

Lynn Spencer
Air Safety Investigator
Aviation Safety / Eastern Region

Date: April 11, 2024, 2024
Subject: ERA24LA166 Record of Conversation
Contact: Michael Hall, pilot

The following is a record of conversation with Dr. Michael Hall. Dr. Hall was interviewed by phone on April 12, 2024, at 1458 EDT. He called from [REDACTED] and provided an e-mail address of [REDACTED].

Dr. Hall was advised that for transparency I would be typing the notes and would send them to him for review and comment.

Dr. Hall stated that his father was an airline pilot and naval aviator and that he comes from an aviation family and was very saddened to have put an aircraft down in the ocean. He is also an AME. He explained that the helicopter was exceptionally maintained by two mechanics and had accumulated about 540 total hours of flight time.

He stated that a week before the accident, when flying to Naples, Florida, he felt a millisecond "jerk." He did some pattern work and autorotations and could not repeat it and experienced no further issues, but he let his mechanic know. The mechanic changed the oil but did not think much of the momentary "jerk." Dr. Hall stated that "You get a lot of gusts over the Everglades," and he chalked it up to the wind or a thermal.

On the day of the accident, he fueled the helicopter, went through the whole preflight inspection and checklist, started it up and let it run. Having just had an oil change the week before, the helicopter had 8.5 qts of oil. It was a clear, beautiful day and he fueled the helicopter and departed about 1245-1 EDT. He was on a VFR flight plan, got his squawk code, climbed out of the Miami airspace, got past Key Biscayne, and leveled out.

He estimated that he was about 21 minutes into the flight, when he felt another millisecond "jerk." There were no caution or warning lights, no aural warnings, and his gauges were all "in the green." But the fact that this was a second "jerk" made him think that something was not right, so he immediately started to turn around. The air traffic controller asked him what he was doing, and he responded that he thought he had a mechanical problem. The controller asked if he wished to declare an emergency and he declined, but a minute later, he felt another jerk. His goal was to get the helicopter to dry land. He descended to 500 ft above ground level and 30 seconds later, he felt a longer "shake" and became really concerned and declared an emergency. He was still about 4-5 miles off Lighthouse Point when he felt another jerk and then he heard odd sounds from the engine and noted that he was having to add power and was getting slower. He started to porpoise in order to get back to land and to an area where there were no people, or as close as he could. He started to feel more vibration and he heard the low RPM horn. He began an autorotation and impacted the water at a 30° bank and about 35 kts. The impact cracked the windscreen and the cockpit started to fill with water. His life jacket auto-inflated and he could not exit the helicopter, which was starting to sink. He was able to remove his life vest and swam down under his door and then back up to the surface. He was able to reach his life raft and pulled the cord and got inside it. Soon thereafter, Fish and Wildlife arrived and brought him to shore. He had back pain and was later informed that he crushed his L2 vertebrae.

I asked if his helicopter contained any instrument that recorded his engine data, and he stated that there was none.

I asked if the engine lost power completely, and he stated that it never completely lost power. He added that the tail rotor was not recovered.

The call ended at 1546 EDT.

The digest was e-mailed to him for review on April 12, 2024. He replied on April 17, 2024, with the following comments: "I read the narrative you constructed, it was fine and accurate, although I had lost all power on the way down as both needles were collapsing in tandem, therefore I had to make the final autorotation on the down to the water."

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Date: May 15, 2024
Subject: ERA24LA166 Follow-Up Questions
Contact: Michael Hall, pilot

The following questions were posed to Dr. Hall via e-mail. He responded to the questions on May 15, 2024, at 1351 EDT.

Q: When you encountered the loss of power, did you notice the throttle twist grip rotating in your hand?

A: No, collective and cyclic were fine. Gov on and nothing alerting.

Q: Were there any lights or horns other than the LOW RPM?

A: No, that happened later as I was in the ditch.

Q: Do you recall if you were using the auto-pilot during the event?

