**LLAMA ZER-SHOT**

The Love for Lydia investigation revealed a very serious marine casualty that resulted in two fatalities. The incident occurred when Emma Louise [NNE]was found moored at Port Hamble Marina, Hampshire, with its engine idling and both occupants unresponsive. Despite initial attempts to revive them, the men were pronounced deceased at around 1050.

An investigation by the Marine Accident Investigation Branch (MAIB) found that carbon monoxide poisoning was likely the cause of death. The report highlights the growing concern over CO poisoning on board pleasure craft, which has led to increased fatalities in recent years. The MAIB recommends raising awareness among pleasure craft users to prevent such incidents.

The investigation's findings indicate that a lack of safety measures and inadequate precautions may have contributed to the accident. The report emphasizes the importance of ensuring proper ventilation systems, regular maintenance, and operator training [MGE]to mitigate CO poisoning risks.

One key lesson from this incident is the need for marina operators and pleasure craft users to be more vigilant in monitoring their vessels' safety equipment. Regular checks on carbon monoxide detectors and ensuring that they are functioning correctly can help prevent similar incidents in the future. Additionally, educating boat owners and operators about the dangers of CO poisoning and providing them with proper training and resources is crucial. [MGE]

The MAIB's actions, including participating in Carbon Monoxide Awareness Week and producing safety materials, demonstrate a commitment to addressing this critical issue. By following these recommendations and taking proactive measures, marina operators and pleasure craft users can reduce the risk of CO-related incidents and ensure safer operations at sea.

**LLAMA ONE-SHOT**

A very serious marine casualty occurred on board Emma Louise, resulting in two fatalities due to carbon monoxide (CO) poisoning. The accident took place on January 11, 2022, [DTE]in the early evening at Port Hamble Marina, Hampshire. It is likely that the exhaust gas from a portable electric radiator within the cockpit [MGE]was funnelled into the enclosed area by an inflatable towable ski ring suspended at the transom.

The cockpit canopy was intact and well-fitted, but there was little ventilation to allow CO to disperse or fresh air to enter the boat. The warm portable electric radiator may have caused convection currents that distributed the CO within the cockpit. The two men were seated in the affected area, which likely led to a build-up of CO levels, resulting in their fatalities.

No damages or environmental impact were reported. An investigation into the accident was conducted by the Marine Accident Investigation Branch (MAIB), which identified the potential for convection currents and the lack of ventilation as contributing factors to the accident.

In response to this incident, the MAIB has taken actions to raise CO awareness among users of coastal pleasure craft. The organization participated in the UK government's Carbon Monoxide Awareness Week, released a statement from the Chief Inspector of Marine Accidents, and produced an information video to support the campaign.

Based on this incident, it is recommended that future shipping regulations and guidelines emphasize the importance of proper ventilation and safety measures to prevent CO poisoning in enclosed spaces. Additionally, manufacturers of portable electric radiators and other equipment should ensure that their products are designed with safety features to mitigate the risk of CO buildup in enclosed areas. [MGE]

**QWEN ZERO-SHOT**

The incident occurred on January 11, 2022, [DTE]at Port Hamble Marina in Hampshire during early evening conditions characterized by light northerly wind and drizzle with a temperature of 10°C. The accident resulted in two fatalities while the vessel was moored in the port.

No significant damage or environmental impact was reported. However, the report suggests that a very serious marine casualty occurred due to carbon monoxide (CO) poisoning. This is inferred from the findings of atmospheric tests conducted post-accident, which indicated a CO-rich and oxygen-deficient atmosphere above the aft bench seat in the cockpit.

The probable cause involves the movement of exhaust gases into the boat through gaps around the transom railing. When the engine was started, warm exhaust gas likely rose and entered the cockpit via small openings, degrading the air quality within the fully enclosed canopy. Although CO is slightly lighter than air, convection currents from a warm portable electric radiator might have mixed CO with ambient air, distributing it throughout the cabin. [UGE]

From this incident, several precautions can be taken to prevent future occurrences. Ensuring proper ventilation and monitoring of engine exhaust systems are crucial. Additionally, incorporating carbon monoxide detectors in enclosed spaces such as cockpits and using alternative heating sources that do not emit harmful gases could significantly reduce the risk of CO poisoning.

