



RECORD OF CONVERSATION

Timothy W. Monville
Sr. Air Safety Investigator
Eastern Region

Date: September 29, 2020
Person Contacted: Donald William Harper
NTSB Accident Number: ERA20LA322

Narrative:

Mr. Harper was contacted by phone on September 29, 2020 at 1136 EDT. He was called at [REDACTED]
[REDACTED] He provided an e-mail address of [REDACTED]

He indicated that he sustained a laceration above his right eye, 2 fractured vertebrae, and he fractured his nose.

He was then 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 advised that NTSB would redact any personal identifiable information in the document that would be released to the public.

He provided the following information:

Donald William Harper

[REDACTED]
Odenton, Maryland [REDACTED]

Phone: [REDACTED]

He was asked if he had his pilot and medical certificates with him?

He indicated that they were left in the airplane, and he did not recover them. He accessed his computer and noted his certificate number is [REDACTED] He held a commercial pilot certificate with airplane single engine land and sea, and instrument airplane issued February 25, 2010. On that date his certificate number went from his SSN to a unique number. He has owned the

airplane since 2006.¹ He has 1,100+ hours total time and about 600 hours in make and model. He indicated that he had some flight time in a Piper Arrow before he purchased the accident airplane when obtaining his commercial pilot certificate.

Was there any recent engine work performed?

No.

Was he medicated now?

He was taking a prescription dose of Tylenol.

Did he feel clear headed enough for the interview?

Yes.

Explain how the airplane was equipped?

It was equipped with a Garmin GTN650 Nav/Com/GPS, a Narco Nav/Comm, A Garmin GTX 345 transponder, a four-place intercom, and an Electronics International (EI), Inc. engine monitor. He linked the GTN650 to his iPad for use of ForeFlight app. His airplane was also equipped with aileron, flap and stabilator gap seals which were installed after he purchased it, and a 3-bladed propeller that was installed before he purchased it.

He was asked to describe in detail the flights related to September 20, 2020.

He indicated that he was a volunteer pilot for Angel Flight, and the mission that day was to transport an individual and her husband from Manassas Regional Airport/Harry P. Davis Field (HEF), Washington, District of Columbia, to Burlington International Airport (BTV), Burlington, Vermont. Eryka Xavier Da Silva was the Mission Assistant. She could not be the pilot-in-command (PIC) as part of the Angel Flight mission because she lacked the total flight time requirement. He and the airplane were based at Tipton Airport (FME), Fort Meade (Odenton), Maryland. While Ms. Xavier Da Silva lives near Carroll County Regional Airport/Jack B Poage Field (DMW), Westminster, Maryland.

FME to DMW

He indicated that he performed a full engine run-up before departure and there was nothing remarkable. He landed at 1205 and indicated that Ms. Xavier Da Silva was ready when he landed. He indicated that she was familiar with the Piper Arrow. They looked over the airplane.

DMW to HEF

With himself and Ms. Xavier Da Silva on-board, an engine run-up was performed before departure with no discrepancies reported. The flight departed under visual flight rules and they obtained their instrument flight rules (IFR) clearance while airborne. The flight was vectored by air traffic control and a visual approach to HEF was performed. He noted that there was a high-pressure area with a corresponding altimeter setting of 30.50 inches of Mercury. They landed early and taxied to the ramp and secured the airplane. They waited in the fixed base operator

¹ According to Federal Aviation Administration (FAA) records, although the Bill of Sale was not dated, it was recorded by the FAA on September 20, 2007. The FAA aircraft registration application completed by Mr. Harper was dated August 16, 2007.

(FBO) for the individual and her spouse to arrive and asked to have the airplane fueled (topped off). The individual and her spouse arrived in a Beech Bonanza and they took their luggage from the Bonanza to his airplane. He did a weight and balance and noted that the weight was near the maximum gross weight limit. They performed a full engine run-up before departure with no discrepancies reported.

HEF to BTV

The flight departed and was vectored to the Martinsburg very high frequency omni-directional range (VOR), then was cleared direct to BTV. The flight climbed to 7,000 ft mean sea level (msl), but because of turbulence and a headwind then climbed to 9,000 ft msl where the ride was smooth and the engine was happy. The flight landed uneventfully at BTV and he taxied to the ramp where the individual and her husband with their luggage were off loaded.

