



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

December 18, 2023

MIR-23-27

Collision between Containership *MSC Rita* and Fishing Vessel *Tremont*

On October 28, 2022, about 0036 local time, the containership *MSC Rita* and the fishing vessel *Tremont* were underway in the Atlantic Ocean, 55 miles southeast of Chincoteague, Virginia, when the two vessels collided.¹ The 13 people aboard the *Tremont* abandoned the vessel and were rescued by Good Samaritan vessels and a US Coast Guard helicopter. No injuries were reported. An oil sheen was reported; a potential of up to 31,000 gallons of diesel fuel were lost with the fishing vessel. Damage to the vessels was estimated at \$4.75 million (*Tremont*) and \$1.5 million (*MSC Rita*).



Figure 1. *MSC Rita* (left) and *Tremont* (right) before the collision. (Sources: shipspotting.com [left] and Tremont Fisheries [right])

¹ (a) In this report, all times are eastern daylight time, and all miles are nautical miles (1.15 statute miles). (b) Visit [nts.gov](https://www.nts.gov) to find additional information in the [public docket](#) for this NTSB investigation (case no. DCA23FM003). Use the [CAROL Query](#) to search investigations.

Casualty type	Collision
Location	Atlantic Ocean, 55 miles southeast of Chincoteague, Virginia 37°36.72' N, 74°14.71' W
Date	October 28, 2022
Time	0036 eastern daylight time (coordinated universal time -4 hrs)
Persons on board	13 (<i>Tremont</i>), 22 (<i>MSC Rita</i>)
Injuries	None
Property damage	\$4.75 million (<i>Tremont</i>) and \$1.5 million (<i>MSC Rita</i>) est.
Environmental damage	Small sheen, est. maximum 31,000 gallons diesel fuel released
Weather	Visibility 8 mi, winds northeast 20 kts, seas 5 ft, swells northeast 3 ft, air temperature 65°F, water temperature 67°F, morning twilight 0655, sunrise 0722
Waterway information	Ocean, depth 1,200 ft (at casualty location)

