

July 15, 2025

MIR-25-29

Listing and Partial Sinking of Yacht *Lovebug*

On July 27, 2024, about 1235 local time, the yacht *Lovebug* was transiting the Chesapeake Bay in the West River north of Shady Side, Maryland, when the vessel started listing heavily to starboard (see figure 1 and figure 2).¹ The four crewmembers and one owner on board abandoned the vessel and were rescued by nearby vessel crews. The yacht partially sank in about 12 feet of water. There was one minor injury. An oil sheen, visible around the vessel, was contained with a boom. Damage to the vessel was estimated at \$8 million.²



Figure 1. The partially sunken *Lovebug* on July 27, 2024, at 1342. (Source: Maryland Natural Resources Police)

¹ In this report, all times are eastern daylight time, and all miles are nautical miles (1.15 statute miles).

² Visit [ntsb.gov](https://www.ntsb.gov) to find additional information in the [public docket](#) for this NTSB investigation (case no. DCA24FM053).

Casualty Summary

Casualty type	Capsizing/Listing
Location	West River, Chesapeake Bay, north of Shady Side, Maryland 38°51.50' N, 076°30.40' W
Date	July 27, 2024
Time	1235 eastern daylight time (coordinated universal time -4 hrs)
Persons on board	5
Injuries	1 minor
Property damage	\$8 million est.
Environmental damage	Visible oil sheen, contained with boom
Weather	Visibility 7 nm, partly cloudy, winds northwest 9 kts, seas 1 ft, air temperature 81°F
Waterway information	Bay; depth 12 ft at casualty site

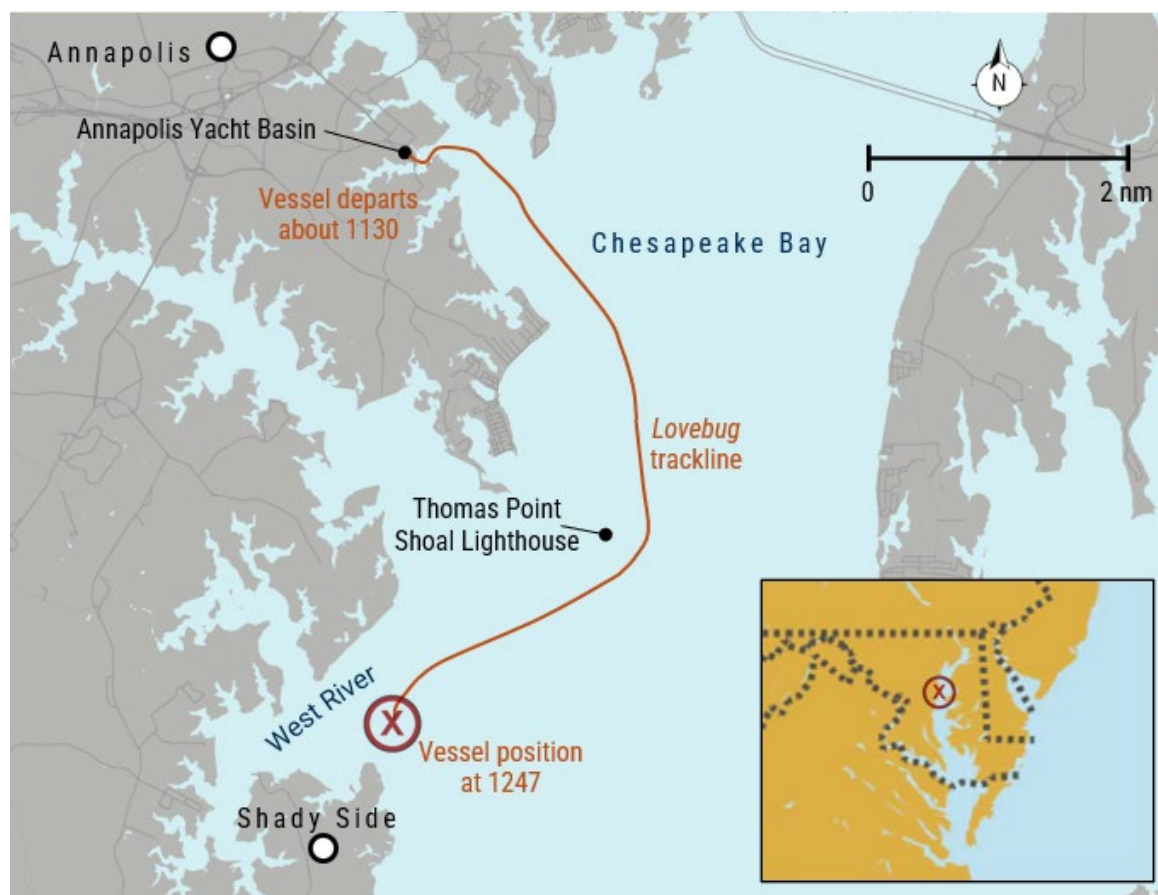


Figure 2. Area where the *Lovebug* partially sank, as indicated by a circled X. The yacht's trackline is orange. (Background sources: Google Maps, Made Smart)