BTV to DMW

Prior to departure he discussed with Ms. Xavier Da Silva if she wanted to fly the return leg and whether she wanted to file IFR or obtain VFR flight following. She agreed to fly and would depart with VFR flight following. She performed an engine run-up before departure and all engine indications were in the green. The flight departed while it was still light, and good visibility. While en route to DMW, when the flight was about 30 miles from Wilkes-Barre/Scranton International Airport (AVP), Wilkes-Barre/Scranton, Pennsylvania, Ms. Xavier Da Silva said she was having trouble leaning the fuel to air ratio. He enriched the mixture control and watched the No. 2 cylinder exhaust gas temperature (EGT) decrease to about 1/2 scale. He then felt a vibration, and he announced he had the airplane for a positive exchange of controls and took the controls. He asked her to declare an emergency with air traffic control, and added full throttle. He added that he was playing with the mixture control when he noticed a very noticeable vibration. They checked for nearby airports on Foreflight and the GTN650 GPS but noted the ones closest to them were grass strips with short lengths. They thought AVP was the best suitable airport and he maintained best glide airspeed while the engine was operating on 3 cylinders. He spotted AVP when the flight was 20 miles away, and the controller informed them the lights were turned up and the runway end identifier lights (REIL) were turned on. When the flight was 8 to 10 miles away from AVP, the controller asked them if they wanted to perform an instrument landing system approach. About that time Ms. Xavier Da Silva advised there was no oil pressure, and he began looking for a forced landing location, later indicated there was mountainous terrain and urban areas near them. He also indicated there was only a "sliver" of a moon that did not add any illumination. When the flight was about 5 miles from AVP, he reported that the engine oversped to 3,000 rpm, which he attributed to be from the loss of engine oil and the propeller governor. He reduced the propeller control to high pitch/feather but there was no effect and it did not feather. They informed the controller that the flight was unable to reach AVP, which was repeated.

He turned towards a parking lot, and pulled the mixture control but the engine continued to windmill. He told Ms. Xavier Da Silva to be sure she was belted. He turned to the parking lot and noticed a large building between their position and the intended parking lot. He then noticed a residential street with no cars (Stone), and thought that was OK for the forced landing. He turned onto final for the street and lowered the landing gear, and then saw a flash of light due to the collision with powerlines. He did not recall any more of the crash sequence. He came to

when the airplane was coming to a stop. He told Ms. Xavier Da Silva to get out of the airplane, and he undid his and her restraints. They got out of the airplane on their own, and he indicated that as a result of the impact he banged his head and shin. When they were away from the airplane he looked back and did not see any fuel leakage, meaning he did not feel the tanks were breached. Ms. Xavier Da Silva who was not injured called for help and neighbors helped move him farther away from the airplane. He indicated that the police and fire departments soon arrived and he was transported to a hospital for treatment.

He was asked the following clarifying questions –

Did they get any fuel at BTV?

Yes, the fuel tanks were topped off. When Ms. Xavier Da Silva declared an emergency with FAA air traffic control they asked her the fuel remaining and souls on-board. At that time there was about 30 gallons of fuel remaining, and 2 souls-on-board.

On the three flights excluding the accident flight describe the leaning procedure?

During the climb he reduced the mixture control back to get a rise in EGT. During cruise he reduced the mixture to obtain peak EGT, then would increase (or enrichen) the mixture to 75 to 100° rich of peak (ROP) temperature.

Did he operate the engine lean of peak (LOP) or ROP?

ROP. He indicated that when operating LOP another instrument is required.

On the first 3 flight legs was there any problem with the engine?

No. If there had been a problem they would have noted the engine monitor flash; the engine was “performing wonderfully.”

What altitude was flown from BTV to DMW?

8,500 ft msl until the engine issue developed.

During the climb was the mixture control leaned?

Ever so slightly. They were operating well rich of peak EGT during the climb.

Was he was leaning the fuel to air ratio during the accident flight?

Yes.

At cruise how long before the mixture was leaned?

Once established in cruise flight with the throttle and propeller controls forward, the controls were adjusted to maintain 24 inches of manifold pressure and 2,500 rpm. Once stabilized, he would slowly move the mixture control aft (leaning the fuel to air ratio) 1/4 inch, then wait for the reading to stabilize, then would move it back another 1/4 inch. When the first cylinder peaks, he would enrichen the mixture to obtain 75° to 100° ROP.

Explain how Ms. Xavier Da Silva questioned the leaning?

She said it was not leaning properly and asked him if she should adjust. He told her no.