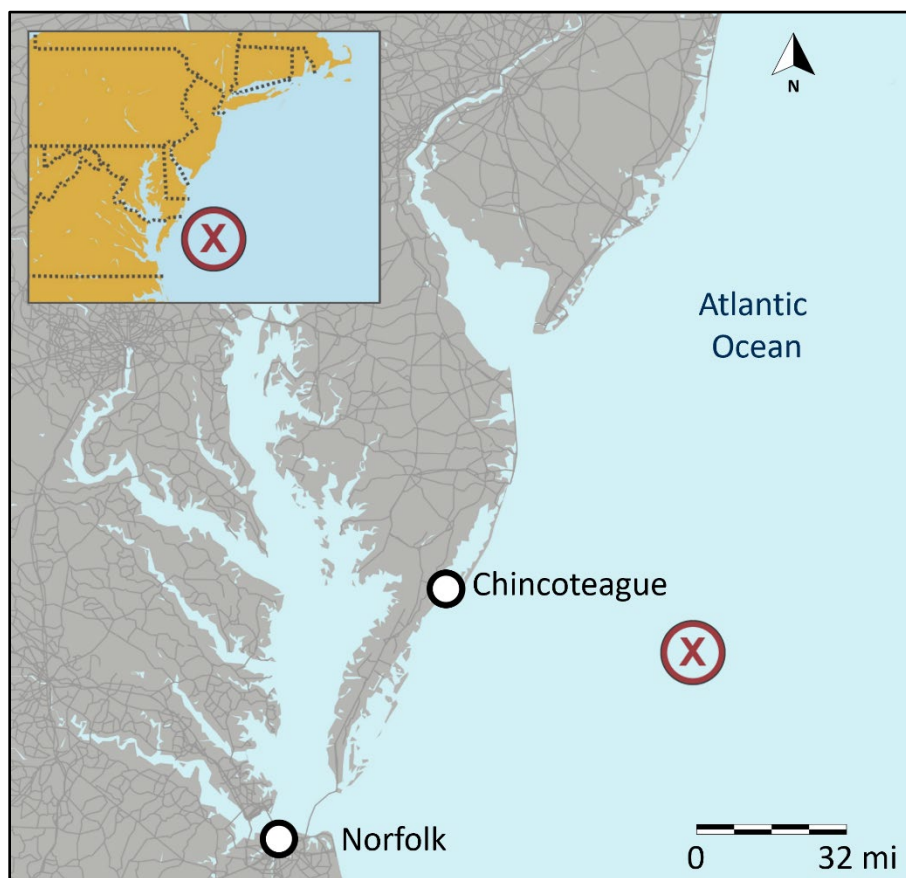


Figure 2. Area where *MSC Rita* and *Tremont* collided, as indicated by a red X. (Background source: Google Maps)

1 Factual Information

1.1 Background

The 115-foot-long *Tremont* was a trawler-style commercial fishing vessel constructed of welded steel and built by Bay Shipbuilding in Sturgeon Bay, Wisconsin, in 1970. *Tremont* Fisheries, LLC, owned by the vessel's mate and his father, acquired the vessel in 2017.

The 1,066-foot-long Panamanian-flagged containership *MSC Rita* was built in 2005 in Korea by Hanjin Heavy Industries and was operated by Mediterranean Shipping Company, based in Sorrento, Italy.

1.2 Event Sequence

On October 7, 2022, the *Tremont* sailed south from New Bedford, Massachusetts, to fish for squid off the east coast of the United States. On board were 12 crewmembers, including one of the owners, who served as the vessel's mate and engineer, and one passenger (the captain's and mate's 2-year-old child).² Over the next 20 days, the crew fished between New Jersey and North Carolina.

About 4 or 5 days into the fishing trip, the vessel's gyrocompass became "kind of sporadic," according to the captain. The error was less than 10°, so she and the mate determined "it was something we could live with." Additionally, the mate and captain stated that the fishing vessel's automatic identification system (AIS) had not been fully functional since part way through the trip. According to the mate, it was transmitting only.

On the morning of October 27, the *MSC Rita* left Staten Island, New York, en route to Charleston, South Carolina. On board were 22 officers and crew. The ship carried 8,085 TEUs of containerized cargo.³ According to the second officer, the *MSC Rita* displayed navigation lights.

On the evening of October 27, while offshore Chincoteague, Virginia, the *Tremont* crew retrieved their fishing gear, and, by 1900, the vessel was underway, transiting at 7 knots. The mate was on watch in the wheelhouse using the autopilot

² Some of the *Tremont* crew and Coast Guard documents referred to the mate (who was also the co-owner) as "captain." However, in this report, "captain" refers to the credentialed master aboard the fishing vessel.

³ *TEU*, or *twenty-foot equivalent unit*, is a measure of the carrying capacity of a containership based on the number of 20-foot-long containers the vessel is capable of loading (standard shipping container lengths are 20 and 40 feet).

(which required heading feedback from the vessel's gyrocompass) to maintain a course while using a fish finder (sonar device) to search for the crew's next fishing gear set point. The captain relieved the mate, who went to bed about 1915 and returned to watch about 2215. According to the mate, the *Tremont* displayed navigation lights for a vessel underway (side lights, stern light, and masthead light), as well as "fishing lights" (a green light over a white light indicates a vessel is engaged in trawling). The crew stated they left the "fishing lights" on between setting gear.

On the morning of October 28, the *MSC Rita* second officer saw the *Tremont* on AIS when he came on watch about midnight. At the time, the *MSC Rita* was making 14 knots on a course of 192°, and the *Tremont* and *MSC Rita* were about 55 miles east of Chincoteague. The *Tremont* was transiting northwest off the southbound containership's port bow. According to the *MSC Rita* second officer, the *Tremont* was not displaying lights for a vessel engaged in fishing or trawling—only red and green lights and some deck lights.

At 0004, according to radar screenshots, the *Tremont* was north-northeast bound on the *MSC Rita*'s port bow. The *Tremont*'s predicted closest point of approach (CPA) to the *MSC Rita*, according to the containership's radar, was astern of the containership. The second officer stated that the master told him to maintain a 1-mile CPA from passing vessels, and the second officer altered course 3° to starboard to 195°, opening up the CPA.