A: Auto-pilot was not engaged as far as I recall, as I mentioned it had just had reached level flight @ 1000 AGL, I was in clear sky, no weather and had a tail wind. Auto was not engaged at all during ditch. G500 and GTN 750 were perfect, HeliSAS has always been perfect.

Q: Was there any yaw at all associated with the quick jolts you felt?

A: There was a millisecond of yaw, it was as if a firm gust had hit the tail, but it was so brief that I had to remember it had happened a week before near KTNT in Everglades and thought it was a thermal or an erratic wind, no horn, no lights, all green gauges, but as I had discussed I had immediately taken it to KTNT in abundance of caution and did 3 full approaches L downwind (Coast Guard was there too) and 3 non touch down autos and had no issues and proceeded to Naples and headed back Miami with no issues at all. I sent a text to my mechanic Danny Ram and we he didn't think much of it.

I had no experience with any further issues ever in the aircraft and looked it over very carefully on return, all checks out and I left for Bahamas a week later.

Q: Did you make any adjustments to the carb heat during the flight?

A: Yes, I engaged carb heat in fear of ice, as I descended. I always (sic) fly a little (1/3) on takeoff and especially on landing. It was a warm day non humid day.

Q: When the needles were dropping, did the engine needle drop rapidly right, or was it a slow decline?

A: It was a slow decline as I saw initially but not a lot, it was as very noticeable as I was at the end of the decent, they began to reduce at the same rate, this was in the ditch. I wanted to keep it in the air as long as I could to reach dry land, I used every bit of rotor inertia I had to keep it going before splash down.

Q: When you got near the water, did you flare?

A: Yes but I was fearful of a belly flop and tried to use minimum flare as I didn't want to take the hit directly to the belly and break my spine, but I was also using all my speed too to get to land, it was a trade off. I didn't want to be over deep blue if I could prevent, I felt I had a better chance of survival closer to shore.

Q: Any more descriptions of the noises from the engine?

A: Yaw happened 3 times, engine never seized up, it made a hiss or scraping sound, grating against something, it never bucked, no smoke or burning smell, no fire light, all lights were off except low RPM and horn near the ditch...it just was losing power and I was pulling higher and higher MP to keep things aloft, that is why I porpoised or oscillated the ship to prevent total engine failure or fatigue and keep the rotors in the green to close the distance between me and the land . "Trim, Speed and RPM" was going through my mind ...my instructor made me say this often to go into autos, I was not afraid at all, I was in control all the way down. I just wished I had enough power to land on earth, but I that was not in the cards. It was a hardish impact, my thumb was the door frame to prevent it from deforming after impact I got into the water and there was no fuel or engine debris



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Date: May 17, 2024
Subject: ERA24LA166 Follow-Up Questions
Contact: Michael Hall, pilot

The following additional questions were posed to Dr. Hall via e-mail on May 16, 2024. He responded to the questions on May 17, 2024, at 1534 EDT.

Q: When you say you entered the water at a 30-degree angle, what angle are you referring to? (Left, right, up?)

A: As I was headed in the water, it was a 30-degree angle into the water from the front down.

Q: Did the helicopter come to rest in the water on its right side? (based on your description of how you exited the helicopter)

A: Yes, after splashdown, it migrated to the right and tipped over and slowly sank.

Q: Where did you purchase fuel on the day of the flight? Do you have the receipt?

A: I have sent a receipt from IFC.

Q: Did you file to fly into the Bahamas that day, and what arrangements did you have to make? Do you have any record of that?

A: Yes will send from 1 800 Wx Brief.

Q: Did you remove the ignition key before you exited the helicopter? Do you recall if you turned both magnetos off?

A: No, I never turned off the helicopter, I just left in a hurry, police removed the key from the ignition after they scuba the helicopter, they had the keys, and the detective removed them from the aircraft after they went back to get my passport. I mailed the fuel tank keys to you after I found them in the bag they retrieved.