

Ask an expert

All your technical boating questions answered...

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WHY DOES MY BATTERY MONITOR SHOW CHARGING WHEN THE ENGINE IS OFF?

My narrowboat has a NASA BM2 battery monitor for a cabin bank and, separately, a starter battery. When I isolate the batteries and leave the boat, on my return a few days later the battery charge level is shown as higher. And it climbs higher the longer I leave it. Why is this? **Richard Smith**

Check to see if the starter battery is somehow misconnected to the cabin battery bank If so, perhaps it could be that when you stop the engine, the starter battery charge is slowly being transferred over to the cabin bank. One tell-tale in this case would be if the voltage readings of the starter and cabin banks are exactly the same.

Measure the voltages of each battery separately with a multimeter, and then compare with what the NASA monitor says. If the multimeter readings of starter and cabin are different but the NASA monitor shows them as identical, the monitor could be miswired and only measuring the cabin bank on both settings. Get a qualified electrician to check the wiring. But also check that all terminals are clean and securely tightened. Andrew Denny



Why is the battery showing an extra charge when returning to the boat?

SHOULD I BE **WORRIED THAT MY INSULATION IS THE** SAME AS GRENFELL?

Reading the Grenfell Tower fire report, I was concerned to see that at least one of the insulation manufacturers criticised has appeared in your boat reviews. I'm shortly planning to commission a boat build should I be worried?

Name not supplied

The report lays the blame for the rapid spread of fire on the cladding used, not insulation. None of the parties mentioned in the report appear to make products specifically for boats.

Fire remains a primary concern for boaters; in 2022 the Boat Safety Scheme recorded 64 incidents of fire on boats (with solid-fuel stoves being the largest cause). Fire was by far the biggest recorded incident type.

A look at some commonly used insulating materials on boats shows them variously described as being 'fire resistant', 'noncombustible' or 'fire retardant'. However, some manufactured insulation board is described as being *combustible material with high contribution to fire" and would not be suitable in a boat. Speak to your boat-builder about the insulation they use and do some research yourself into the technical characteristics of it. Be aware, requirements for insulation are not specifically outlined in the RCD or RCR 2017, and are also not covered by BSS requirements.

A boat could be considered



as being a tube, commonly lined with wood and piped with gas and liquid fuels, all surrounded with a web of electrical cabling. Add in solid fuel and portable electricals and there are many things to consider. Perhaps the best defence against fire is prevention - good engineering practice and maintenance, supplemented with adequate warning and safety devices. Even then, every boater needs a fire escape plan and clear exits in case the worst happens. Tom Keeling

WHY HAVE I GOT CONTAMINATED **HOT WATER?**

My boat's hot water is heated by the engine. I've noticed a smell of diesel when I run hot water taps. What's the problem? **Paul Taylor**

A calorifier (hot water tank) heated by a coil from the

engine's cooling system is the most common primary water heating method on narrowboats. It would be very unusual for the hot water to be contaminated by diesel directly, and it is very infrequent that the engine coolant would leak into the calorifier.

The pressure relief valve (PRV) on the top of the calorifier (or on the side if it is a horizontal calorifier) might lead to a hose in the bilge and, if so, bilge water can be sucked back into the calorifier, which could explain the contamination.

The pressure relief valve is designed to open and discharge water when the internal temperature raises the pressure too much. However, sometimes the valve can fail, allowing water to enter. If the engine coolant is leaking into the calorifier this could be traced by adding a dye such as fluorescein to trace any leakage.

Also, check for any diesel smell in the cold water, in case the main water tank is contaminated. This could (unfortunately) mean a full clean and repaint/lining of the tank.

Mark Langley

WHY SPEED WHEN GOING **UP A TIDAL RIVER?**

The worst overheating incident on my boat occurred when I was going up the Thames from Limehouse and trying to keep up with other boats in the convoy. Why is it necessary





to speed up so much if the passage up the tidal Thames has been properly timed to go up with the rising tide? John Rich

Even if the tide is going A fast, you need to be going faster still to be able to steer accurately. You might also run the risk of missing the turn of a tide and end up having to 'punch' the tide when it starts flowing in the opposite direction. Perhaps the other boats were taking this into account. There is also the issue that by sticking together in a flotilla, others (e.g. oncoming boats, or those crossing your path) will recognise your presence more easily. If you plan it well, you shouldn't need to speed. However, it is important to discuss your plans with the other boats before you set off. Mark Langley

WHAT ARE 'ARISINGS'?

