



RECORD OF CONVERSATION

Timothy W. Monville
Sr. Air Safety Investigator
Eastern Region

Date: July 30, 2018
Person Contacted: Dr. Mark A. Kukucka
NTSB Accident Number: ERA18LA192

Narrative:

Dr. Mark A. Kukucka was contacted by phone on July 20, 2018, at 1502 EDT. He was called [REDACTED] and left a voice mail message. He returned the call the same day at 1609 EDT, calling from the same phone number.

In preparation of the flight he performed a thorough preflight inspection of the helicopter using the printed checklist in the Pilot Operating Handbook for N411HU. He indicated that while a pilot may not allow a non-pilot to inspect the helicopter, his passenger (who is not a pilot) but who has flight training in a fixed wing airplane and who has soloed, also performed a preflight inspection of the helicopter while following immediately behind him. No helicopter issues were discovered during this preflight inspection.

He indicated that he departed MTN about 1045 EDT, for the intended 30 minute personal flight. He did not have a flight plan filed. He was asked if there was any video or pictures that were taken at any time during the flight. He indicated that no video was taken, but the female passenger did take pictures while in-flight, but none were taken after the Timonium Racetrack.

He planned to return to MTN (helicopter based there) by 1200 the same day.

He was asked at any point did the passenger exercise the flight controls. He indicated that she did not. He did state that there were cyclic and collective controls at her seat, but because of her stature, she was not able to reach the anti-torque pedals. He indicated that he did not perceive any change in engine sound during the accident sequence.

He indicated that he has between 160 and 200 hours in rotorcraft. Over the last 18 months, he spent about 70 hours flying the accident helicopter, which is equipped with 4 seats.

He was called on July 25, 2018, at 1000 hours, to the same phone number. He was asked if he recalled hearing any audible warnings or horns. He did not recall hearing any audible alarms during the accident sequence.

The digest was e-mailed to him for review on July 30, 2018. He replied on August 3, 2018, at 1047 EDT, with comments that were incorporated into the narrative. The corrected digest was e-mailed to him on August 3, 2018.



RECORD OF CONVERSATION

Timothy W. Monville
Sr. Air Safety Investigator
Eastern Region

Date: July 25, 2018
Person Contacted: Dr. Mark A. Kukucka
NTSB Accident Number: ERA18LA192

Narrative:

Dr. Mark Kukucka was contacted by phone on July 25, 2018, at 1000 EDT. He was called at [REDACTED]

He began to describe the flight indicating that he flew from Maryland and with I-83 in sight, flew over a Walmart in Shrewsbury, then proceeded in a northeasterly direction towards Shoestring Aviation Airfield (0P2), Stewartstown, PA.

At that part of the phone call he was advised that when NTSB speaks to anyone they have to be informed they have the right to be represented, and that should have been said during the phone call of July 20, 2018. He was advised that the NTSB is a federal agency mandated by Congress to investigate aircraft accidents, and NTSB has no authority to take any action against any individual. He was also informed that the purpose of an NTSB investigation is for safety only, and any person NTSB talks with has the right to representation; he agreed to the interview without representation.

He reported purchasing another similar helicopter in August 2016, and the accident helicopter (N411HU) in March 2017. After purchasing the accident helicopter, he and a flight instructor flew it from where it was purchased in California to Martin State Airport (MTN), Baltimore, Maryland, where it was based. During the 3 days it took, there were 13 fuel stops. During one such stop in Beckley, WV, they preflighted the helicopter after having lunch. As part of the preflight inspection, his flight instructor found that the anti-torque pedals could not be moved. It was decided to move the main rotor blades, and after doing so his instructor checked the anti-torque pedals and noted no issues. They were both perplexed and unable to replicate any further binding issues with the anti-torque pedals. At that time they were 2.5 hours away from MTN, which required 1 more fuel stop. At the last fuel stop in Frederick, MD, the anti-torque pedals were manipulated again (as part of a preflight inspection) and no binding issues were noted.

