

## **The Collision of the Star Ruby – Lessons to be Learned**

It is sometimes said that if you die in the North Pacific, and it is not by drowning, it will be by heart attack. I wouldn't want to try either, thank you.

The story of the *Star Ruby* is a gruesome, yet instructive tale that all mariners should keep in mind when plying the coastal waters, particularly the lower Inside Passage.

The *Star Ruby* was a 30 foot fiberglass pleasurecraft on a pleasant summer cruise, that is, until it found its way under the bow of the super-ferry *Spirit of Vancouver Island* on the sunlit morning of September 14, 2000. Despite this accident happening more than three years, it was not until recently that the Transportation Safety Board of Canada released its report on the collision (the "TSB Report"). There are several important lessons to be learned from this report, both by professional mariners and recreational boaters.

In short, and in the words of the Transportation Safety Board, the story goes like this:

*On the morning of 14 September 2000 shortly after departing her berth at Swartz Bay, B.C., the passenger vehicle ferry Spirit of Vancouver Island increased to a customary speed and attempted to overtake the pleasure craft Star Ruby in the 460 metre long section of the buoyed channel of the Colburne Passage. Neither vessel took effective collision-avoidance measures. A collision resulted.*

The American master, seated at the control station in the cabin of the *Star Ruby*, was an elderly gentleman with significant hearing loss in both ears and wearing eye glasses with corrective lenses. Although he was trained and certified to run a pleasurecraft like the *Star Ruby*, he was not familiar with the local waters. He traveled with a female companion. The cabin of his Tolleycraft was modified with aftermarket galley cabinets set on the port side, and venetian blinds (closed at the time of the collision), both of which significantly reduced the visibility to port. The master was not monitoring the local traffic channel and did not have updated local charts onboard.

Traveling from Victoria to Thetis Island, the master of the *Star Ruby* was heading into the narrow channel in Colburne Passage, apparently unaware that the ferry was leaving her berth immediately to his port quarter. The *Star Ruby* and the ferry entered the passage on slightly converging courses. The ferry blew seven short blasts on three occasions, with no response from the *Star Ruby*. In all probability, the master could not hear the horn because of the combination of his hearing loss and the proximity of the twin Volvo engines beneath his feet. Despite the good weather, the master had not chosen to navigate the high traffic area from the upper, exposed control station. The *Star Ruby* could not be hailed on the VHF.

The TSB Report states that as the vessels converged on each other in the passage the *Star Ruby* suddenly cut hard-to-port under the bow of the ferry. The ferry initiated a crash-

stop, but the *Star Ruby* was too close and rolled under the bow of the ferry, was pushed along in the ferry's bow wake, and rolled off to starboard to emerge upright in heavily swamped condition.

The TSB report states that "the master was injured when, as a result of the collision, he came into contact with rigid objects within the cabin of his vessel". Not a pleasant thought. After the *Star Ruby* had come to rest beside the ferry the master pulled his way out of the cabin and shortly thereafter suffered a fatal heart attack while resting against the hull. His female companion was later removed from the vessel and could not be revived.

The TSB Report stated that it could not, and never will be, determined why the *Star Ruby* made the sudden last-second jag to port that precipitated its violent demise. In the initial printing of this article in *Mariner Life* magazine, I speculated that it might have been panic by the master that caused the last minute course change. I stated that the vessel's engine controls were found in a "strange" position, the gear set in the astern position, the power setting was at idle, and the rudders set at hard-to-port. Since that printing, Bill Brown, naval architect, has kindly pointed out that the last minute jag to port and the positioning of the vessel's controls are all in keeping with the effects of *hydraulic interaction* between the *Star Ruby* and the super ferry and the *Star Ruby* master's last ditch effort to avoid collision. The TSB Report, knowingly or otherwise, did not speak to the issue of hydraulic interaction.

Simply put, *hydraulic interaction* is the reaction of a vessel's hull to pressure exerted on its underwater volume caused by a passing vessel or other object, such as a river bank. Bill Brown explained that, in the case of the *Star Ruby* and the Spirit-Class ferry and their proximate and converging courses within the narrow Colburne Passage, the circumstances point towards hydraulic interaction causing the *Star Ruby* to "drift towards" the ferry (as reported by the ferry's bridge crew) and ultimately causing the last minute violent turn as the suction of the ferry's passing hull drew the *Star Ruby* under her bow.

