



RECORD OF CONVERSATION

Timothy W. Monville
Sr. Air Safety Investigator
Eastern Region

Date: February 27, 2020
Person Contacted: Robert Blake
NTSB Accident Number: ERA19LA014

Narrative:

Federal Aviation Administration inspector Robert Blake contacted NTSB on October 23, 2018, at 0940 EDT. He called from [REDACTED]

He indicated that the pilot was flying in a northwesterly direction trying to execute a forced landing in a field, when the airplane collided with an oak tree. As a result, the pilot sustained a broken ankle. The tunnel for the pilot's feet was crushed on the left side.

He stated that the single-seat airplane was equipped with a Volkswagen engine. The left bank of cylinders valves had very large gaps. He would like to re-examine the engine after the airplane was recovered because of the resting position of the airplane. He did not see or feel any bent pushrods or pushrod housings.

When the airplane is recovered he will re-examine the engine.

The digest was reviewed with him during the phone call.



RECORD OF CONVERSATION

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Sr. Air Safety Investigator
Eastern Region

Date: October 31, 2018
Person Contacted: James Donald Hargrove
NTSB Accident Number: ERA19LA014

Narrative:

Mr. James Donald Hargrove was contacted by phone on October 23, 2018, at 1221 EDT. He was called at [REDACTED]. At the beginning of the call 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 was asked if he was available for a conference call with himself, FAA, and NTSB at 1300 hours. He indicated he would be available. He indicated that he holds a Sport Pilot certificate but does not have a FAA medical. He indicated that he was trying corrective action in-flight but that did not help. At 1300 hours FAA inspector Robert Blake was called and then Mr. Hargrove was called at [REDACTED] and conferenced in. Mr. Hargrove provided an e-mail address of [REDACTED].

At the beginning of the call at 1300 hours 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 holds a Sport Pilot certificate with airplane single engine land rating, certificate number [REDACTED] which was issued April 15, 2012. He does not hold a medical certificate, or a repairman certificate, but reported he should have submitted paperwork for his repairman certificate since he built the airplane. He operates the airplane with his driver license and reported prior to the accident, he was in good health. His address is [REDACTED] Tampa, Florida [REDACTED] and his date of birth is [REDACTED]. His total flight time is about 100 hours, with about 60 hours in the accident airplane.

He was asked if he was taking any medication for his injuries and he reported taking Oxycodone every 4 hours as needed for pain. He was also taking Gabapentin 4 (four) times a day, and Meloxicam 1 (one) time a day. He last took one dose of Oxycodone earlier in the day at 0800. He indicated at the time of the call he was not in pain, and he felt clear headed with sufficient memory of details of the accident flight. His injury consisted of a crushed/broken right ankle.

He built the airplane himself, which he finished in 2009. Since then, he has spent considerable time working on it, making it “flight worthy.” The airworthiness certificate was issued in 2016 for the experimental light sport airplane, which is based at Zephyrhills Municipal Airport (ZPH), Zephyrhills, Florida. The maximum fuel capacity in each fuel tank is 7.0 gallons. Each tank has its own shutoff valve, and he reportedly normally flies with both valves on¹. It is also equipped with a header tank that holds about 1 liter of fuel. Each main fuel tank feeds the header tank. His airplane was not equipped with any recording devices and he was not using his phone to record the flight. It is only equipped with 1 magneto. It was not equipped with a stall warning system, or fuel pressure gauge. It was equipped with exhaust gas temperature (EGT) and cylinder head temperature (CHT) probes on 2 cylinders of the Volkswagen engine. It is also equipped with an Arrow V throttle body.

