

If there's smoke, there's trouble

An alarmed Peter Fellows reviews protection for your boat

Both smoke and CO alarms are available for people with hearing loss.

Further information is available at the BSS website boatsafetyscheme.org/search/?q=smoke+alarms and the Fire Industries Association www.fia.uk.com has produced a list of smoke alarms that are suitable for boats. The CO alarm manufacturer's association, CoGDEN cogdem.org.uk, has published a list of alarms produced by its members that are suitable for use in boats.

Every year, boaters are killed or injured by boat fires and carbon monoxide (CO) poisoning. Both are preventable by fitting the proper alarms and making sure that these, and the heating appliances on your boat are well-maintained. Here are the basics.

Smoke alarms

There are two types of detector in smoke alarms: optical (or photoelectric) and ionization detectors. The best choice for boats is an optical alarm, fitted with a 'hush button'. This type is more effective at detecting slow-burning fires, such as smouldering wood or foam-filled furniture, overheated wiring etc. It is also less prone to nuisance alarms from cooking fumes and if it does go off while frying food or making toast, the hush button can be used to temporarily silence the alarm. The second type is an ionisation alarm, which uses a radioactive isotope. This type is very sensitive to flames and can detect a fire before the smoke gets too thick. If you think your boat is at risk from both slow-burning and flaming fires you should consider installing one of each. Some alarms have both types of sensor in the same housing or a combined smoke detector and carbon monoxide (CO) detector. Others have an emergency light to illuminate the escape route.

Battery or mains-power?

A smoke alarm with a flat battery is not a smoke alarm; it is useless. Alarms with 'sealed for life' lithium 7-year or 10-year batteries are better than replaceable 9-volt alkaline

or standard batteries. If you do use alkaline or standard batteries, they should be replaced at least once a year, or more frequently if the cabin atmosphere is damp. Alarms should be tested at least once a week when the boat is in use and after any period when the boat has not been used.

Unless a boat has a permanent shoreline electricity supply, or you are confident that you have sufficient capacity in your boat's battery and inverter system, mains-powered alarms are less suitable. They are hard-wired in and have to be installed by a competent person.

How many smoke alarms do you need and where to fit them?

Obviously, the number of alarms depends on the size of your boat, but as a guide, no area of the boat cabin should be more than five metres from an alarm. Longer narrowboats therefore need multiple units for maximum protection. If you choose to fit more than one alarm on your boat, it is recommended that they are connected to each other so that, when one detects smoke, all the alarms sound. The interconnection can be wireless or via a 12v bell wire. These are useful for anyone who needs a loud noise to be woken from deep sleep or for people with hearing difficulties.

The ideal location for an alarm is on a well-insulated part of the ceiling (avoiding cold spots) along the centreline of the boat. Alarms should be placed in a cabin space that has a heater or a cooker, but not too close to the appliance. If possible, avoid putting them closer than 300 mm



to a vertical surface (a cabin wall or wardrobe for example). If you can't mount the alarm on a ceiling (e.g. if headroom is a problem), mount it on a wall 150–300 mm below the ceiling, but not directly above a ventilator or opening window. The location of the alarm should be easy to reach for testing or pressing the hush button and in a place where you are able to hear it, particularly when you're asleep or when doors are closed. Check if you can hear the alarm before you fix it in position. Do not fix a smoke alarm in the galley or bathroom, where it could be set off by cooking fumes or steam, or close to a heater or a roof ventilator.

CO alarms

Boats are built to keep water out, but this also makes them good containers for gases and fumes—especially carbon monoxide. 'Black-spot' colour-changing CO indicator cards are not good enough: they do not give an instant warning of dangerous CO levels and have no alarm to wake you up. CO alarms are designed to protect you from CO produced by incomplete combustion of any fuel

(including LPG, coal, charcoal, wood, paraffin or diesel used in domestic appliances such as cookers, boilers, stoves, etc.), or from exhaust fumes from a boat's engine or generator.

The main causes of CO build-up in a cabin are faulty, badly maintained, or misused appliances and escaped flue gases from solid fuel stoves.