They flew to MTN, and after landing, checked the tail rotor and again noted some binding. They called a person named Roy (not a mechanic) to check the tail rotor issue for himself the next morning. He too felt some binding in the tail rotor pitch mechanism. The helicopter was grounded. His mechanic eventually checked the tail rotor pitch mechanism noting some binding and noise which Mark took a video of. His mechanic performed work on the tail rotor, and in July 2017, the helicopter was repaired and was test flown on July 29, 2017 before being returned to normal flight status. He was asked to provide a copy of the logbook entry. He indicated that the FAA has the maintenance records.

Overall, he reported flying for about 1.5 years with 2 different flight instructors, both of whom were highly experienced. He accrued about 65 hours in the accident helicopter. He reported that he did not rush his training. He had about 200 landings and about 75 hours in the accident make and model helicopter, and 188 hours total time in all rotorcraft at the time of the accident.

With respect to the accident flight, he did obtain a preflight planning, and obtained winds by Googling the wind forecast, which was forecast to be below 7 knots until 1500 the same day. After 1500 hours, the wind was forecast to be at 11 knots. He also obtained the Zulu, Alpha, and Bravo automated terminal information service (ATIS) from MTN before departure, noting that the Zulu ATIS indicated the wind was from 5 knots, and the Alpha and Bravo ATIS both indicated the wind was at 7 knots from a westerly direction.

He piloted the helicopter from the left seat, and departed MTN flying in a northerly direction paralleling I-83 flying on the west side of it. He was using the on-board Garmin Aera 660 GPS receiver. When the flight was near the Timonium Racetrack (near the Maryland State Fairgrounds), the winds were westerly which was the same direction as they were at MTN when he departed. He continued to monitor the wind while continuing towards OP2. Being familiar with Shrewsbury, he noted the Walmart below him off the left side of the helicopter. He knew OP2 was about 3-4 miles northeast from the Wal-Mart¹, and almost immediately saw 2 buildings (hangars) at OP2 that he recognized from a Google Earth view which he had reviewed at home the morning before this flight. He was flying VFR and could see the horizon, reporting visibility was no issue. When the flight was about 1 mile from OP2 he made a radio call on the common traffic advisory frequency (122.9 MHz) announcing his position. Because he knew that ultralights operated out of OP2, he kept looking and listening for traffic. Because the wind was from the west when he departed MTN, as he approached OP2 with runways 33 and 24, he expected the wind to be from the west, possibly favoring runway 33. He reported that OP2 has 2 windsocks on the field. One (bigger, or about 16 inches in diameter) was located on the northeast corner of the intersection of runway 24/33, and the second (4-6 inches in diameter smaller) was located near the hangar(s) on runway 15/33. As he approached OP2 on a prospective left base leg of the airport traffic pattern for landing on runway 33, he saw the windsock and noted that this was not the best runway for landing based on the windsock direction. He then flew on the south side of Ebaugh Road in a northeasterly direction, and noted that both airport windsocks favored runway 24 instead. He continued on the left downwind leg of the airport traffic pattern for runway 24 flying about 500 feet above ground level (agl) and between 60 and 70 knots, descending about 300 feet-per-minute. He turned onto a left base leg of the airport traffic pattern

¹ Google Earth depicts OP2 being 1.91 nm and 30.23 degrees from Wal-Mart

over Rehmeysers Hollow Road maintaining between 60 and 70 knots (favoring 60 knots), and descending to between 300 and 400 feet agl. He then turned onto final for runway 24 at about 300 feet agl, with the airspeed decreasing to between 40 and 50 knots. While on final, he observed the large windsock which indicated it was extended only 30°, which he estimated was about 10 knots. The wind was estimated to be from about 220 to 230°, or just off the left side nose of the helicopter.

While on final he noted a woman cutting grass in a field east and south of the intersection of runways 33/24. She moved away from that location, and being aware of her he intended to land long to prevent rotor downwash and grass clippings from blowing on her. At the approach end of runway 24, while at 100 to 200 feet agl, he was at 40 knots and continued to descend and slow. He was slowing and reported the approach was high, because he wanted to land long (as noted previously). While descending at about 20 feet agl he slowed to about 10 knots and began to apply left anti-torque pedal input to begin a hover, but almost immediately at that point the helicopter started to spin clockwise to the right as the helicopter was not “doing what he expected it to do.” He recalled applying left anti-torque pedal input instinctly. The helicopter spun to the right an estimated 10-12 times, during which time his only thought was to try to keep the nose of the helicopter level. He hoped to get it under control and land on the skids. He did not recall rolling off the throttle or lowering the collective. He also did not remember fighting with the tail rotor pedals. The helicopter eventually descended, and impacted the ground.