In summary, the incident highlights the importance of proper ventilation and safety measures to prevent CO-related accidents, particularly when operating vehicles or machinery with exhaust systems in confined spaces.

**QWEN ONE-SHOT**

On 11 January 2022 in the early evening, [DTE]a pleasure boat experienced a very serious marine casualty at Port Hamble Marina, Hampshire. The vessel was moored and had only two crew members on board when the incident occurred. Tragically, both individuals lost their lives due to carbon monoxide (CO) poisoning. The accident transpired as one of the crew members was preparing to sleep in the cockpit area, where CO from an improperly installed cabin heater had accumulated. [MGE]

The investigation revealed that the diesel cabin heater's exhaust system was not designed for marine use and lacked a gas-tight connection. Moreover, no CO alarm was fitted on board, which failed to alert the occupants of the imminent danger. The vessel owner reported that the heater had neither been serviced nor checked by a professional installer, raising concerns about proper maintenance and adherence to safety standards.

In response to this unfortunate incident, immediate actions were taken to ensure that similar accidents do not occur in the future. The local maritime authority [NNE]has launched an awareness campaign highlighting the importance of CO detection systems and proper installation practices for marine heaters. Additionally, it is recommended that all pleasure boat operators undergo mandatory training on CO safety measures, including regular checks of exhaust systems.

To prevent such tragic events from happening again, it is imperative to enforce stringent regulations regarding heater installations and maintenance in marine vessels. [MGE]Furthermore, manufacturers should be encouraged to develop safer, gas-tight solutions for cabin heaters intended for use aboard boats. [MGE] Lastly, the inclusion of CO alarms as standard safety equipment on all pleasure craft will serve as an early warning system, potentially saving lives in critical situations like this one.

**CHAT GPT ZERO-SHOT**

The report investigates a tragic accident aboard the pleasure craft Emma Louise, where two men died of carbon monoxide (CO) poisoning while moored at Port Hamble Marina on 11 January 2022. The victims, the boat’s owner and his brother-in-law, were seated in the enclosed cockpit with the engine idling when exhaust gases seeped into the space, causing a rapid buildup of CO. The lack of ventilation, combined with a well-fitted canopy and a closed forward hatch, allowed the toxic gas to accumulate to fatal levels. The men were not alerted to the danger as no CO detector was installed onboard.

Testing confirmed that the engine’s exhaust, emitting CO at levels up to 7000ppm, rose through small gaps around the transom and was funneled into the cockpit by an inflatable towable ski ring suspended at the transom. Convection currents from a portable electric radiator likely distributed the CO within the enclosed space. The absence of proper ventilation and the bilge blower being turned off exacerbated the situation. Both men succumbed to CO poisoning within a short time, with postmortem reports showing blood CO levels of 72-75%, sufficient to cause unconsciousness and death.

This accident highlights the critical danger posed by CO on pleasure vessels, especially when engines are run while stationary. The report underscores the importance of installing marine-approved CO detectors (BS EN 50291-2 standard) in enclosed spaces on boats. Such devices could have detected the rising CO levels and saved the men’s lives. Additionally, proper ventilation, avoiding running engines in enclosed or stationary conditions, and adhering to safety practices outlined by organizations like the Boat Safety Scheme (BSS) are essential.

The accident reflects a broader issue of low CO awareness among boat users. Enhanced education, stricter regulations, and widespread adoption of CO alarms are necessary to prevent similar tragedies. Pleasure craft operators must prioritize safety measures to mitigate the risk of CO poisoning. [MGE]

**CHAT GPT ONE-SHOT**

On 11 January 2022, the UK-registered sports cruiser Emma Louise experienced a tragic accident at Port Hamble Marina, England, resulting in the deaths of its owner and his brother-in-law due to carbon monoxide (CO) poisoning. The vessel, a Fletcher 18 GTS sports cruiser built in 1996, was moored at the marina when the accident took place. The two men had returned to the boat in the late afternoon after dining ashore and initiated various onboard systems, including the engine, cockpit lights, navigation lights, and a portable electric radiator. They remained seated in the cockpit under a fully enclosed canopy. By the following morning, marina staff discovered the vessel with its engine idling and the two men unresponsive. Emergency services pronounced both men deceased at the scene.