He provided the following timeline for October 15, 2018 –

He did a complete preflight inspection of the airplane which included a check of the fuel, magneto, tires, brakes, and control surfaces. Sometime after 1200, he performed 3 full-stop taxi back landings at ZPH, adding that between each landing he performed an engine run-up. He then self-fueled the airplane adding 3 gallons of 100 low lead fuel into each fuel tank, that had about 1 gallon remaining, bringing the total fuel capacity to about 8 gallons. After fueling he did not check the fuel tanks for water or contaminants. He then intended to then fly to his sister’s house, fly over, then return to ZPH. He turned on the fuel pump, magneto, and started the engine, then taxied to the runway. He performed an engine run-up before takeoff and departed ZPH to the north² about 1400 EDT with the engine operating at 4,000 rpm³, and climbed to 1,000 feet mean sea level (msl). He then turned crosswind leg of the airport traffic pattern, climbed to 2,000 feet msl, then turned southwest flying in the direction of his sister’s house. He was airborne for about 5 to 10 minutes, and while flying at 2,000 feet msl and 110 miles-per-hour, with the engine at 3,400 (midrange), the mixture full rich, and the auxiliary fuel pump on⁴, the engine sputtered “a little bit.” He moved the throttle but the engine then quit and the propeller stopped. He pushed the throttle full in and verified the mixture control was full rich, and reported that had no affect. He also pulled the throttle back and forth but that had no affect. He then pulled the mixture control aft and when doing so the metal rod bent. Because the engine did not start he began looking for a field. He chose a field and made an orbit to land in the field but reported that he got too slow and stalled the airplane, resulting in the nose dropping. He was unable to recover and impacted a tree then the ground. He indicated that the primary error he did was to not remember to extend the flaps, thus his stall speed was higher. After coming to rest he climbed out of the

¹ FAA inspector Blake reported finding both valves in the “on” position at the accident site during his examination

² According to AirNav.com ZPH is equipped with runways 5/23 and 1/19.

³ He reported that maximum red line rpm is 4,200

⁴ Per the preflight checklist

airplane, and a bystander arrived and another person called 911 reporting the accident. He was ground transported by ambulance to Florida Hospital in Zephyrhills, Florida, where he was treated for his injuries.

He reported he was wearing the 3-point restraint, and his injuries consisted of bruised ribs and the shattered right ankle.

At the time the engine quit (about 1430) he did not notice any engine temperature readings, but he did notice that the oil pressure was good.

Following his narrative, FAA inspector Blake was asked if he had any questions. He asked:

Any recent work performed?

Mr. Hargrove indicated that he had installed a new propeller and had flown the airplane 4 (four) times since then. The propeller he installed was a Prince wood/carbon fiber 5446. He also changed the engine oil.

Any recent engine work performed?

He recently removed the spark plugs and installed aviation type spark plugs instead of the automobile type spark plugs with shielded ignition wires.

Any recent adjustment to the cylinder valves?

No. Mr. Blake explained that during his on-scene portion of the investigation, he noted a very large gap of the left side valves, while the valve gap on the right side visually appeared normal. Mr. Hargrove responded that there was plenty of power during takeoff, and no strange sounds. He also indicated that he ran the engine after changing the propeller and did not notice any engine issues. He also indicated that the engine was a new engine from Kessler in Arizona.

Any plans to recover the airplane so a more thorough engine examination can occur?

He does plan to recover the airplane to his hangar at ZPH and will let FAA and NTSB know when that does happens.

He was asked where the maintenance records were located?

He reported at his hangar at ZPH.

The digest was e-mailed to him for review on October 31, 2018. He did not reply, but included a detailed narrative on March 23, 2019, which outlines a description of the accident flight, and the reason why the engine lost total power.



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Timothy W. Monville
Sr. Air Safety Investigator
Eastern Region

Date: February 27, 2020
Person Contacted: James Hargrove
NTSB Accident Number: ERA19LA014

Narrative:

Mr. James Hargrove was contacted by phone on March 20, 2019, at 0941 EDT. He was called at [REDACTED]

He indicated that he was on Gabapentin for back pain which is a nerve cell signal depressant. He had been on it for about 3 months before the accident, and was taking 300mg four times a day. He started taking it in June or July 2018. Since he started taking the medication, he noticed his reactions were not what they previously were. He was on the drug during the flight which causes issues with decision making. He added that Sport Pilot warned about use of the drug and flying.