1 Factual Information

The *Lovebug*, a 122-foot-long San Lorenzo yacht, was built in 2010 (see figure 3). On July 26, 2024, the *Lovebug* departed the Annapolis Yacht Basin in Annapolis, Maryland, for a sunset cruise in the Chesapeake Bay. The vessel safely returned, and the crew began preparing for the following day.



Figure 3. The *Lovebug* on unknown date before the casualty. (Source: YachtCharterFleet)

The following morning, July 27, the crewmembers conducted predeparture checks, and the vessel departed the yacht basin at 1130, with four crewmembers and one of the *Lovebug*'s owners on board. The vessel was bound for Shady Side, Maryland, a frequent destination for the vessel and its crew. The crew consisted of a captain, deckhand, chef, and steward. The captain held a US Coast Guard credential as a master of self-propelled vessels less than 1,600 gross tons upon near coastal waters.

At 1148, the vessel entered the Annapolis Harbor Channel in the Severn River heading southeast at 7-10 knots. At 1203, the captain changed course to starboard. The deckhand took the watch as the captain completed a round of the engine room spaces when the yacht was near the Thomas Point Shoal Light. The captain did not find anything out of the ordinary on his round, estimating it took about 15 minutes.

About 1235, when the yacht was near the West River Entrance Light 2, the captain noticed the *Lovebug* had developed a starboard list (see figure 4). He checked the steering, rudder indicators, and stabilizers on the bridge and found no problems. The captain told investigators that, when the vessel first began listing, he did not hear any alarms. The list rapidly increased. According to the captain, about a minute after the vessel started listing, the vessel, which had been powered by its starboard generator, lost power. The captain backed off the throttles, and the vessel's speed dropped to about 4 knots.

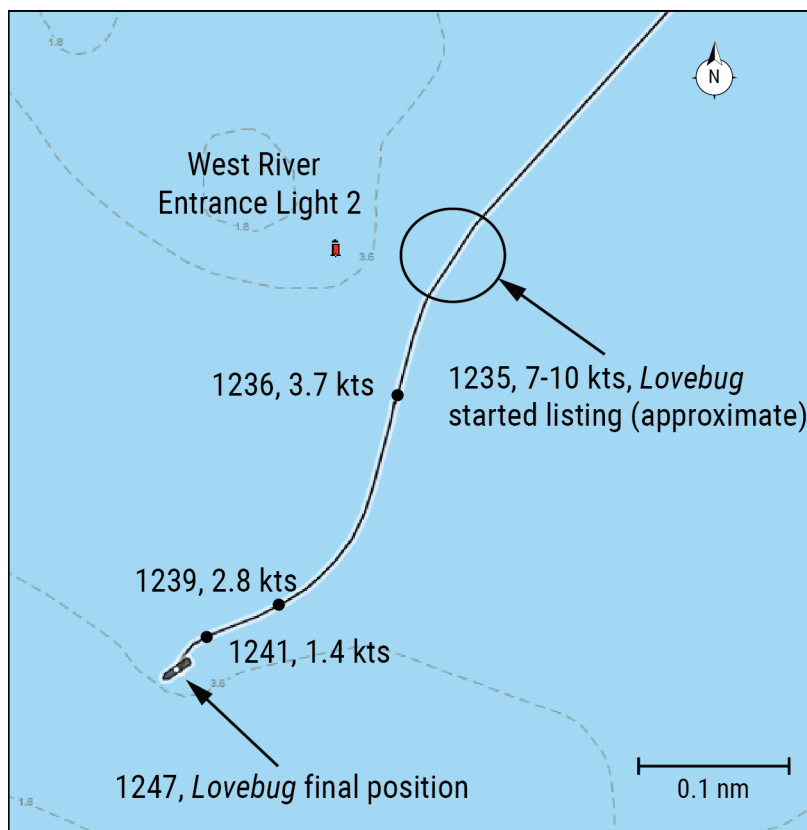


Figure 4. The *Lovebug*'s track from the approximate area the vessel first was observed listing to its final position. (Background source: National Oceanic and Atmospheric Administration Electronic Navigation Chart US5MD1LC as viewed on Made Smart automatic identification system)

The captain ordered the deckhand to prepare to lower the anchor. The deckhand prepared one of the anchors, but before she could deploy it, the captain ordered everyone on board to abandon the vessel because the list had become significant, and they were in danger. The deckhand, chef, steward, and owner jumped into the water. The captain broadcast a distress call on VHF channel 16, verified that all personnel had egressed, and then he also abandoned the vessel by jumping into the water. From the time the vessel started listing until the owner and

crew were in the water, less than 4 minutes had elapsed. The yacht had listed over about 45–50° and grounded in the mud, visibly down by the stern (see figure 5).

