



Memorandum for Record

Fabian Salazar
Air Safety Investigator
National Transportation Safety Board
Investigator in Charge

NTSB Accident Number: WPR19LA087
Aircraft Registration & Make/Model: N506PH / MD Helicopter 369E
Accident Location: Kukuihaele, HI.
Accident Date: 2/21/2019

Daniel Malakie
Director of Safety
February 21, 2019

I, Daniel Malakie, was notified of the accident via our internal hangouts system at approximately 7:18. I quickly drove to work and met Cal and Joel who had opened our Emergency Operations Center. We quickly completed emergency response procedures as shown in a separate timeline document. Lauren the Director of Maintenance and I departed Kona as the “Go Team” around three hours after the accident enroute to secure and preserve the scene. Enroute we spoke with Pete our Chief Pilot, who had told us he has spoke with Rob the pilot. Between Pete’s conversation, what I saw on scene, and what Rob later told us at the hospital I can say the following. “Rob had mentioned to Pete that he had completed a post 300-hour aircraft and engine inspection operational check flight prior to leaving Hilo airport and performed power checks enroute. His power checks were fine and no issues were found. After I assume 15-20 minutes of flight time enroute he noticed his engine was operating at 909 TOT with no torque indication. The engine began to run erratically and he was trying to find a place to land. He quickly made the decision to enter an autorotation. On the way into the zone horses were on his right, a dried up river bed was to his back and front, people were to his front and major sloping terrain to his left. One small, cleared sloping area was the only nearest zone available to attempt an autorotation to. It appears that the left skid hit the ground and separated from the aircraft and then the tail impacted the terrain and flew forward. It appears that the aircraft then bounced up and landed on its left side. I was told the engine was still running which

makes me assume he had a under power condition. Rob was extracted by contracted workers he was intending to perform his mission with for the day at Waipio on Horseback Ranch.”

Once Lauren and I, the Go team, arrived we checked to ensure the aircraft was turned off and noticed fuel was leaking. We quickly secured the site with caution tape and kept everyone away. I was able to get the aircraft paperwork from Mike the WOH Ranch landowner and secure it in my truck. I took statements from Chris Carter, Patrick Kirchem and Robert Kapua before going back to the site to perform an inventory of the debris. Lauren and I took pictures before we installed our yellow flags indicating debris and red flags indicating impact areas and then took pictures of each numbered flag. We noticed oil on the aircraft so we called Chris Howard for approval to put a tarp over the wreckage to secure the integrity of the site. We also put a bucket under the aircraft to catch the fuel leaking from the airframe.

Patrick aka “Focus” was contracted from K&S Helicopters to perform security of the site. We also had Carlos Navor our Hilo Base Manager stay on station until Kahea Gomes a K&S Helicopters employee was able to come up to perform security overnight with the aircraft. Lauren and I went to the hospital in Waimea on the way back to Kona and saw Rob in the hospital. He was in good spirits and told us he broke four ribs and punctured a lung. His story is of the accident is reflected above.

The next morning Lauren and I returned to the scene at 6:40am to meet Patrice Li the insurance adjustor. She arrived at 7:03 and had us remove the tarp to take pictures of the wreckage. She asked a few questions and departed to an area to send her information to her company. She said she would be in contact to provide direction to move the wreckage. At approximately 9:00am Chris Howard and Spencer from the FAA arrived to survey the wreckage. They took pictures and asked questions before they began driving to Kona to meet Stacey Dorn, K&S Helicopter owner, to secure the fuel samples and aircraft records. I received word from Darren our CFO and Patrice we could begin efforts to remove the wreckage back to the Kona airport.

At around 3:00pm Cantor Bros Lowboy arrived to survey the removal of the area. Calvin Dorn, K&S Helicopters owner, had also arrived to survey the scene and extraction of the wreckage. We also had Coty, a K&S Helicopter maintainer, arrive who helped drain nearly 43 gallons of fuel from the helicopter. The ground proved to be too wet and the truck the driver had was not able to drive to the site. He asked us to remove the remaining right skid and rotor blades to shorten the load and he would be back the following day. Lauren, Cal, Cody and I removed the blades, skid and some instrumentation which has been inventoried by myself. With the difficult terrain and heavy rain we removed some instrumentation to maintain the integrity and ability to draw vital information from the Diamond J gauges and trac-plus system. Once complete we drove the skids, rotor blades and removed instrumentation back to Kona where we locked it up in a secure hangar.

23 February Derrick and Sam from our maintenance department and myself returned to the site at 2:15 to prepare the wreckage for extraction. It was raining heavily. The trucking company arrived at 2:50pm and began taking measures to remove the wreckage. Pictures were taken during the removal process which proved difficult with the muddy conditions. Every effort was taken to ensure we maintained the integrity of the engine area. The aircraft was loaded on the truck at 4:35 and departed to Kona Airport at 4:43. The load arrived at the Kona hangar and was secured at 7:00pm.