Was the leaning of the fuel to air ration done fairly soon after climbing to 8,500 ft msl?
Within a couple minutes, yes.

What caused her to say it was not leaning ok?
She was scanning the EL, and she noted they could not obtain the desired ROP setting of between 75°F and 100°F ROP.

When the engine issue first developed, what was the manifold pressure, rpm, altitude and airspeed?
The manifold pressure was between 21 and 22 inches of Mercury, the rpm was bout 2,500, the altitude was 8,500 ft msl, and he could not recall the airspeed but believed it was between 120 and 125 knots indicated airspeed.

What was the first thing he did with the mixture, propeller and throttle after the engine issue occurred?
He enriched the mixture, looked at the EI, and noticed the No. 2 cylinder EGT was low. He had the throttle control full forward, the propeller control at 2,500 rpm, and he did not touch the propeller control.

Did he enrichen the mixture to full rich or some when the engine issue first occurred?
Some.

Did he apply full rich on the mixture control when the engine issue first occurred?
He did not think so during the descent. During the descent he maintained best glide speed and moved the mixture control back, thinking the engine would quit. He moved the mixture control back to idle cutoff when the engine issue occurred.

What was the best glide speed?
100 miles-per-hour. That value was mph.

Was 100 mph the book value for best glide airspeed?
Yes.

What cylinder achieved the peak temperature first?
He did not recall.

Did he recall any of the EGT readings before the engine issue?
No.

Did the gear extend?
He did not recall seeing three green down and locked lights from the landing gears. He felt that even if the landing gears were not fully extended they would help cushion at touchdown. The controller who was likely a military controller asked them to check the gear being down. They kept the gear up to stretch the glide during the descent.

How was the landing gear kept up during the descent?

The gear was put out only when starting his turn for the forced landing. He did notice the gear unsafe light. The auto gear extender was disabled on his airplane.

The small lever between the seats what does it control?

The large lever is the flap selector and the small lever allows retraction of the landing gear uplocks and allows the gear to free fall.

Was he in the right seat from BTV to DMW flight?

Yes.

From his vantage could he clearly see the EI?

Yes.

Explain his usage of the terms propeller feathering on a single engine equipped airplane?

If the engine quits, he pulled back the propeller control to the high pitch/feather position and that position provides for the least propeller drag. With partial engine power (which was their situation), moving the propeller control to the high pitch/feather position was the wrong choice. When the engine oversped, he moved the propeller control to the rear but that had no effect.

Is he mechanically inclined?

Not really.

Is he familiar with the propeller control system?

Yes. The propeller governor controls oil pressure to the propeller.

He was given an overview of the status of the investigation and advised that the FAA inspector was on-scene well into the early morning hours. The airplane was recovered to a nearby facility and it was planning to be moved to an aviation salvage facility in Clayton, Delaware.

When was the engine overhauled last?

In 2005 or 2006 which was before he purchased it. The last annual inspection was performed on December 5, 2019. The tachometer time and engine time since major overhaul at that time were 5,291.4 and 1,169.3 hours, respectively. There was no record that the tachometer had been replaced between the annual inspection entry and the accident date.

Was there any cylinder work or top overhaul work done recently?

No.

Describe his restraint usage?

He was wearing the seatbelt and shoulder harness and they were snug.

Do you have any questions for me?

When can the personal effects (pilot certificate, medical certificate, pilot logbook, and iPad) in the airplane be released?

They generally are released if FAA/NTSB is present and have reviewed them. I will get with the FAA inspector when the wreckage is at the facility

When the airplane is moved to the salvage facility can he be present when the engine is examined?

The NTSB rules allow for people who have expertise to participate in the investigation. And although he has a very strong need/desire to see what caused the engine issue, he does not have the expertise needed to examine the engine. I would keep him informed of the findings, and to be transparent at the time of the call explained to him that the FAA inspector noted a cylinder displaced the crankcase, though at this time we did not know why that occurred and would likely be doing a full engine disassembly.

He was informed that as PIC at the time of the forced landing and owner of the airplane he and Ms. Xavier Da Silva were required to complete the NTSB Pilot/Operator Aircraft Accident/Incident Report. I would be sending the same report to both of them individually, and they had 10 business days from the date of receipt to complete and return. He was told that the report required some maintenance information but he said the maintenance records had been shipped to FAA inspector Gary Brown, but before shipping them he took a picture of the annual inspection entry in the airframe, engine, and propeller logbooks.