About 1247, automatic identification system data showed the vessel at a speed of 0.1 knots, crossing the 12-foot-depth contour in the West River.

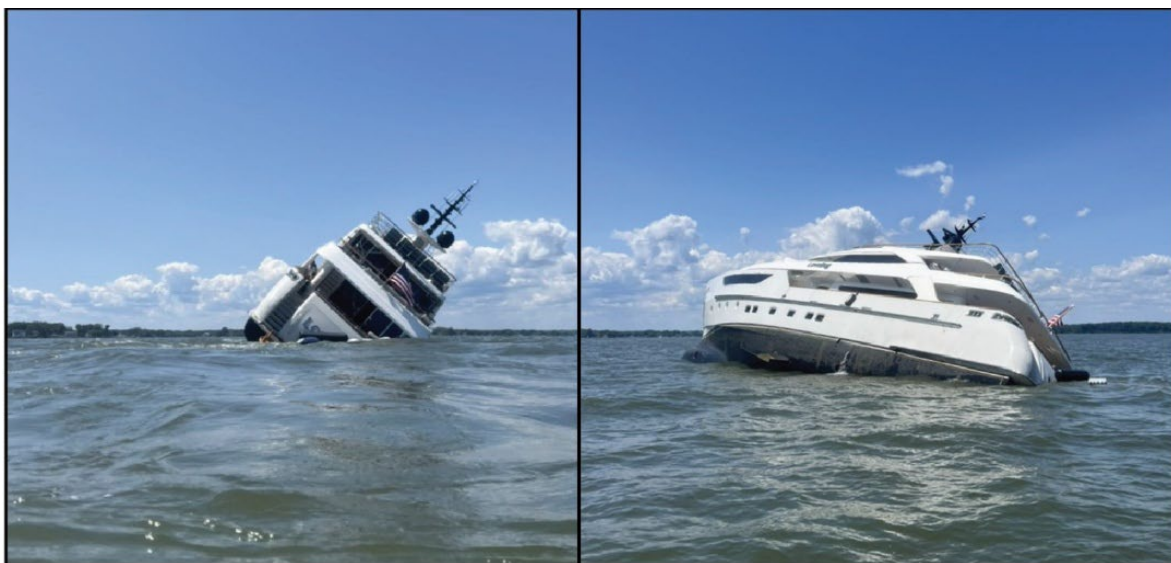


Figure 5. The *Lovebug* at 1238:48 and 1241:45, shortly after the owner and crew abandoned the vessel. (Source: *Lovebug* owner)

Nearby Good Samaritan vessels rescued the crew and owner; Coast Guard personnel later evaluated them for injuries. One crewmember had a minor injury.

For 16 days, the partially sunken yacht remained in the West River while salvage plans and logistics were coordinated. Salvage operations began on August 13.

The vessel's aftmost spaces on its lower deck were a garage that housed watercraft and a technical area for vessel electrical and mechanical systems on the port side. Forward of the garage and technical area, separated by a watertight bulkhead, was the engine room compartment. This watertight bulkhead had watertight doors to the engine room compartment. The garage space was accessed through a large clamshell-type door on the stern actuated with hydraulic rams. Beneath the door was a platform that could be tilted down for launching and recovering watercraft. During diving operations, salvors found that this external garage door was partially open. Salvors also found the watertight door between the garage and engine room compartment open.

According to the vessel's trim and stability booklet, the garage was not designed as a watertight space. All bulkheads and hatches to spaces adjacent to the

garage, including the engine room compartment, were designed to maintain watertight integrity. The forward bulkhead of the garage and the adjacent technical area were the engine room compartment's aft watertight boundaries. The captain told investigators that he visually observed that the external garage door was closed before the yacht got underway.

In preparation to move the *Lovebug* out of the West River, it first needed to be raised out of the water from its position partially sunken in the mud (see figure 6). The opening in the garage door was temporarily sealed with a soft patch for water removal. When sufficient dewatering was completed, the seal was removed, and the door was closed. Divers patched openings below the waterline and repaired leaks found during the salvage efforts, allowing the vessel to float on its own.