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Lauren Douglas
Director of Maintenance

February 24, 2019

On 21 February 2019, I arrived at WOH Ranch with Dan Malakie to secure the scene of aircraft N506PH. We arrived at the ranch around noon and spoke to several bystanders who witnessed the event. We then went up to the location of the helicopter. I observed the aircraft on its left hand side. The horizontal stabilizer, vertical stabilizer, tail rotor gearbox, tail rotor blades, and a section of the tail boom in the corner of the gated pasture. About another 20 feet away I observed the pilot side door against a fence and there were several different debris locations that had pieces of the windows and some of the seat cushions. Behind the aft of the fuselage I noticed the left hand skid was broken off and in the dirt. There was a small amount of fuel dripping from the belly vent hole so we did place a plastic container underneath the drip to prevent fuel from getting to the ground, making sure not to disturb the fuselage. All of the main rotor blades were bent and distorted from hitting the ground. I did observe a main rotor blade with scuff marks that matched the area on the tail boom where it had made contact. The right hand engine cowling door was open so we were able to peek inside without touching anything to check for any visible damage to the right side of the engine. I did not see any visible damage to the right side of the engine but I did take note on how nice everything looked inside. Safety wire and torque stripe were all intact and very visible, everything looked nice. I did notice some oil spattering on the right-hand engine door. Also, I noted that the tail gearbox did have oil inside. I was unable to see the engine oil level through the sight glass on the fuselage because of the way the aircraft was laying. Also noted was that the governor throttle lever was pointed to 90. I assisted Dan Malakie with putting out numbered flags on the scene with red flags representing the impact areas and

yellow flags representing the debris. Everything was documented with description and what flag number it went with. We then got permission to cover the fuselage with a tarp so we could preserve what was there. Once the tarp was placed on the aircraft and our relief person showed up to ensure the scene remained secured, I returned to Kona.



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Pete Stachowicz
Chief Pilot

February 21, 2019

Rob called me on his wife's phone because his was lost in the mishap and she had recently arrived at North Hawaii Community Hospital, where he was taken.

I made sure he was all right. He told me he had a few broken ribs (I found out later that it was 4), but otherwise he was okay. Below is a paraphrased synopsis of our 20 minute phone conversation.

Rob was on his way to his intended landing zone near Kukuihaele, at Waipio On Horseback (WOH) Ranch, at 3000' initially due to it being early and not wanting to annoy residents. He was making his approach, descending through the 90 into the wind when he heard a "sputter" or "light popping". He looked at his instruments and saw his TOT gauge blinking and reading 909C, his Nr was 100%, and his Torque was 0. He then transitioned his scan outside to find a suitable landing zone and leveled out the aircraft. He initially headed toward his original LZ, but at 500'-300' he completely lost available power and was in a dedicated autorotation. He left the twist grip full open because he said it sounded like the engine kept trying to work and he thought it might come back. He soon realized that he couldn't make his original zone and started looking for an alternate. There were lots of Eucalyptus trees around, but he saw an opening and headed for it. This new LZ was at the top of a steep hill about 100'-150' shy of the original LZ. Rob shot for the summit and ran out of energy (Nr) at about 20'-25', with his collective all the way up, and fell the rest of the way. When he impacted the ground, his door flew off, then the aircraft rolled on it's left side. Rob's left arm was pinned between the ground and the seat back. He said

it sounded like the engine was still running, or “something was going on” behind him. He tried to turn the twist grip off, but couldn’t get it all the way. Then he pulled the fuel shutoff, but still heard the sound. He didn’t want the electrical equipment to spark and ignite any spilled fuel so he tried to turn it all off. When he couldn’t reach with his hands, he used his foot to turn all the switches off.

The guys who were watching him land and staged at the original LZ ran over and lifted the airframe enough for Rob to get his arm unstuck. They pulled him through the front windscreen, which was no longer there, and helped him walk away from the aircraft.

Rob said the aircraft was now in pieces and he couldn’t find his phone, which was on a suction mount on the now-gone windscreen.

Prior to heading to Kukuihaele, an OCF was scheduled on the aircraft. Rob completed the OCF, which included a power assurance check, prior to ferrying to WOH, but never got a chance to enter it into the book. His numbers were: 2000’, 729C TOT, 20C OAT, and 100% Ng.

I asked him if he took a fuel sample during preflight, and he said yes, but he accidentally put it in the jar labeled 508. He mentioned this to Nicole, an apprentice mechanic, but didn’t have time to fix the error and left. Several hours later Mark (Hilo Lead Mechanic) and I realized that the pilot for 508 (Chris Vaines) who launched an hour later probably dumped out Rob’s fuel sample, thinking it was the one from 508 from the day before. The fuel in 506’s jar was most likely from the day before.

Rob was taken to the hospital via ambulance. He is being kept overnight to monitor his condition and more x-rays are scheduled for tomorrow. I’ve talked to him since and he’s in good spirits and walking around.



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Lauren Douglas
Director of Maintenance, Paradise Helicopters
November 23, 2020

In a telephone interview with the Director of Maintenance, Lauren Douglas, she mentioned that the two bleed valves (FF21214 and FF28091) were shipped to Keystone due to pilots reporting similar compressor surges, but not resulting in an engine failure. She stated that the company stopped using HEROS Incorporated and removed other bleed valves that were overhauled by HEROS from helicopters in their fleet.

When asked about mechanics confusing the engine wash ratio, she stated that she was unaware of any occasions of mechanics confusing the ratios and they actually dilute the engine wash solution to 10:1 (10 parts water to 1 part engine wash). She also stated that they have a V-shaped block with a long flag that is used to manually close the bleed valve during engine washes.