Recently I saw a CRT sign saying 'Leave no arisings here'. What are 'arisings'? Name supplied

From the location data of the photo you sent, this sign is on the Marsworth lock flight on the Grand Union Canal. It's not a sign I have noticed anywhere else on the network. My first thought was that this was asking boaters not to leave rubbish (or possibly ash from stoves) on the towpath. But no. After a little to-ing and fro-ing with CRT it turns out that this sign is an internal one. aimed at staff and volunteers.

The local team say the reason for that sign is to maintain natural reservoir flows down the back channel", a CRT spokesperson told us. "If arisings were to be left there then it would block the flow."

Yes, but what are arisings? "It's basically waste material" our

source responded. "It could be dredging, or soil. It would normally be harmless and biodegradable so that it can be spread on the ground adjacent to the towpath. But in this case not, since it might wash off, causing potential blocked by-washes or drains." **Andrew Denny**

WHO BUILT THIS BOAT?

I recently bought an old narrowboat that had been put up for auction by CRT. The original owner, a man in his 80s, had died. It has fine lines and I am slowly restoring it to its former glory.

But what is its history? There is no information on the boat register except for the name, Curly Cats Canal, plus a registration number. Someone told me it might be a Les Allen boat. I believe it was first registered in about 1979, and it has a Peugeot 2.3-litre diesel engine (still working well) that a motor forum tells me would once have been installed in a Ford Granada Mark II saloon. **Phil Jones**

I asked David Harris, who A worked at the Allen yard for many years, and he's positive it's not a Les Allen boat. Does any one recognise this distinctive

profile? Pointers include: the stylish sweep up to the (stern) counter, the roof handrail (rather than cant rail), a side gas locker near the stern, an engine vent to starboard, and a distinctive 'wing' to the cabin side at the front. I'm told the Boat Safety Scheme has the name as just Curly Cats, and the registration number dates from as late as 1990. Which makes me wonder - might it have been on another (non-British Waterways) navigation for the first decade of its life? **Andrew Denny**

WHY DOES MY PROPELLER SOUND SO STRANGE IN REVERSE?

When stopping or reversing my boat, the sound from the propeller changes. It sounds like gravel hitting the boat, or maybe air bubbles. Is this normal? I have an 18in x 15in prop with around 11/4in top clearance, using a 50hp Shire 150 gearbox. I previously had an 18in x 10in propeller and that did the same (I changed it because it was under-propped and I bent it). **Anthony Spanswick**

On a narrowboat it is most likely ventilation, although it could be cavitation - both can reduce stopping power.

Ventilation is where air is drawn into the propeller. This can come from the surface - often along the hull 'swim' (sometimes you see little whirlpools drawing air down) - or from around the rudder. The shape of the hull, length of swim, taper to the ends of the swim, rudder shape and hull curves all play a role. As it also happened with your previous prop, it would suggest that the issues lie with the hull, rather than the propeller.

If it is cavitation, you would probably also report the engine speed increasing as the boat slows. This is because as the blades spin, they lower the pressure around the blade tips until the water vaporises (or

dissolved gases come out) so the prop is effectively spinning in gas rather than water. This normally happens with highspeed propellers, though it can happen sometimes to narrowboats. Mark Langley

IS A BRITANY ANCHOR GOOD **ENOUGH FOR A** NARROWBOAT?

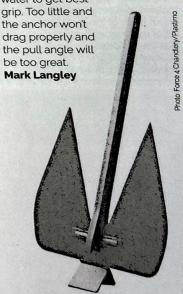
I have taken over a 62ft narrowboat with a 16kg Britany anchor. Is this anchor solid enough to hold the boat in a river? **Bill Goad**

A variant of the Danforth anchor, invented in the 1940s, the Britany should be fine for rivers. A 16kg Britany will probably be enough if you have sufficient chain and rope. A 20kg would be better but it can be hard to pull up without a winch.

Ideally, you need at least 15ft of chain, preferably more, since the weight of the chain helps the anchor dig in. The rest of the line should be nylon or polyester, not polypropylene (which floats and so is counterproductive).

An eight-strand polyester like Octoplait or Anchor Plait can be spliced directly to the chain, avoiding shackles. This style of rope, with four opposed pairs of strand, is very easy to splice in directly to the chain without kinking - there are a number of quides online on how to do this.

You cannot have too long a line. A minimum of 100ft (30m) would be appropriate. As a rule of thumb you need to put out at least five times the depth of water to get best



A Britany anchor - good enough for rivers but ensure you use enough rope and chain.