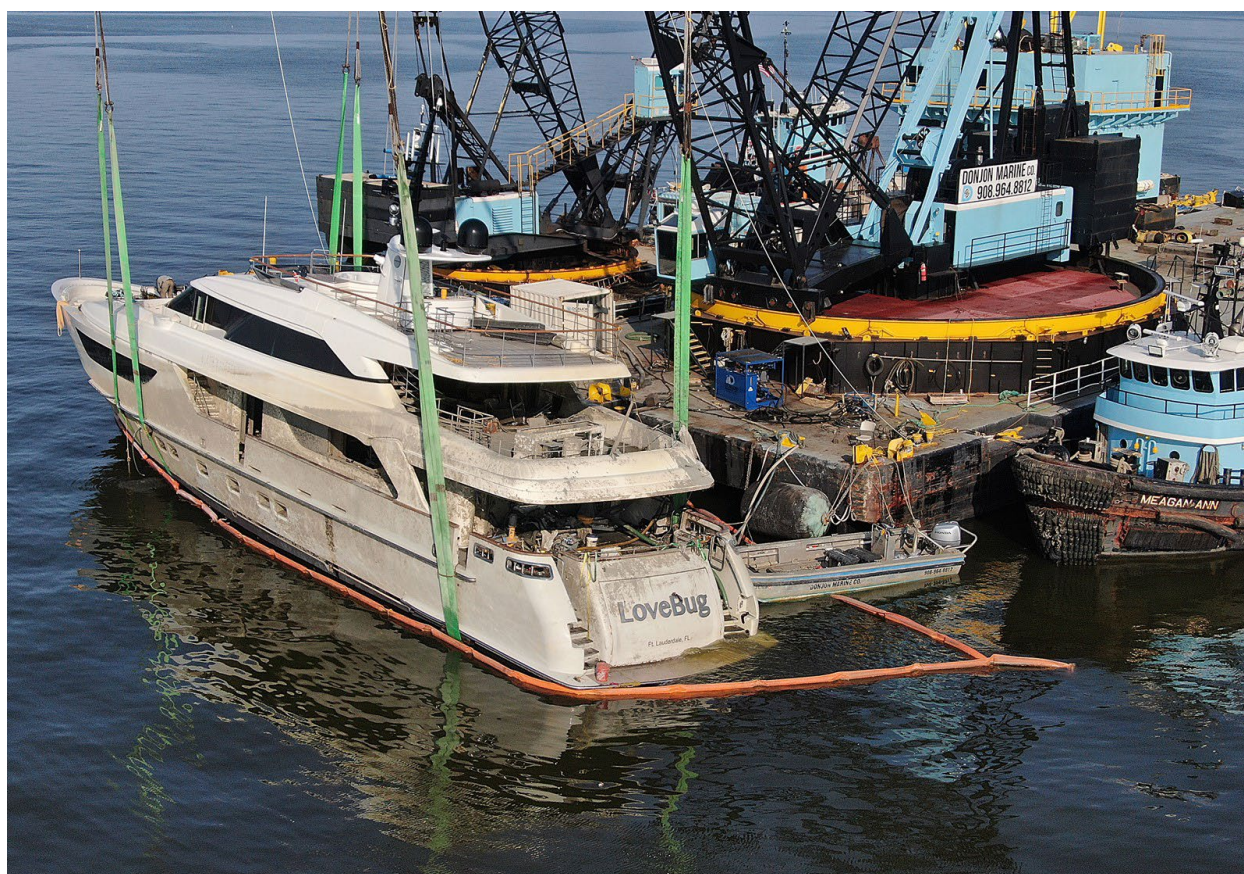


Figure 6. The *Lovebug*, with garage door visible at the stern, as it was raised out of the water after it partially sank. (Source: *Capital Gazette*)

The vessel was towed to Yank Marine in Dorchester, New Jersey, on September 1 for survey and overhaul.

A marine surveyor and National Transportation Safety Board investigators surveyed the hull for damage in the shipyard. There was no visible hull breach or

indication of a potential source of water ingress on the interior or exterior of the vessel. Extensive damage and debris throughout the vessel prevented investigators from examining some smaller spaces.

The marine surveyor's report stated, "due to the post casualty condition of the vessel it is impossible to determine the pre-loss condition." The report also noted that the vessel had passed a class inspection the month before the casualty.³

Damage to the vessel was estimated at \$8 million.

