlike alarms used to detect a butane or propane leak, CO detectors are not positioned at low level as carbon monoxide, unlike liquefied petroleum gas (LPG), is not denser than air – ie an accumulation of CO will not 'sink' towards the floor in the way that LPG does.

Installation guidance from the NCC begins with two key requirements:

- A CO alarm should be installed between 1-3m away (measured horizontally) from any potential source of carbon monoxide
- It should not be situated directly above a source of heat or steam

The NCC then urges fitters to fulfil most of these recommendations:

- Mount on a wall 15-20cm (6-8in) below the ceiling and preferably higher than any door or windows
- Site it away from obstructions – eg don't fit one in a cupboard or behind a curtain



This LPG gas alarm is correctly mounted near the floor – CO gas alarms should be fitted near the ceiling



Once this backing plate has been fixed to a wall, it is easy to attach or remove the detector itself

- Don't fit it directly over a sink
- Avoid locations adjacent to a door, window, extractor fan or air vent
- Do not fit it in the immediate vicinity of a cooking appliance
- Select a position where dirt or dust is unlikely to block vents on its casing
- Avoid damp or humid locations

SUSTAINED PERIODS OF COLD WEATHER

A CO alarm, like all electronic devices, must not be left for prolonged periods at sub-zero temperatures. If a caravan is left in an unheated storage facility during winter, it is advisable to remove the unit. Don't forget to put it back in place at the start of a new touring season.

USER GUIDANCE

Observe the manufacturer's instructions and manually test an alarm's function periodically. If an alarm becomes activated, ensure that

everyone promptly vacates the caravan or motorhome. Isolate the gas supply in its external locker and only re-enter your vehicle when it has been established that it is safe to do so.

SUMMARY

Since many caravans and motorhomes are already equipped with LPG and smoke alarms, it is tempting to question the importance of adding yet another device. However, when you consider the potential tragic consequences of a CO leak, it makes sense to do so. ■

INFORMATION

- ➔ **National Caravan Council** – call 01252 318251 or see nationalcaravan.co.uk
- ➔ **Honeywell Analytics Domestic Products** – call 01202 645577 or see honeywellanalytics.com
- ➔ **Calor Gas** – call 0800 626626 (stock CO alarms)
- ➔ **CO Awareness** – covictim.org (a charity that helps to raise awareness on this topic in a context of camping and caravanning holidays)
- ➔ **Gas Safe Register** – to find a gas engineer qualified to maintain the appliances in your caravan or motorhome, call 0800 408 5500 or see gassaferegister.co.uk
- ➔ **Acknowledgement:** thanks to Martin Perman, NCC Technical Specialist



Smoke alarms have been fitted to caravans for many years. The purpose of a CO alarm is quite different