According to the *Tremont* mate, while he was on watch, "shortly before the collision, I started having issues with my gyrocompass, and I was attempting to straighten it out." The vessel's autopilot was still engaged, and, as he adjusted the gyrocompass, the vessel changed course, with the autopilot adjusting for new feedback from the gyrocompass.

The *MSC Rita* second officer noticed the *Tremont* alter course slowly to port. By 0015, the *Tremont* was heading 330° with a near-zero CPA instead of passing astern. When the two vessels were about 3.5 miles apart, the second officer then altered course 15° to port to 180°, increasing the CPA to 0.7 miles and allowing the fishing vessel to pass ahead.

At 0029, the *Tremont* passed ahead of the *MSC Rita* at a distance of 2.3 miles (see figures 3 and 4). At 0032:20, however, while 1.3 miles away on the containership's starboard bow, the *Tremont* turned back to starboard toward the *MSC Rita* on a course of about 080°. The *MSC Rita* lookout (an able seafarer) told investigators he saw a green light, then both sidelights, then just a red light on the *Tremont* at this time. The second officer told investigators he sounded a whistle

signal, switching from the aft whistle on the house to the forward one on the focsle after the first blast.⁴

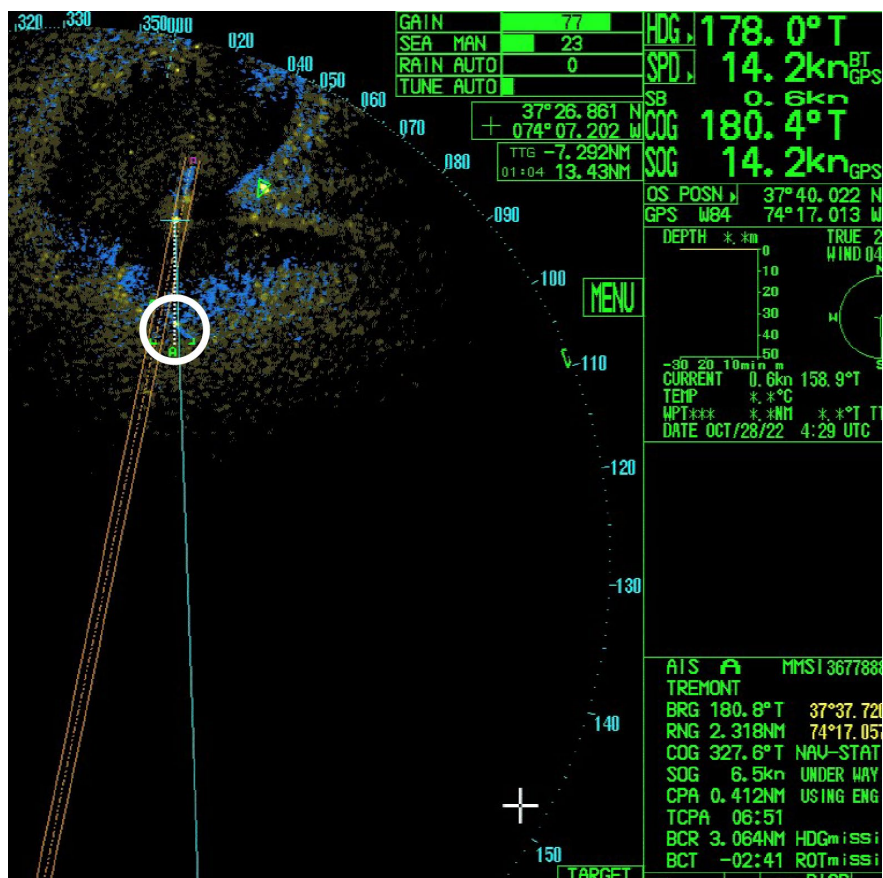


Figure 3. *Tremont* (circled in white) crossing ahead of *MSC Rita* at 0029:17 as seen on the containership's X-band radar. (Source: *MSC Rita*)

As the fishing vessel continued to approach, the second officer had the helmsman switch to hand steering and come hard to port at 0036:05. About 20 seconds later, the *Tremont* struck the *MSC Rita*'s starboard side, about 200 feet aft of the bow.