How many CO alarms do you need and where to fit them?

If the boat has a single multi-use cabin, one alarm is sufficient, but otherwise all cabins with a fuel-burning appliance should have a CO alarm fitted. If fuel-burning heaters, generators or engines are used while people sleep, all bedrooms should have their own alarms. Follow the alarm manufacturer's installation instructions as far as the space and nature of the boat allow, but if the directions are difficult to meet on your boat, the following are best practice points:

10 TIPS TO KEEP YOU AND YOUR CREW ALIVE

1. Install fuel-burning appliances properly, in line with manufacturer's instructions.
2. Follow servicing guidelines, with routine and competent maintenance.
3. Use appliances as per their instructions (e.g. never use cookers for space heating).
4. Don't allow any bodged repairs, adjustments and adaptations to appliances.
5. Never use equipment you suspect has problems; deal with them immediately.
6. Don't block ventilation.
7. Don't bring charcoal BBQs on board, or have them near a cabin during or after use—only stone-cold charcoal is safe.
8. Prevent engine fumes from entering the cabin and never use a portable generator in or near a cabin.
9. Learn about the danger signs; identify potential hazards before CO can be produced and make sure that all crew know the symptoms of CO poisoning and how to react if it is suspected.
10. Install a certified CO alarm (BS EN 50291-2), test it routinely and never remove the batteries.

A smoke alarm should meet BS EN 14604:2005, have a British Standard Kitemark, a BRE Global Loss Prevention Certification Board (LPCB) horseshoe certification mark or the square VdS symbol.

A CO alarm for a boat should meet BS EN 50291 as a minimum and BS EN 50291-2 standards (suitable for boats) for greater assurance. Also look for the BSI Kitemark or a LPCB horseshoe certification mark.

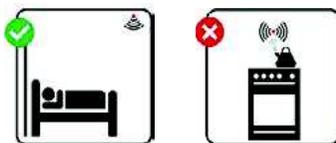
Combined alarms should comply with standards EN 14604 (including Annex L) and EN 50291-2 and carry a recognised approval mark. The manufacturer should state that they are suitable for use in boats.

Place the alarm:

- in living quarters between 1 metre and 3 metres from the appliance;
- in living quarters high up on a wall, at least 150 mm from the ceiling and where the indicator lights can be seen;
- in sleeping quarters in the 'breathing zone' near the bed head.

Before fixing, check that you can hear the alarm from any position in the boat (or buy additional alarms). Test the alarms when you first board the boat and then weekly when the boat is in use.

Write a replacement date on the alarm. Do not use it beyond that date and if in any doubt, replace it earlier. When working on the boat with paints, solvents, degreasers etc., cover the alarm or remove it temporarily to protect the sensor.