As for the post-mortem positioning of the *Star Ruby*'s controls, Mr. Brown explained that these positions are indicative of the *Star Ruby*'s master's final attempt to both back away from the ferry (the only option remaining) and change his heading by kicking his stern to port (rudder hard-over to port, astern selected, but selection of max rpm stymied by the collision). Mr. Brown says this action would have been futile even if time allowed max astern thrust to be developed.

I am very grateful for the comments of Bill Brown, and query why the TSB Report did not address the effects, or at least the possibility of the effects, of hydraulic interaction.

There are many more details to this incident which would be beneficial to discuss, but we are limited by space. For casual mariners, there are several important lessons we can take from the scenario outlined above. For professional mariners, there are several important reminders that emerge. These are as follows:

1. Always travel with charts that are current and issued by the local authority. If the master of the *Star Ruby* was using up to date charts, he might have seen more clearly that he was passing through an active ferry channel. Also, review these charts throughout the voyage, regardless of how well you believe you know the area.
2. If you are using an electronic plotter, make sure that the charts/files for the plotter include ferry routes, and traffic lanes, and that they are up to date. Do not rely solely on electronic plotting devices, and always double-check your position by GPS, loran or radar bearing from time to time.
3. Be cautious of modifications to craft that interfere with visibility or communication. Designers of vessels have, for the most part, accounted for the requirement that visibility from the wheelhouse must be good. Aftermarket or post-construction modifications can be a subtle hazard. In the case of the *Star Ruby*, if the aftermarket cabinets and closed blinds on the port side had not been in place, the crew may still be alive.
4. Monitor the vessel traffic channel in areas of high traffic (this accident occurred in the Gulf Islands, a notoriously high traffic area). When piloting a vessel from an internal control station, always keep a door or a window open near to you so that you can hear other vessels' horns or wake. This is true regardless of the weather, and especially despite the dampness of fog. It is better to suffer a bit of a chill, than the cold of death.
5. When passing through areas of high risk/traffic, utilize the best reasonable viewing position, regardless of comfort. The *Star Ruby* collision would likely have been avoided if the master was using the control station of the upper deck.
6. Most importantly, and for your family's sake, stay the hell away from ferries. As rightfully pointed out by Bill Brown, the effects of hydraulic interaction between large and small hull can be unexpected and disastrous. Ferries are an amazing form of public transportation that start and stop and turn much more slowly than most coastal vessel traffic. They deserve every respect. Besides, steel beats fiberglass any day of the week.

As discussed in last month's Legal Desk, the reason practices such as these are important is that, regardless of experience, all mariners owe a duty of care to themselves, their passengers and to other mariners to ensure they are acting with reasonable care. This duty of reasonable care, among other things, includes keeping a proper look-out. If we fail in maintaining our duty of care, and a person or property is injured as a result of this failure, we may well be legally responsible for their damages. Damages can be in the millions of dollars. Not all, or many, of us carry insurance to protect ourselves from such liability.

Indeed, in the case of the *Star Ruby*, all mariners should understand that the standard of reasonable care for navigating is represented, as a minimum, by the *International Regulations for Preventing Collision at Sea*, 1972, otherwise known as the Collision Regs, or the Rules of the Road. Every mariner has a duty to understand these Rules and abide by them without fail.

Despite the possible negligence of the *Spirit of Vancouver Island* on September 14, 2000, it is my opinion as a marine lawyer that the *Star Ruby* bore the brunt of the responsibility in causing the collision, and ultimately the deaths of its crew. Despite my opinion, it should be said that this particular conclusion is not that of the TSB Report, as it is not the function of the Transportation Safety Board to assign fault or determine civil or criminal liability. Leave this job to the Courts.

There have only been two deaths related to ferry collisions in Canada since 1993. Both of these arose from the collision of the *Spirit of Vancouver Island* and the *Star Ruby*. Considering the amount of ferry and other traffic on the west coast alone, this is an impressive record.

*This article is not legal advice. Darren Williams is a marine lawyer in Victoria, British Columbia and can be reached at 250-478-9928 or at Williams@MarineLaw.ca*