The *Tremont* mate stated that he saw the containership seconds before the collision, describing it as a single white light and "a dark, shadowy figure of the ship." He had the radar set to a 6-mile scale but said he did not see the *MSC Rita* on radar because he "was trying to adjust [the gyrocompass]." The mate stated that he put "the boat full astern" and did not have time to sound signals, nor did he hear any.

⁴ The bridge voyage data recorder microphones, located aft on the ship, captured the first whistle blast at 0034:10. Coast Guard inspectors later confirmed the forward sound signal was operational.

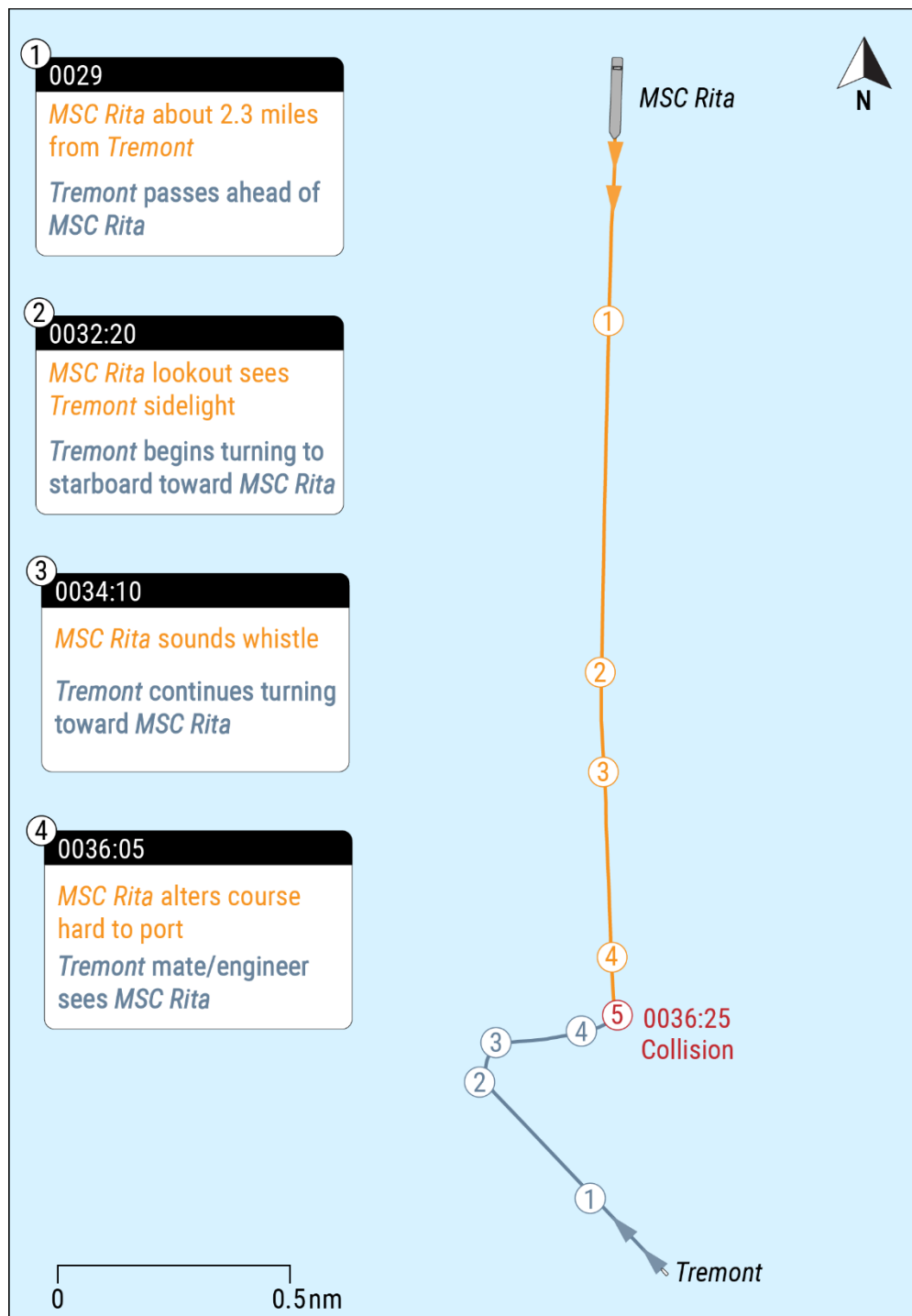


Figure 4. *Tremont* (blue) and *MSC Rita* (orange) tracklines leading up to the collision.