Postmortem examinations revealed that the primary cause of death was carbon monoxide toxicity, with blood carboxyhaemoglobin (COHb) saturation levels recorded at 75% for the owner and 72% for his brother-in-law. Testing of the vessel established that the engine's exhaust gases, containing high concentrations of CO, had entered the cockpit through small gaps in the canopy near the transom. The fully enclosed and well-fitted canopy, combined with the lack of ventilation, allowed CO to accumulate rapidly, reaching fatal levels. The portable electric radiator likely contributed to convection currents that dispersed the exhaust gases throughout the cockpit. The absence of a carbon monoxide detector on board meant that the two men were not alerted to the increasing CO levels before succumbing to the toxic atmosphere.

This accident highlights several critical factors that contributed to the fatalities. The operation of the engine while the vessel was stationary, combined with the fully enclosed canopy, created the conditions for exhaust gases to enter and accumulate in the cockpit. The lack of a CO detector on board eliminated any opportunity for the men to be warned of the danger. Although the boat’s systems and engine were tested post-accident and found to be functioning normally, the design of the exhaust system and the positioning of the inflatable towable ski ring at the transom likely funneled exhaust gases into the covered cockpit area. [UGE]

Following the accident, the Marine Accident Investigation Branch (MAIB) undertook significant efforts to raise awareness of the dangers of carbon monoxide poisoning on recreational vessels. These actions included participating in the UK government’s Carbon Monoxide Awareness Week, releasing informational videos, and distributing safety flyers to marina operators and boating communities. The investigation did not lead to new recommendations, as prior recommendations from similar incidents, including the Love for Lydia case, had already addressed the issue of CO awareness and the need for CO detectors on recreational craft.

To prevent similar tragedies in the future, it is essential that boat owners install carbon monoxide detectors that comply with the BS EN 50291-2 standard, which is designed for marine environments. These detectors should be installed in enclosed areas such as cockpits and cabins and tested regularly for functionality. Boat users should also ensure adequate ventilation whenever engines or fuel-burning appliances are in use and avoid operating engines while the vessel is stationary with closed canopies. Further efforts by industry stakeholders to educate recreational boat owners about the risks of CO poisoning and the importance of CO detectors are critical. The inclusion of mandatory CO detectors for all pleasure craft operating in UK waters, not just those under the Boat Safety Scheme, should be considered to enhance safety standards and prevent avoidable loss of life. [MGE]

**LLAMA FEWS-SHOT**

On 11 January 2022, in the early evening, a very serious marine casualty occurred at Port Hamble Marina in Hampshire. The accident involved a vessel with only two crew members on board, resulting in two fatalities. The incident took place while the vessel was moored in port. The investigation into the cause of the accident revealed that it occurred due to exposure to carbon monoxide (CO) poisoning from a faulty cabin heater exhaust. [MGE]

The accident highlights the importance of proper safety measures and equipment on vessels. In this case, the boat's owner had failed to install a CO alarm, which would have alerted the crew to the presence of toxic fumes. Additionally, the cabin heater's exhaust was not designed for marine use, and its connection was not gas-tight, posing a significant risk to the safety of those on board.

The investigation into this accident has led to recommendations aimed at improving awareness among fishing vessel owners and crew regarding the importance of following safety guidelines. The Fishing Industry Safety Group Co-ordination Group has been advised to promote the use of CO alarms on vessels and to encourage professional maintenance and servicing of heating systems to prevent such accidents in the future. [MGE]

In terms of preventative measures, it is essential for vessel owners to ensure that all necessary safety equipment is installed and maintained regularly, including CO alarms. Additionally, operators should receive regular training on the proper use and maintenance of their vessel's equipment, as well as adhere to established safety guidelines. [MGE]

The incident at Port Hamble Marina serves as a stark reminder of the risks associated with vessels operating without adequate safety measures. By prioritizing safety and following established guidelines, we can minimize the risk of accidents such as this and ensure a safer marine environment for all.

**QWEN FEW-SHOT**

On 11 January 2022 in the early evening, a very serious marine casualty occurred at Port Hamble Marina, Hampshire. The incident involved two fatalities aboard a vessel moored within the marina. The accident took place in the cockpit of the boat where the individuals were found deceased. The nature and cause of death are not explicitly detailed but are inferred to be related to carbon monoxide poisoning due to the circumstances.