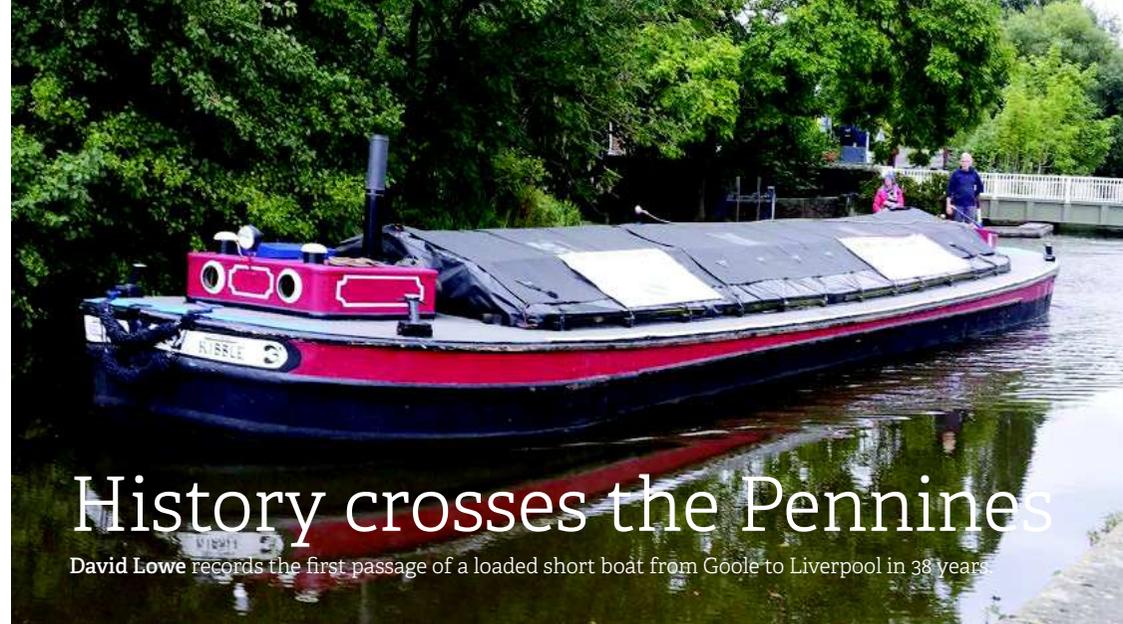
NOTE THAT CO ALARMS

- only detect CO, they cannot prevent it;
- do not detect fires, smoke or leakages of petrol or LPG fuel vapours;
- can activate if they sense hydrogen (e.g. from the boat's batteries gassing off when under charge).
- may not fully safeguard individuals with specific medical conditions;

Replace the alarm as soon as the air clears and before you use any appliance or the engine. Consider removing the alarm from a winterised boat to prevent long periods of sub-zero temperatures affecting its sensor and battery.

parklikeatwat.com: Part 2

Diane Richmond took this photo, and another one by Sarah Edgson during the same week near Rugby. Comments included, Brian Holt: "Well it looks like the hazard lights are on, so it should be OK", Mark Jones: "I see the problem: no green and red navigation lights!" and Sadie Dean: "Just shows how shallow it is in parts!" Finally, in the recent crop of photos, this one taken near London by Alexandra Cat, with a comment by Andy Ellis: "That is stupid mooring - anyone knows you need more than one line to moor properly". From the NABO Facebook page



History crosses the Pennines

David Lowe records the first passage of a loaded short boat from Goole to Liverpool in 38 years

Ribble Photo: David Lowe

To mark the bicentenary of the completion of the Leeds and Liverpool Canal, David and Margaret Poole, owners of the 1934 Leeds and Liverpool short boat 'Ribble', organised a demonstration cargo run across the Pennines. A tribute to those who built and worked on the canal and, on a purely practical level, a good test of the recent extensive dredging. It was also chance to see what a loaded short boat looks like—a sight once commonplace, but not seen for nearly 40 years. In David Poole's words: "It would bring joy to those who knew what they were looking at, an education to those who didn't."

The Commercial Boat Operators Association arranged the cargo, 32 tonnes of sand in one-tonne bags, donated by member, AC Marine Aggregates and its loading in Goole Docks by North West Trading at no cost on 21st September with assistance and advice from Humber Barges Ltd. The MCA gave the trip its blessing, and CRT's NW Waterway and NE Partnership supported the project. The sand was donated to the Trust at the end of

the voyage. This was the first load of sand to be taken up the Aire and Calder Navigation for three years, the first loaded short boat to traverse the eastern end of the L&L since 1982 and the first across the summit since September 1978, when Derek Bent's short boat *Weaver* crossed from Selby to Manchester with a load of fishmeal.

The journey achieved its objectives: considerable interest from towpath users, boat owners and Trust staff. Passage through Yorkshire and onto the summit was relatively trouble-free, especially through the recently dredged lengths, as was the section from Wigan to Liverpool. Navigation between Barrowford and Wigan, however, proved to be a challenge, especially on the return, with very low water levels, shallows and rubbish in bridge holes. A comprehensive report of the trip will enable CRT to plan its future dredging programme for the western end of the canal and perhaps revisit its policy on water levels. 'Ribble' was unloaded at CRT's Rose Grove Wharf near Burnley on 13th October, having travelled back from Liverpool.

While the 'Ribble' voyage was not a true commercial cargo, resumption of sand deliveries to Leeds is expected later this year or early next.