³ Bureau Veritas was the class society responsible for *Lovebug*'s survey. The most recent survey took place on July 19, 2024, and included annual surveys of the hull, structure, machinery, and load line. Surveyors commented that there were no damages on the accessible parts of the hull, machinery alarms were audible throughout vessel, and no substantial corrosion areas had been identified during or before the survey.

2 Analysis

On July 27, the yacht *Lovebug* was transiting the Chesapeake Bay north of Shady Side, Maryland, when it rapidly developed a heavy starboard list, heeled over, and partially sank. Less than 4 minutes elapsed from the time the vessel started listing until the owner and crew abandoned ship into the water.

Nobody on board observed flooding in the short time before they abandoned the vessel. Additionally, after the yacht was raised from the water and towed to a shipyard, a marine surveyor and National Transportation Safety Board investigators did not find any visible hull breach or indication of a source of water ingress. However, before the *Lovebug* was raised from the water, during dive operations, salvors found that the external garage door was partially open. Because the door's lower edge was situated at the waterline and no other potential source of water ingress was identified, it is likely that water entered the yacht via the partially open garage door.

Salvors also found the watertight door between the garage and engine room compartment to be open. Water in the garage would have decreased the yacht's draft aft, accelerating water ingress through it. If the water level in the garage space reached the lower edge of the open watertight door, seawater would have flooded into the engine room compartment.

Failure to maintain the integrity of a vessel's watertight envelope can reduce a vessel's overall stability should unintentional flooding occur. If minor flooding goes unnoticed, the gradual reduction in initial stability may go unnoticed by operators (because detection of a loss of initial stability through "feel of the vessel" is often not obtained in benign conditions).

Stability is the tendency of a vessel to return to its original upright position when a disturbing force (e.g., wind or wave) is removed. Vessels are often termed "stable" when they have enough positive stability to return to an upright position in the conditions encountered and "unstable" (negative stability) when they do not. The *Lovebug* was unable to return to an upright position at a certain point because it was no longer stable.

Flooding causes a vessel to sink lower in the water, which typically reduces its stability due to a reduction in righting energy. It also tends to lower the range of a vessel's stability as seawater can enter any openings and downflood into compartments at lower angles of heel. With a reduction in stability, and slack water in the garage and engine room compartment, an induced heeling moment on the vessel from an external force such as wind, waves (even small ones), wake from

another vessel, or a turning moment would have likely induced a list. As the vessel first heeled to starboard, the free movement of the liquid would have shifted floodwater weight in the direction that the vessel was heeling, and its overall stability would have been further reduced due to this free surface effect.⁴ The combination of the weight of floodwater, increasing the vessel's draft, and the free surface effect, created by the flooding of the garage and full-beam-width engine room compartment, likely resulted in a condition of neutral stability, with little righting energy to resist severe heeling or capsize. This resulted in a sudden large list and further flooding until the *Lovebug* reached equilibrium at a list of 45-50° and then partially sank in the mud.

⁴ *Free surface effect* describes the effect of the motion of liquids in slack (partially filled) tanks, water on deck, flooded bilges, or anywhere liquids are free to move. Free surface reduces a vessel's overall stability because liquids are free to move to the vessel's low side when it heels over. Free surface effect increases with the number of slack tanks or flooded compartments. The reduction in stability is significantly larger for tanks or compartments that span the full beam of the vessel.

3 Conclusions

3.1 Probable Cause

The National Transportation Safety Board determines that the probable cause of the listing and partial sinking of the yacht *Lovebug* was undetected flooding through an open watertight door, resulting in the vessel losing stability.

Vessel Particulars

Vessel	<i>Lovebug</i>
Type	Yacht/Boat (Yacht)
Owner/Operator	Jabulani Charter Florida, LLC (Private)
Flag	United States
Port of registry	Fort Lauderdale, Florida
Year built	2010
Official number	N/A
IMO number	9609940
Classification society	Bureau Veritas
Length (overall)	122.7 ft (37.4 m)
Breadth (max.)	25.9 ft (7.9 m)
Draft (casualty)	7.5 ft (2.3 m)
Tonnage	308 GRT
Engine power; manufacturer	2 x 3,242 hp (2,418 kW); Caterpillar C32 12-cylinder diesel engines

NTSB investigators worked closely with our counterparts from **Coast Guard Sector Maryland-National Capital Region** throughout this investigation.

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For more detailed background information on this report, visit the [NTSB Case Analysis and Reporting Online \(CAROL\) website](#) and search for NTSB accident ID DCA24FM053. Recent publications are available in their entirety on the [NTSB website](#). Other information about available publications also may be obtained from the website or by contacting—

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