After the collision, the *Tremont* drifted from the impact point aft along the *MSC Rita*'s starboard side as the *MSC Rita* continued forward. At the time of the collision, the *Tremont*'s captain and four deckhands had been sorting fish on deck, and the captain "felt a disturbance and a loud noise." She went to the bridge while the other crewmembers grabbed lifejackets and roused the off-duty crew. On her

way to the bridge, the captain noted an exterior “watertight” door on the portside could not be opened to access an interior passageway.

The *Tremont* mate called the *MSC Rita* at 0043 and told the second officer, “I just checked for flooding. I got everybody up.... I don’t think we’re taking on any water at this time.” The *MSC Rita*’s master called the *Tremont* at 0052, and the mate replied that the vessel’s bow was “all stove in” on the port side and the crew were “assessing the situation.” He further stated, “I don’t need any help at this time.” The *MSC Rita* continued on its voyage.

The *Tremont* crew gathered in the galley for about 10 minutes until one crewmember who had gone outside discovered water on the factory floor, which was on the main deck above the fish hold. The mate then ordered the crew on deck.

Below the main deck on the *Tremont* was a forepeak, the engine room, a single fish hold, and the lazarette. There was no access to the forepeak from the engine room. The mate recalled that a bilge alarm for the shaft alley, which ran below the fish hold, sounded. Sea water later flooded the engine room.

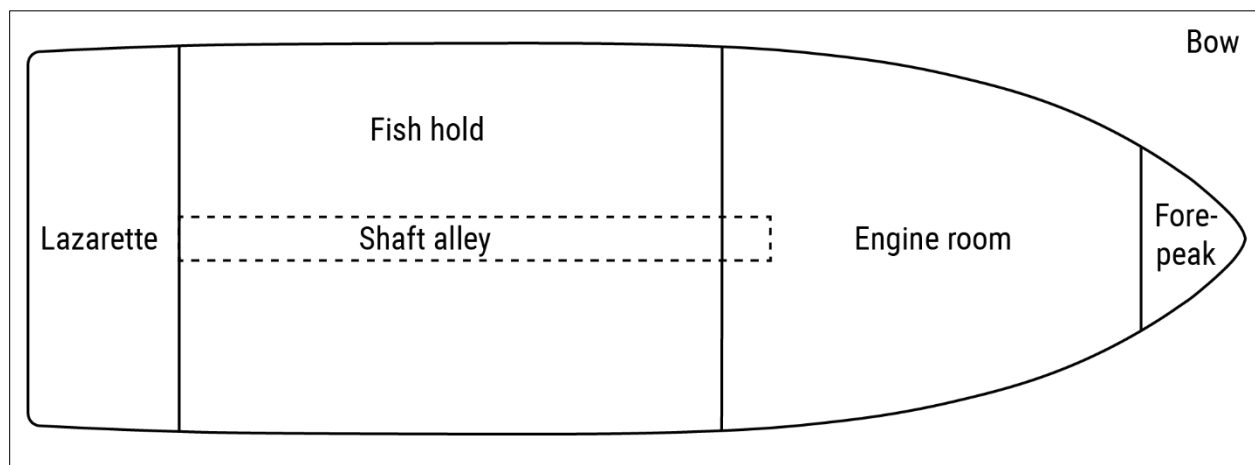


Figure 5. *Tremont* below-deck general arrangement. (Background source: Tremont Fisheries, LLC)

With the vessel continuing to flood, at 0148, the *Tremont*’s captain made a distress call on VHF channel 16. However, US Coast Guard Sector Virginia only heard the captain saying “MAYDAY” and the vessel’s name, and the captain did not hear a response from the Coast Guard (a postcasualty review of the Coast Guard’s recording of the captain’s distress call found it was weak and unreadable). The nearby 273-foot-long research vessel *Atlantis* and 146-foot-long fishing vessel *Dyrsten* both heard the distress call and responded, arriving on scene at about 0300.