He indicated that the airplane has one fuel tank in each wing, which feeds fuel into a 1 liter header tank. A rocker-type switch that activates the auxiliary fuel pump to pump fuel into the header tank was installed in the center console ahead of the control stick. His normal policy when he turns the engine off is to turn off the auxiliary fuel pump. He recently installed a new propeller, and was continuing to check the propeller performance.

He indicated that prior to the accident flight, he took off three times, did a high speed pass, checked the climb rate of the new propeller to check propeller performance, then stopped for fuel. He talked with his sister, then fueled the airplane and as part of his procedure when securing the engine turned off the auxiliary fuel pump, but "did not recall turning on the auxiliary fuel pump" before departure. He departed from Zephyrhills Municipal Airport (ZPH), Zephyrhills, Florida, to the north, flew over the pattern then turned to the west, followed by the south. About 8 to 10 minutes into the flight, the header tank ran out of fuel. The mixture control which was tight was pushed full forward but the engine did not respond. In preparation for the forced landing he did not put the flaps down, and got too slow and stalled. He attributed the aerodynamic stalling due to failure to extend the flaps caused by his use of medication (Gabapentin).

He did have a friend (ron White) recover the airplane to his hangar. During postaccident inspection the header tank was empty. Also, impact damage was noted to the valve covers.

He added that in conclusion, he flew around the airport traffic pattern, stopped for fuel, “he forgot to turn on the fuel pump”, and did not properly respond to the loss of engine power.

He relayed that previous to the accident he had operated the engine with a full header tank and the auxiliary fuel pump off, and the engine quit about the same length of time as the length of time of the accident flight.

He indicated that there was, “no engine failure or malfunction.”

He indicated that he would finish the NTSB Pilot/Operator Aircraft Accident/Incident Report.

He was asked to provide:

1. Picture of the instrument panel
2. Provide NTSB Pilot/Operator Aircraft Accident/Incident Report

The digest was reviewed with him during the phone call.



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Eastern Region

Date: February 27, 2020
Person Contacted: Robert Blake
NTSB Accident Number: ERA19LA014

Narrative:

Federal Aviation Administration inspector Robert Blake called NTSB on March 20, 2019, at 1434 EDT, returning my call to him the same day at 0939 EDT. The phone number was not recorded.

He indicated that both fuel tanks were breached, and no fuel was found in the left fuel tank.

He indicated that he will research the pilot's reported use of Gabapentin and get back to me.

The digest was reviewed with him during the phone call.



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Timothy W. Monville
Sr. Air Safety Investigator
Eastern Region

Date: February 27, 2020
Person Contacted: James D. Hargrove
NTSB Accident Number: ERA19LA014

Narrative:

On March 23, 2019, at 1827 EDT, Mr. Hargrove sent NTSB an e-mail providing a detailed statement concerning a flight before the accident flight and also the accident flight. The e-mail statement is included below.

“On the morning of Oct 15, 2018 I got up at 7:30, had breakfast, took the Maloxicam and Gabapentin and left Tampa to drive to the Zephyrhills airport. I arrived at the airport about 9:30 am. The weather was clear and beautiful. The 4 knot wind was out of the north from about 10 degrees. I pulled the plane out of the hanger and did a complete preflight.

I checked the oil, checked the fuel tank drains for water, fuel level in tanks with a calibrated dip stick. I checked the main gear and the tail wheel for wear and function since I replaced the tail wheel a month ago to gain better traction. I checked the [propeller] integrity because I replaced a Tennessee wood [propeller] with a Prince wood/composite [propeller] a week earlier. After checking all [flight] control surfaces I concluded the aircraft was flight ready and climbed in the cockpit. I buckled up, put the headset on and turned the radio on. I closed the canopy and locked it down. I turned on the power and the fuel pump. After a few seconds I moved the mixture to full rich and turned the ignition switch. The engine started immediately. After a few minutes of warm-up it was running as smooth as glass. The quiet vibration free smoothness of this Prince [propeller] is amazing. I taxied to runway 5 and did a run-up before the threshold. All the instruments look good at 3600 rpm.

