



FINDINGS OF CONCERN

Marine Safety Unit Portland

March 27, 2020
Portland, OR

Findings of Concern 003-20

SEAT HEIGHT AND RAILINGS ON JET BOATS

Purpose. The U.S. Coast Guard issues findings of concern to disseminate information related to unsafe conditions that were identified as causal factors in a casualty and could contribute to future incidents. Findings of concern are intended to educate the public, state, or local agencies about the conditions discovered so they may address the findings with an appropriate voluntary action or highlight existing applicable company policies or state/local regulations.

The Incident. A passenger onboard a commercial jet boat was ejected during an excursion when the vessel was performing a 270 degree spin maneuver characteristic of jet boat thrill ride tours. This excursion included four vessels transiting along the river together and conducting high speed spins in successive order. After the first three boats completed their spins, the jet boat which was carrying the injured passenger started a spin. At some point during this spin the passenger was ejected. Two other vessels, having completed their spin maneuvers, proceeded up river through the area where the ejected passenger was located, unaware that a passenger had fallen overboard, which further endangered the passenger. The passenger sustained an open-wound head injury and was given first aid at the scene by an EMT that by chance was a passenger onboard one of the other vessels. The passenger was taken to the hospital and was diagnosed with a concussion and treated for a head laceration.

Contributing Factors and Analysis. The investigation identified that the following factors contributed to the casualty.

(1) There was insufficient railing, or gunwale height, on the side of the passenger's bench seat. The passenger was seated in the fourth row bench seat, port side, forward of the operating station. The seating configuration on the vessel resembled stadium seating, with the back benches set higher than the front benches. Although the three benches immediately forward of the operating station had a small railing on the gunwale, the fourth bench, and all benches forward of it, did not have the railing. Furthermore, the fourth row seat was only two inches below the gunwale and the seat had no railing or guards to prevent a passenger from sliding overboard.

(2) There was no handle or structure for passengers to hold on to during the high speed spins. A handle or bar to allow passengers to hold on during fast maneuvers may have prevented the passenger from being ejected.

(3) The vessels involved did not have deckhands, which are integral positions for maintaining situational awareness and a proper lookout. As such, the operators did not immediately notice that the passenger was ejected, which delayed the passenger overboard response.



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Prior to the incident, the jetboat fleet operated with one Master and no deckhands. Following this incident, the Officer in Charge, Marine Inspection (OCMI) Portland issued a requirement for all jet boats with more than 15 passengers to operate with one Master and one deckhand. Vessel Certificates of Inspection (COIs) were amended to reflect this requirement in effort to increase operational and situational awareness, ensure a proper lookout, and provide a crewmember that could immediately respond to an emergency while the Master maintains control of the vessel.

Findings of Concern. Coast Guard investigators have identified the following measures as prudent to mitigate the risks associated with the above identified contributing factors:

- Ensure at least a 10 inch minimum seat depth below the vessel's gunwales or install railings of adequate height as a means to prevent a passenger from being ejected from the vessel.
- Install handles, grab bars, seat belts, or similar structures, which would allow passengers to hold on during spin maneuvers. This could be an effective way to reduce the likelihood of a passenger sliding off, and falling overboard, or being ejected.
- Conduct jet boat specific training to ensure safe passenger operations, including seating safety checks.

Closing. These findings of concern are provided for informational purpose only and do not relieve any domestic or international safety, operational, or material requirements. For any questions or comments please contact Marine Safety Unit Portland Investigations Division by phone at (503) 247-4309 or by email at PDXIO@uscg.mil.