AVIATION HIGHWAY MARINE RAILROAD PIPELINE

March 7, 2024 MIR-24-05

Fire aboard Fishing Vessel *Marlins II*

On March 9, 2023, about 1808 local time, a fire was reported on the fishing vessel *Marlins II*, which was moored at a dock in Westport, Washington, with no one on board.[1] The local fire department extinguished the fire. No pollution or injuries were reported. Damage to the vessel was estimated at $950,000.

Figure 1. Fishing vessel *Marlins II* at the dock precasualty. (Source: Kyle Stubbs)

[1] (a) In this report, all times are Pacific standard time, and all miles are statute miles. (b) Visit ntsb.gov to find additional information in the public docket for this NTSB investigation (case no. DCA23FM020). Use the CAROL Query to search investigations.

Casualty type	Fire/Explosion
Location	Westhaven Marina, Westport, Washington 46°54.63' N, 124°6.68' W
Date	March 9, 2023
Time	1808 Pacific standard time (coordinated universal time –8 hrs)
Persons on board	None
Injuries	None
Property damage	$950,000 est.
Environmental damage	None
Weather	Visibility 8 mi, overcast, winds east-northeast 18 kts, gusts 30 kts, air temperature 39°F, sunset 1808, evening twilight 1838
Waterway information	Harbor/marina

Figure 2. Area where the fire aboard the fishing vessel *Marlins II* occurred, as indicated by a red *X*. (Background source: Google Maps)

1 Factual Information

On the evening of March 8, 2023, the 91-foot commercial fishing vessel *Marlins II* arrived alongside the Westhaven Marina dock in Westport, Washington, after returning from a 3-day fishing trip (see figures 1 and 2). The crew worked late into the evening freezing their catch of hagfish before being sent home by the captain, who was also the owner, sometime after 0200 the morning of March 9. The captain remained on the vessel and went to bed.

Later that morning, the captain awoke, secured the vessel's electrical generator, and connected the vessel to shore power. Other vessel machinery systems, including the main engines and catch refrigeration system, had already been secured.

The shore power for the vessel was supplied from a pedestal located at the end of the dock. A 30-amp shore power cord led from the pedestal down the dock to the vessel. The captain stated that he attached an adapter to the end of the shore power cord to aid in the connection of two 15-amp, standard, three-prong, general-purpose extension cords that ran onto the vessel. One cord ran down into the vessel's engine room to power a 110-volt bilge pump. The second cord ran into the vessel's galley to provide 110-volt power to a light, a household refrigerator, and a chest freezer.

To avoid running the galley extension cord through a door opening, the captain ran it underneath the vessel's hydraulic tank, down into the engine room, and then back up into the galley through a deck penetration. The captain said that to power the galley appliances while at the dock, he would unplug the appliances in the galley from their wall receptacles and plug them into the extension cord. He had been using this electrical configuration for several years without incident.

About 1130, the captain departed the vessel, leaving it unoccupied. At 1808, the local shoreside fire department was notified that there was a vessel on fire at the Westhaven Marina. Thirteen minutes later, the fire department arrived on scene and discovered the *Marlins II* on fire. The captain received a call from the marina operator that his vessel was on fire, and he immediately returned to the dock.

The *Marlins II* had a hull and superstructure of steel construction; however, the vessel's internal accommodation spaces were wood framed and paneled. The fire department indicated that, initially, smoke and flames appeared to be coming from the vessel's galley area. The fire eventually spread to the remainder of the accommodation spaces and the wheelhouse. At 2113, the fire department extinguished the fire, and they departed the scene at 2344. The fire resulted in $950,000 in estimated damage to the vessel (see figure 3).

After the fire, the vessel captain told investigators that he did not smoke and that, on morning of the fire, none of the galley cooking equipment had been used. He also stated that when he left the vessel, there were no issues with the appliances in the galley (refrigerator and chest freezer) or with the electrical shore power configuration.