The call ended at 1238 EDT.

The digest was e-mailed to him for review on September 29, 2020. He replied on October 4, 2020 at 1405 EDT with, "Good afternoon. I have no corrections or comments to the narrative. Thank you." The corrected digest was e-mailed to him on October 5, 2020.



RECORD OF CONVERSATION

Timothy W. Monville
Sr. Air Safety Investigator
Eastern Region

Date: September 23, 2020
Person Contacted: Eryka Cristina Xavier Da Silva
NTSB Accident Number: ERA20LA322

Narrative:

Ms. Eryka Cristina Xavier Da Silva was contacted by phone on September 21, 2020 at 1352 EDT. She was called at [REDACTED]

At the beginning of the brief phone call she 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. She 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. She indicated that she had just returned home at 0700 and asked for the interview to be performed the next day. It was set for 1100.

On September 21, 2020, at 2024 EDT, she sent an e-mail to NTSB asking for the interview to be moved to 1400 hours, which was agreed. On September 22, 2020, at 1350 EDT, she sent an e-mail advising she was ready but wanted to have representation on the call. A conference call was set up through the National Transportation Safety Board (NTSB) Response Operation Center, and Ms. Xavier Da Silva and her attorney were provided the call in and passcode information.

On September 22, 2020, at 1405 EDT, a conference call was held with NTSB (Monville), Ms. Eryka Cristina Xavier Da Silva, and her attorney Mr. Gerard Uehlinger present. The phone number was [REDACTED] and the passcode was [REDACTED]

After introductions were made, Ms. Xavier Da Silva 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. She 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. She was asked if Mr. Uehlinger was her representative, and she said yes.

The group was advised that I had been assigned to the investigation, but because there are only about 50 NTSB investigators, and because there were no fatalities, and with Covid 19 pandemic, NTSB did not travel to the site but was investigating. I indicated that I was waiting to hear from the FAA inspector who went to the accident site, but he was on-scene very early into the morning on 9/21/2020. They were also advised that once the typed notes were finalized, they would be eventually put into the NTSB's public docket, but any personally identifiable information would be redacted.

She provided a home address of [REDACTED] Westminster, Maryland [REDACTED] Her date of birth is [REDACTED] She holds a commercial pilot certificate, certificate number [REDACTED] with ratings airplane single engine land, airplane multi-engine land, and instrument airplane. It was last issued on June 22, 2020, when she added the multi-engine rating. Her private pilot certificate with airplane single engine land rating was initially issued on March 24, 2018. She holds a 1st class medical certificate with no limitations issued March 19, 2018. She has a total flight time of about 300 hours, and about 10 hours total time in make and model.

She was asked to explain her relationship to the pilot-
She indicated they first met on the day of the accident (9/20/2020) about 1200 hours at the Carroll County Regional Airport/Jack B Poage Field Airport (DMW), Westminster, Maryland. They were part of Angel Flight Mid-Atlantic, and they do volunteer work. Their contact is Gretchen. Mission (13548) was assigned to fly an individual and her spouse from Manassas Regional Airport/Harry P. Davis Field (HEF), Washington, District of Columbia to Burlington International Airport (BTV), Burlington, Vermont.

She was asked to explain the flight-
She received the itinerary and was the mission assistant for the flight from HEF to BTV. She indicated that they picked up the patient (Kathleen) and her spouse on 9/20/2020 at HEF and flew them to BTV. After dropping the individual and her spouse off they intended to fly back to DMW to drop her off.

She was asked if the pilot owned the airplane?
Yes. She learned that in her conversation with him.

Who was the pilot-in-command (PIC) on the accident flight?
She was to a point. She and the airplane owner had briefed before takeoff that if there was a problem, he would take the controls. She was PIC until the issue occurred. At that time, she declared an emergency with Federal Aviation Administration (FAA) air traffic control and gave him the controls. He became the PIC at that time.