Since the captain could not establish communications with the Coast Guard over VHF, she used a satellite phone to call 911, which was routed to the Coast

Guard, and convey the vessel's location and the nature of the emergency. The crew aboard the *Atlantis* was also able to reach the Coast Guard by satellite phone.

About 0201, after the *Tremont* crew had been assembled on deck for about 15 minutes, the captain ordered them to don their immersion suits. About 3 minutes later, at 0204, the lighting failed, leaving the crew to don their immersion suits in the dark.

The *MSC Rita*, overhearing the *Tremont*'s VHF mayday call, turned around at 0214 and returned to the scene. The Coast Guard dispatched a C-130 aircraft, an MH-60 Jayhawk helicopter, a Coast Guard Station Chincoteague 47-foot-long motor lifeboat (CG-47277), and the 154-foot-long fast response cutter *Rollin Fritch*. Upon arrival at the scene at 0320, the crew aboard the Coast Guard C-130 noted visible damage to *Tremont*'s port bow, a list to port, and the vessel down by the bow.



Figure 6. The *Tremont* with damaged bow as seen from the *Atlantis*. (Source: Lance Wills)

About 0410, the crew, wearing immersion suits, launched one of the vessel's two liferafts and abandoned the *Tremont* into it. The liferaft's sea painter had become entangled in the vessel's rope ladder (Jacob's ladder) used to board the liferaft, so the *Tremont*'s mate elected to stay on board to release the sea painter. The *Atlantis*'s rescue boat towed the survivors in the liferaft to the *Drysten*, which they boarded.

The *Tremont* then listed further, the bow submerged, and the mate was washed overboard. The Jayhawk helicopter crew deployed their rescue swimmer and hoisted the mate (uninjured) aboard and flew him to Coast Guard Base Portsmouth in Virginia. The *Tremont* sank at 0420, bow first. The *Tremont* was equipped with a

float-free emergency position indicating radio beacon, but it did not alert when the vessel sank.

At 0600, the remainder of the crew transferred from the *Drysten* to the Coast Guard motor lifeboat and were taken to Coast Guard Station Chincoteague.

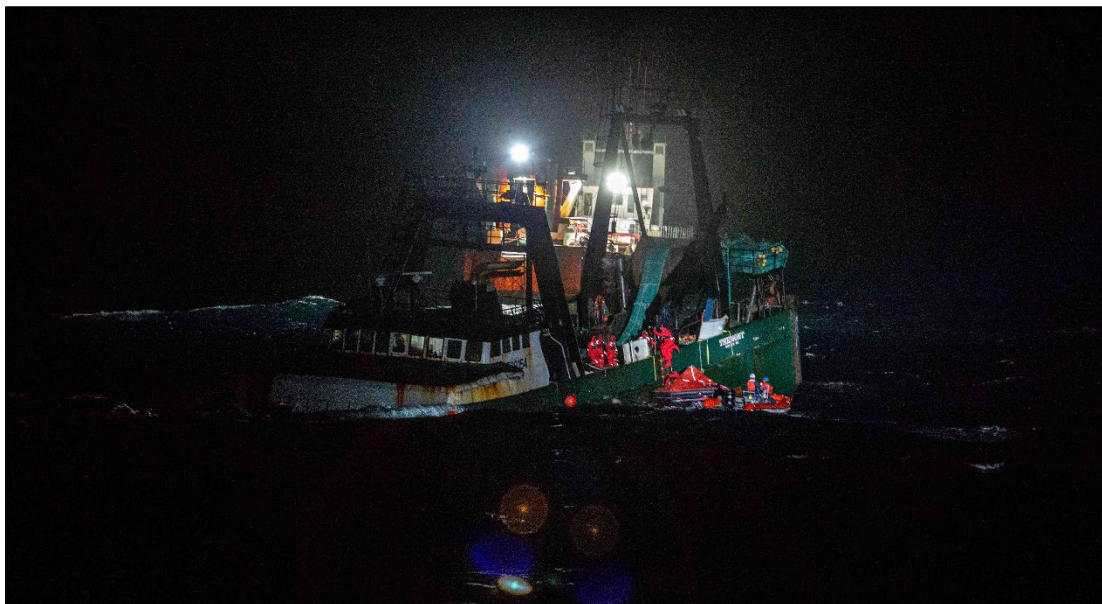


Figure 7. *Tremont* bow awash during the abandonment as seen from the *Atlantis*. (Source: Lance Wills)

1.3 Additional Information

1.3.1 Damage

The *Tremont's* dry hold held nearly 500,000 pounds of product at the time of the casualty. The vessel was valued at \$4 million and the load of fish at \$750,000.