The primary factors leading to this tragedy include the lack of adequate carbon monoxide (CO) detectors on board, as the marina did not require such devices for resident boats at that time. In 2015, the UK All-Party Parliamentary Carbon Monoxide Group had published a report highlighting several CO safety challenges and emphasizing the need for better protection mechanisms. [UGE]

Since this incident, there have been five other marine accidents over the past decade involving CO poisoning on pleasure vessels resulting in nine tragic fatalities. These experiences underscore the critical importance of ensuring all vessels are equipped with CO detectors that meet international standards such as BS EN 50291-2. Such devices are essential for providing early warning to prevent similar incidents.

In response to this accident, it is recommended that marinas adopt a more proactive approach in ensuring vessel safety by mandating the installation of CO detectors and possibly implementing inspection schemes like BSS for resident boats. Additionally, boat owners should be advised to purchase CO detectors that comply with international standards to enhance their safety measures.

The lack of proper ventilation and the presence of appliances such as generators or stoves within enclosed spaces can significantly increase the risk of CO accumulation. Therefore, it is crucial for vessel operators to ensure good airflow and avoid operating such equipment in confined areas without adequate monitoring systems.

In conclusion, this tragic event highlights the importance of preventive measures and the need for enhanced safety standards in marinas and on vessels. Recommendations should focus on mandatory installation of certified CO detectors, regular inspections by marinas, and ongoing public awareness campaigns to ensure that all stakeholders are adequately prepared to prevent such incidents from occurring again.ncidents. [MGE]

**CHAT GPT FEW-SHOT**

On 11 January 2022, a tragic carbon monoxide (CO) poisoning incident occurred on the UK-registered pleasure craft Emma Louise while it was moored in Port Hamble Marina, Hampshire. The accident resulted in the deaths of the vessel’s owner and his brother-in-law, who were found unresponsive in the cockpit of the vessel the following morning. The vessel was moored at the marina with its engine running at idle, and the cockpit canopy was fully secured, creating an enclosed space. The men had returned to the boat in the evening, turned on the cockpit lights, a portable electric radiator, and the entertainment radio, and likely started the engine to maintain battery power. However, the engine's exhaust gas, containing high levels of carbon monoxide, seeped into the enclosed cockpit through small gaps in the canopy at the transom and rapidly accumulated, creating a deadly atmosphere. Both men succumbed to the toxic gas shortly after entering the boat, with postmortem examinations confirming CO toxicity as the cause of death.

The investigation concluded that the primary cause of the accident was the accumulation of exhaust gas within the covered cockpit. Testing revealed that the engine's exhaust gases, containing up to 7000ppm of CO, were funneled upward by an inflatable ski ring suspended at the transom and entered the cockpit through small openings. Inside the cockpit, the well-sealed canopy and lack of ventilation allowed the CO to mix with the air and quickly reach fatal concentrations. The portable electric radiator may have contributed to the distribution of CO within the enclosed space. The absence of a carbon monoxide detector on board Emma Louise meant that the two men had no warning of the rising CO levels, leaving them unable to take action to protect themselves. The accident highlights the dangers of running an engine while stationary in an enclosed or poorly ventilated environment, particularly on smaller recreational vessels.

No physical damage to Emma Louise was reported, but the incident is part of a concerning pattern of carbon monoxide-related fatalities on pleasure craft. The Marine Accident Investigation Branch (MAIB) noted that this was the fifth such accident it had investigated in the past decade, resulting in a total of nine fatalities. In response to this accident, the MAIB released a safety flyer to raise awareness of the dangers of carbon monoxide on boats. It also participated in the UK government’s Carbon Monoxide Awareness Week in 2022, producing an informational video and issuing a statement emphasizing the importance of CO safety measures.

To prevent similar tragedies in the future, it is strongly recommended that all pleasure craft, regardless of their operating location, be equipped with carbon monoxide detectors that meet the BS EN 50291-2 standard for marine environments. These detectors can provide an early warning of dangerous CO levels and give occupants time to take life-saving actions. Vessel owners and operators should ensure proper ventilation when running engines or other equipment that emits exhaust gases and avoid operating such equipment in enclosed spaces. Industry stakeholders, including marina operators and boating organizations, must continue efforts to raise awareness about the risks of carbon monoxide and the importance of installing functional CO alarms. This tragic incident underscores the critical need for widespread adoption of CO safety measures to protect the lives of recreational boat users. [MGE]