He pulled the fuel shut-off valve and he and the passenger exited the helicopter thru a break in the front Plexiglass windshield. After making sure it was safe, he went back briefly 3 to 4 times into the helicopter to retrieve his belongings, including the Aera GPS, which was not damaged. He then turned the GPS off.

He is familiar with the audio annunciators in the helicopter, and did not recall hearing any during the accident sequence. He also does not recall seeing any blinking warning lights, nor does he recall any reading of any of the engine gauges (including main and tail rotor rpm) when the helicopter was yawing to the right. He went on to say that he did not hear any abnormal engine sounds.

The insurance adjuster is Kevin Olsen.

The digest was e-mailed to him for review on July 30, 2018. He replied on August 3, 2018, at 1047 EDT with comments that were incorporated into the narrative. The corrected digest was e-mailed to him on August 3, 2018.



RECORD OF CONVERSATION

Timothy W. Monville
Sr. Air Safety Investigator
Eastern Region

Date: October 2, 2018
Person Contacted: Thomas E. Hopkins
NTSB Accident Number: ERA18LA192

Narrative:

Mr. Hopkins was contacted by phone on October 2, 2018, at 1500 EDT. He was called at [REDACTED] [REDACTED] Mr. Hopkins is the owner and manager of Shoestring Aviation Airfield (0P2), Stewartstown, PA. His e-mail address is [REDACTED]

At the date and time of the accident, he was outside a building at 0P2, at the southwest corner, which was located at 39° 47'39.94" north latitude and 076° 38'42.95" west longitude, or about 754 feet southeast of the Impact/Final Position¹. Also located on the airport was a person on a lawnmower near the 200 foot marker block, or about 152 feet south-southeast of the Impact/Final Position.

He reported he was looking to the north, and observed the helicopter flying above runway 24U, then when near the departure end of the runway, noted the helicopter hovered for more than 5 seconds in a southwesterly direction. He noted the helicopter yaw to the left consistent with a turn towards a parking area, then noted the helicopter yawed to the left an estimated 6-7 turns, while maintaining altitude and position well, reporting he was adamant the turns were to the left. He reported seeing the turns stop for about 1 second, then while slightly off level, the turns began again, while drifting backwards to the east and losing altitude. He reported from his vantage point at the time it was occurring he did not discern the direction of the second turns, but a subsequent review of the video taken by the person on the lawnmower noted the second set of turns were to the right. He pointed out that the person on the lawnmower thought the pilot was putting on a show. During the entire time he saw the helicopter he reported the engine sound was constant with no variation.

¹ The Impact/Final Position location refers to the resting position of the helicopter provided by Mr. Hopkins.

He has a weather station located on the airstrip northeast of runway 15/33, at about the 400 foot marker, or about 555 feet south-southeast from the Impact/Final Position. On the day of the accident about 1224, or about 1 hour 9 minutes after the accident, the highest windspeed of 16 miles-per-hour (mph) was recorded. The same station recorded the wind at 2255 the same day at 197° at 5 mph.

On the day of the accident, an experienced ultralight pilot went flying from OP2 and reported the winds as being “squirrely.” He estimated at the time of the accident the wind gusting between 10 and 15 mph, varying between 5 and 15 mph.

After the accident he had a conversation with the pilot who relayed that he thought something had broken and that was the reason why he could not maintain control.

The digest was e-mailed to him for review on October 2, 2018. He replied on October 3, 2018, at 1159 EDT with comments that were incorporated into the narrative. The corrected digest was e-mailed to him on October 3, 2018, at 1322 EDT. He replied the same day at 1348 EDT with a comment that was incorporated. The corrected digest was e-mailed to him on October 3, 2018, and he was asked if he agreed with the digest. He replied the same day at 1356 EDT with, “Yes, thank you Tom Hopkins.”