The *MSC Rita* suffered an estimated \$1.5 million in damage, including buckled sideshell plating, distorted longitudinal framing, and a 600-millimeter-by-400-millimeter (1.3-foot-by-2.0-foot) hole in the shell plating of the no. 2 water ballast tank.



Figure 8. Damage to the *MSC Rita*'s starboard hull. (Source: Coast Guard)

1.3.2 Crew

The *Tremont*'s captain held a Coast Guard-issued credential endorsed as master limited to vessels of 1,600 gross register tons on/near coastal waters. The captain had 27 years of experience in the commercial fishing industry, including 5 years as captain of the *Tremont*. She normally stood a bridge watch from midnight to 0600.

The *Tremont* mate had worked on board for 5 years and held a Coast Guard-issued credential endorsed as third mate limited to vessels of 2,000 gross register tons and as designated duty engineer limited to vessels of 500 gross register tons.

After the collision, the mate tested negative for alcohol and all tested-for substances, and the *MSC Rita* bridge watchstanders tested negative for alcohol (they were not tested for other substances, nor were they required to be).

2 Analysis

While the containership *MSC Rita* was transiting southbound in the Atlantic Ocean, southeast of Chincoteague, early in the morning, the fishing vessel *Tremont* was transiting north-northeast in the same area. Shortly after the *Tremont* passed ahead of the *MSC Rita*, the *Tremont* suddenly turned back toward the containership. At that time, the mate on board the *Tremont* was operating the vessel and attempting to fix the vessel's gyrocompass, which the captain stated had been off by 10° since 4–5 days into the trip (investigators were unable to determine what was wrong with the gyrocompass). As he worked to fix the gyrocompass, the mate left the vessel's autopilot engaged. The *Tremont's* autopilot required heading feedback from the vessel's gyrocompass and a user to input the heading setpoint (desired course). As a result of this heading feedback and user input, the *Tremont's* autopilot then output the calculated rudder commands to correct any heading deviation. The amount of rudder used was a function of heading setpoint deviation, the rate of change in the deviation, and the mean deviation. Therefore, as the mate adjusted the gyrocompass to troubleshoot the cause of its error, the autopilot processed the heading feedback, causing the vessel to turn to starboard and toward the *MSC Rita*, striking the containership on its starboard bow.

In the time leading up to the collision, the *Tremont* mate was standing watch alone in the wheelhouse at night. The vessel was equipped with radar and AIS, which was transmitting but not displaying properly, and the mate was aware of this issue. The vessel's radar was functioning, and visibility conditions were good (8 miles). The 1,100-foot-long *MSC Rita* would have presented a substantial radar target, and since the containership was displaying navigation lights, the mate should have been able to see it visually. However, the *Tremont* mate told investigators that, while he was on watch, he was preoccupied with troubleshooting the gyrocompass. The mate stated he did not see the *MSC Rita* on radar nor visually until immediately before the collision. As the *Tremont* turned back toward the *MSC Rita*, the containership's second officer sounded the vessel's whistle, but the *Tremont* mate did not hear it. Therefore, the mate's distraction due to troubleshooting the gyrocompass prevented him from maintaining a proper lookout, and he was thus not aware of the approaching *MSC Rita*.