To determine the origin and cause of the fire, a certified fire and explosions investigator, who was hired by the vessel owner's marine insurance provider, examined the burned-out vessel. In his report, he eliminated discarded smoking materials, a lightning strike, and the electrical shore power pedestal as potential causes of the fire. By examining the "totality of damage, the material mass loss of finishing materials, and the flame and heat travel patterns," the fire investigator determined that the origin of the fire was in the aft, midships area of the galley near the chest freezer. After further examination and elimination of other potential sources, the fire investigator concluded that the cause of the fire was "more probably than not caused by the internal failure of an extension cord device that was being used, in conjunction with an electrical adapter, to energize a chest freezer in the galley."

Figure 3. The burned-out *Marlins II* after the fire. (Source: Blomquist Marine Surveys)

2 Analysis

The fire on the moored *Marlins II* began about 6 hours after the captain hooked up shore power and departed the vessel. The fire consumed most of the vessel's interior accommodation spaces and wheelhouse. A certified fire and explosions investigator ruled out that the fire started from discarded smoking materials, a lightning strike, or from an issue with the shoreside power supply. He concluded that the fire originated from within the vessel's galley near a chest freezer that had been plugged into an extension cord and energized before the fire. The examination report stated that the cause was most likely a failure of the extension cord that was powering the freezer.

The Electrical Safety Foundation stresses that extension cords should be rated for intended use and not be used for more than one appliance; extension cords should not be substituted for permanently installed wiring, nor should they be run through walls, doorways, ceilings, or floors.[2] The Consumer Product Safety Commission also advises that extension cords can overheat and cause fires when used improperly. It advises that, to prevent fires, extension cord users should inspect the cord along its entire length to ensure it has not been damaged and look for visible signs of excessive wear or damage to the plug, sockets, or insulation.[3] In addition, the US Coast Guard advises mariners to assess their vessels and ensure extension cords are used only in temporary applications.[4]

Extension cords were used as a substitute for permanently installed wiring when the *Marlins II* was at the dock using shore power. One of the extension cords powered multiple items in the galley: a chest freezer, a refrigerator, and a light. This standard 15-amp cord was fed from a 30-amp cord through an adapter. Additionally, the galley extension cord was routed under a tank, down into the engine, and then back up into the galley behind the appliances; if it was left in place between uses, it is unlikely that the extension cord could have been effectively inspected for damage before each use.

[2] Electrical Safety Foundation, "Extension Cord Safety Tips," accessed February 23, 2024, Extension Cord Safety Tips - Electrical Safety Foundation (esfi.org).

[3] U.S. Consumer Product Safety Commission, "Household Extension Cords Can Cause Fires," accessed February 23, 2024, CPSC Publication 5032 - Household Extension Cords Can Cause Fires.

[4] US Coast Guard, "Marine Safety Information Bulletin: Fire Safety on Small Passenger Vessels," MSIB 05-23, April 6, 2023, MSIB-05-23_Fire_Safety_on_Small_Passenger_Vessels (uscg.mil).

3 Conclusions

3.1 Probable Cause

The National Transportation Safety Board determines that the probable cause of the fire on board the fishing vessel *Marlins II* was the failure of an extension cord used to energize galley appliances when on shore power.

Vessel	*Marlins II*
Type	Fishing (Fishing vessel)
Owner/Operator	Private
Flag	United States
Port of registry	Westport, Washington
Year built	1998
Official number (US)	1074005
IMO number	8958174
Classification society	N/A
Length (overall)	91.2 ft (27.8 m)
Breadth (max.)	24.0 ft (7.3 m)
Draft (casualty)	8.0 ft (2.4 m)
Tonnage	146 GRT
Engine power; manufacturer	650 hp (485 kW); Caterpillar 3412 diesel engine

NTSB investigators worked closely with our counterparts from **Coast Guard Marine Safety Unit Portland** throughout this investigation.

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable cause of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for any accident or event investigated by the agency. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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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 DCA23FM020. 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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