After announcing I taxied onto the runway and stopped on the numbers. I pulled back on the stick, released [the] brakes and [applied] full throttle. The [airplane] accelerated quickly and at 50 mph I eased forward on the stick to lift the plane off the runway. It climbed out at 75 mph, 1400 fpm and 3800 rpm. I reached pattern altitude, 1000 ft, well before the end of the runway. At runway's end I announced and turned cross wind. I flew down wind at 80 mph. Upon

turning base I reduced rpm to 2000, set one notch of flaps and adjusted trim for approximate glide. On final I set two notches of flaps and refined trim setting. As the mains [touched down] I [closed] the throttle, [eased] the tail wheel down and brake a little to make the [deleted extra "the"] first turn off. I basically flew the takeoff, pattern and landing routine two more times and then taxied to the fuel pumps. At this time I took the second 300mg gabapentin.

The flight ending with the emergency landing/crash began after refueling and receiving a call from my sister who lives in Zephyrhills on a golf course. She called just after I climbed into the cockpit and was preparing to start the engine. She said they were on the golf course and wondered if I could fly over. She had asked me in the past but I always gave her an excuse for not being able to. My sister lives about 8 miles south west of Zephyrhills. That requires flying at 2000 ft or lower to avoid [Tampa International Airport] air space. Bad choice, I should have declined her request. I buckled up, [donned] the head set, turned on the radio, started the engine and taxied to runway 5. After the crash when I was in the ambulance on the way to the hospital, with much anguish and anger I realized I had neglected to flip on the fuel pump switch after refueling. I announced and took off on runway 5. I turned cross wind and announced leaving the pattern. I climbed to 2000 ft and turned south west towards my sisters house. After [deleted extra "after"] about 5 minutes the engine sputtered a few times and [quit]. I checked the throttle and tried to restart. The engine turned over normally but did not start. I pulled the mixture back and pushed it forward. It pulled back lean as normal but when pushed it forward rich the wire push rod bent. The mixture control had been a little stiff but I thought it was the tension adjustment on the throttle quadrant. It worked fine under normal operations but could not handle the resistance created by pace and force applied in an emergency. At 2000 ft time is short. I spotted a large clear field on the left to land in. I was at about 1000 ft. I started a big right hand turn to line up with the field length wise. At about 200 ft msl there was a large oak tree just ahead and to the right. I had to circle that tree with a right turn to align with the landing field. Unfortunately I failed to deploy the flaps resulting with the right wing stalling and the plane heading straight down into the oak tree. The plane crashed through that oak tree so fast it was just a blur. The nose impact with the ground was probably greater than 50 mph. The nose was resting on the ground, smashed on the tree roots and the tail was high in the air leaning against the tree. My right foot, which was pushing on the right rudder bar, broke through the right side of the firewall on impact. I opened to canopy and climbed out of the plane after freeing my right foot. I learned later that my right heel had been crushed. The tenant in the house on the property heard the impact noise and arrived with his 4X4 ATV about the time I got out of the [airplane]. He asked if I needed help. I said yes, I think I broke my ankle and need to call 911. By the time we had driven the 300 ft to the house the EMS ambulance had arrived.

My assessment of the cause; PILOT ERROR. Failure to turn on fuel pump after refueling allowing the header tank to run dry. The fuel pump pulls fuel from two wing tanks up to a header tank located at the top of the fuselage just behind the firewall. Failure to deploy flaps during emergency landing.

I hope people aren't thinking that I'm using Gabapentin as an excuse for this accident because i'm certain the brain fog caused by this drug was a major factor in the events leading up to this crash.

Thanks for your [patience], Jim Hargrove"

The digest was cut and pasted into the NTSB Record of Conversation form.