

Domestic Commercial Vessels (DCV) engine room smoke

The incident

On 14 February 2021, OTSI received a report of a suspected fire in the starboard engine room of a catamaran type DCV.

Following the sounding of a fire alarm, the Master of the vessel sent their general purpose hand (GPH) to investigate the starboard engine room. When the GPH investigated, they saw it was filled with smoke. However, there was no evidence of a fire. The GPH returned and reported to the Master. On receiving the report the Master activated the fixed fire suppressant system (NAF S-III). At this time the main engine was left running, the air dampers were open and the fuel supply was not isolated. As a result, the suppressant gas was drawn through the main engine intake and released between the hulls via the exhaust.

The GPH observed a large cloud of smoke at the stern of the vessel and reported this to the Master. The Master then activated the port engine room fire suppressant. The port engine was also running with the air dampers open and fuel not isolated. The Master then manoeuvred the vessel alongside a nearby wharf and when the vessel was secured, inspected the starboard engine room, cautiously opening the door to look inside. NSW Fire and Rescue arrived shortly after and confirmed there was no fire in either engine room.

Operator follow up

The Chief Investigator requested a report from the vessel operator. OTSI's review of the report highlighted several areas where safety management processes could be improved.

Key points for DCV operators

The effectiveness of fixed fire suppressant systems in vessel engine rooms is dependent on a thorough knowledge of the correct activation procedure. A comprehensive induction and regular refresher training (drills) are key ways to improve safety culture and provide crew members with the requisite knowledge of a vessel's systems and emergency response procedures.

A fire on a DCV is more likely to result in fatalities and loss of vessel than any other incident type. According to the Australian Maritime Safety Authority (AMSA) marine incident data 2015-2019, 46% of fires occur in vessel machinery spaces¹.

AMSA provides guidance for fire prevention on vessels in their Maritime Safety Awareness Bulletin March 2020. The bulletin highlights the importance of regular planned maintenance and crew safety culture in mitigating the risk of fire.

Safety message

Domestic Commercial Vessel operators should have appropriate risk mitigations in place to manage the risk of fire including for example fire suppressant systems, planned maintenance, effective crew inductions, emergency preparedness training and planned drills.

¹ Australian Maritime Safety Authority, Australian Safety Awareness Bulletin Issue #11, March 2020