

Safety Advisory SA04/23

Managing fire risks on domestic commercial vessels

Safety message

Domestic commercial vessel (DCV) operators should conduct regular risk assessments of emergency response procedures paying attention to the location of emergency equipment and how to access it under different scenarios. This Safety Advisory highlights the importance of risk identification and emergency management plans, including training/induction, emergency preparedness and the use of emergency equipment in responding to fires.

The incident

On 25 February 2023, a 34 foot (10 metre) Seawind catamaran caught fire approximately 100 metres east of Barangaroo in Sydney Harbour. The vessel was returning from a three-hour charter cruise and was headed to Aquarium Wharf to drop off guests.

When the vessel was between Balmain East and Darling Island, the Master noticed smoke coming from the starboard engine. The deckhand lifted the engine cover and saw a wire smouldering. The smoke quickly intensified, and the passengers were directed to muster on the bow of the vessel.

A nearby vessel reported the fire to Vessel Traffic Services (VTS) and a ferry, which was close by, gave immediate assistance with a fire hose. A NSW Maritime vessel evacuated 20 passengers and two crew. The fire was later extinguished, with no reported injuries.

The Office of Transport Safety Investigations (OTSI) inspected the vessel and identified that the fire had started in the starboard engine compartment. The starboard engine fell from the vessel into the harbour as a result of the fire.

Observations

During its inspection of the vessel and interviews with the Master and operator, OTSI observed:

- The vessel had a portable fire extinguisher on board. The vessel was not fitted, or required to be fitted, with a fixed engine bay fire suppression system.
- Emergency equipment on the vessel was not readily accessible:
 - electrical isolation for the batteries was located behind seats and difficult to access
 - fuel shut off valves were in the floor and difficult to access

- flotation rings were stored near the barbeque and gas bottle which would make retrieval difficult if the barbeque caught fire (Figure 1). Smoke and flames from the engine fire also prevented access in this incident
- the radio was located below deck and the Master was not able to safely monitor the VTS channel from the helm while on the harbour or to broadcast their emergency when the fire occurred.
- The Safety Management System (SMS) could not be located on board the vessel after the fire.
- Isolating the sources of energy (fuel and batteries) may have lessened the severity of the fire.
- All crew and passengers were transferred to another vessel without lifejackets. The lifejackets were located under the seats in the vessel's cabin and the master reported that there was no time to access them due to the smoke, and bags and other items on the seats.
- While the Master had previously operated similar catamarans and worked as a deckhand on the vessel in the week prior, it was the first time they had been in command of the vessel.
- The Master and deckhand were both casual crew hired to operate the charter, which highlights the importance of crew being familiar with emergency management plans for the vessel, particularly when they do not operate the vessel regularly.

Key points for operators

The [National Standard for Commercial Vessels](#),¹ Part C 'Design and construction', Section 4 'Fire Safety provides the design, construction and installation standards for passive and active fire protection measures on domestic commercial vessels.

DCV operators should identify and assess fire related risks and implement appropriate controls in accordance with their Safety Management System. Specific consideration should be given to how this information is provided to all crew, including casuals.

DCV operators should:

- Review their SMS with consideration to emergency preparedness, emergency scenarios (including fires) and responses appropriate for their vessel and type of operation. The review should consider:
 - where an emergency or fire is likely to occur (eg. engine, electrical)
 - what response would be required, including identification of a muster point for crew and passengers
 - storage of safety equipment in a readily accessible area
 - provision of safety equipment at the muster point.
- Ensure all crew are trained/inducted in these emergency procedures, are aware of the vessel's safety equipment, and how to access and use this equipment during emergencies.
- Ensure that a determination of appropriate crewing numbers has been conducted and recorded.
- Ensure that crew can safely monitor radio equipment while operating so they can raise the alarm if required and respond to emergencies on other vessels.

¹ <https://www.amsa.gov.au/about/regulations-and-standards/national-standard-commercial-vessels-nscv>

[Guidance on Safety Management Systems](#) is available on the Australian Maritime Safety Authority (AMSA) website.²

For more information on the issues raised in this Safety Advisory, contact: engagement@otsi.nsw.gov.au

Figure 1: Flotation rings and fire damage



Source: OTSI. The image was modified to remove the vessel identification number from the flotation rings for the purposes of the Safety Advisory. The fire damage to the hull where the starboard engine caught fire is highlighted.

² Available at: <https://www.amsa.gov.au/vessels-operators/domestic-commercial-vessels/safety-management-systems>