The *MSC Rita* bridge team monitored the *Tremont* crossing ahead and to starboard of the containership at 0029 (about 7 minutes before the collision) when the two vessels were about 2.3 miles apart. The *Tremont* then unexpectedly turned back sharply toward the *MSC Rita* a few minutes later. When a mariner is in doubt about a vessel's erratic movements or an operator's intentions, they should sound blasts of the whistle to signal uncertainty. About 0034, when the fishing vessel was about 1.3 miles away, the *MSC Rita* second officer sounded five short blasts of the whistle. However, the *Tremont* mate did not hear these signals, and the *Tremont* continued on the same heading, closing on the *MSC Rita*. Although the *MSC Rita*

helmsman switched to hand steering and came hard to port at 0036:05 to avoid a collision, there was not enough time to maneuver the containership out of the path of the *Tremont*, and the fishing vessel struck the *MSC Rita* about 20 seconds later.

The collision resulted in hull damage to the *Tremont* on its port side and bow. The crew found water in the engine room, a bilge alarm went off in the shaft alley, and within 10 minutes of the collision, flooding was found to have reached the main deck above the fish hold. The crew did not determine the source of the rapid flooding and subsequently abandoned the vessel. Based on witness statements and photographs of the vessel before it sank, the flooding was likely caused by port side shell damage at the engine room and/or the vessel's forepeak.

After the collision, the *Tremont* captain used VHF to signal distress, but because of the distance between the vessel and the nearest Coast Guard station ashore, the distress call was weak, and Coast Guard watchstanders heard only "MAYDAY" and the vessel's name. The captain used the vessel's satellite phone to call 911 and communicate the nature of the emergency, as well as the vessel's position. The *Tremont* was equipped with VHF-digital selective calling (DSC); by pushing and holding the red distress button on the radio, a VHF-DSC call could have communicated the nature of the distress and the latest position of the vessel to nearby vessels, unlike a satellite call, and would have continued to transmit distress messages until the call was acknowledged.

3 Conclusions

3.1 Probable Cause

The National Transportation Safety Board determines that the probable cause of the collision between the containership *MSC Rita* and the fishing vessel *Tremont* was the *Tremont* mate not maintaining a proper lookout and keeping the autopilot engaged while troubleshooting the vessel's gyrocompass, which resulted in the vessel turning into the path of the *MSC Rita*.

3.2 Lessons Learned

Conducting Maintenance on Critical Equipment while Underway

In this casualty, maintenance of the gyrocompass was being conducted while the vessel was underway with its autopilot—which was receiving heading information from the gyrocompass—engaged. Simultaneous operations, often referred to in safety management systems, is a situation where two or more operations occur in the same place at the same time and may interfere with each other. Managing simultaneous operations is an essential element of safety management and safe vessel operation. Before beginning work, mariners should identify hazards associated with working on one piece of equipment that may affect another, such as sensors feeding information to other equipment, and manage those risks to avoid unsafe conditions.

Using VHF-DSC to Communicate Distress

Modern VHF radios are equipped with digital selective calling (DSC). Pressing the VHF-DSC button alerts search and rescue authorities and nearby vessels, and automatically provides the vessel's position. Time permitting, mariners can also select the nature of distress on the radio and verbally communicate with nearby responders. When a vessel is in distress, mariners should use all available means to signal emergency responders, including VHF-DSC.

Vessel	<i>Tremont</i>	<i>MSC Rita</i>
Type	Fishing (Fishing vessel)	Cargo, General (Containership)
Owner/Operator	Tremont Fisheries, LLC (Commercial)	Mediterranean Shipping Company (Commercial)
Flag	United States	Panama
Port of registry	Boston, Massachusetts	Panama
Year built	1970	2005
Official number (US)	529154	N/A
IMO number	7037894	9289116
Classification society	N/A	DNV
Length (overall)	114.5 ft (34.9 m)	1,065.6 ft (324.8 m)
Breadth (max.)	42.0 ft (12.8 m)	141.0 ft (43.0 m)
Draft (casualty)	11.0 ft (3.4 m)	44.6 ft (13.6 m)
Tonnage	399 GRT	89,954 ITC
Engine power; manufacturer	EMD 12-645 1,200 hp (895 kW)	Wärtsilä 22 RTS 96C-B 82,843 hp (61,776 kW)

NTSB investigators worked closely with our counterparts from **Coast Guard Sector Virginia** throughout this investigation.

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For more detailed background information on this report, visit the NTSB investigations website and search for NTSB accident ID DCA23FM003. 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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