Please tell the whole story of the 1st flight leg?
Attorney Uehlinger chimed in at this point advising that there were several legs flown that day and provided data based on his research of Flight Aware indicating:

1st Leg FME to DMW – Departed FME at 1139 and arrived DMW at 1204
2nd Leg DMW to HEF – Departed DMW at 1248 and arrived HEF 1318

3rd Leg HEF to BTV – Departed HEF 1442 and arrived BTV 1817 where the patient and her husband were dropped off

4th Leg BTV to DMW – Accident Flight

Ms. Xavier Da Silva indicated that she had planned with the airplane owner of N3790T to meet at DMW at 1215, but she arrived there at 1200. She was there before the pilot had landed. After taxiing to the ramp, he went to the door of the fixed base operator between 1210 and 1211. Since they had not met previously, he asked her if she was Eryka. She said yes. Prior to that they had communicated by e-mail. Via e-mail he had sent her what he expected of her as the mission assistant. As mission assistant she was responsible for helping the individual and her spouse and helping the airplane owner. After meeting him they went to the airplane at 1240 hours local and the pilot did a preflight inspection. They filed an instrument flight rules (IFR) flight plan for the flight to HEF and waited for a wheels up time. The owner flew the airplane from DMW to HEF and landed early. The pilot filled the fuel tanks while at HEF, and she charged the iPad, looked at the route from HEF to BTV, looked at weather, and obtained food. The individual and her spouse arrived about 1400 and met the pilot. She (Ms. Xavier Silva) got the individuals bags and helped her to the restroom. She then helped load her into the airplane. The owner did the passenger briefing and she had them sign the waiver and asked them for a release of any pictures taken associated with the flight.

The owner was the pilot flying and departed HEF with an IFR clearance via Arsenal Five departure Martinsburg transition to MRB very high frequency omnidirectional range (VOR), direct to BTV. The filed altitude was 7,000 ft mean sea level (msl), but they had more of a headwind than anticipated at that altitude and flew higher which smoothed out the ride. The flight landed uneventfully at BTV, and she helped put the individual into a car with her daughter.

Mr. Harper started planning the route back and asked her if she wanted to fly on the way back to DMW. They talked briefly about her experience and she relayed to him that she had a checkride scheduled for October 14, 2020. The checkride was for her obtaining a flight instructor certificate. She asked of the need for eating and stopping along the way, and he said that was her call. She indicated that she had a heavy breakfast and while at BTV she had a protein bar and a cheese stick from the vending machine. They fueled the airplane, and the owner checked the fuel and oil. The owner asked her where she wanted to sit. Because she felt more comfortable in the left seat, she chose that seat. As part of the briefing she indicated that if there was an emergency, he would take the controls of the airplane.

The flight departed with VFR flight following from runway 33¹, and turned left to intercept the course while climbing to 8,500 ft msl. After about 1 hour into the flight she began using the mixture control to lean the fuel to air ratio, correlated with the engine monitor² and could not obtain the performance number of -85°F. The temperature was varying between -50°F to -20°F.

¹ According to ADS-B data, the first target at 2308:45 UTC/1908:45 EDT, was located near the approach end of runway 33 at BTV.

² According to the FAA airworthiness records, on December 5, 2019, an Electronics International, Inc., glass panel engine monitor with in-flight data, model CGR-30P was installed in accordance with Supplemental Type Certificate SA02283SE.

The flight continued about 30 to 40 minutes while she monitored the engine monitor and “gently leaning [the fuel to air ratio] trying to get [the] optimal number.” The airplane was flying normal and other instrument readings were ok, as well as the avionics which were ok. They kept talking and the owner noticed that she kept “working the mixture.” He told her that it takes a little longer to stabilize, and he then tried to lean the fuel to air ratio in an attempt to get to the optimal number. He could not obtain the optimal number, and on the 2nd attempt, the reading went to -270°F or -280°F, which was much higher than before. With her feet on the floor because the airplane was flying straight, she felt a vibration. She asked the owner if he felt that and he told her to declare an emergency. She called Wilkes Barre Approach and declared an emergency. The controller asked her what type airplane, the number of souls on board, and advised her the nearest airport was 20 miles ahead of their position. She added that at the time the engine problem first occurred, the GPS indicated the flight was 22 miles from that same airport. The owner took over communications and used the checklist. He put his hands on the control yoke and she said he had the controls, but she noted at that time that he was distracted. She told him again that he had the controls and she took the checklist from him. She helped him. She recalled that based on the engine monitor, they lost the No. 2 cylinder (there was no reading). While operating with 3 cylinders the runway lights at Wilkes-Barre/Scranton International Airport (AVP), Wiles-Barre/Scranton, PA were on. The controller advised them the runway lights were turned up for them. They were asked if they had the airport in sight. They replied yes, and the owner told her he wanted to remain high until over AVP, then he would descend. Because the engine monitor was on her side of the airplane, she told him the other cylinders were OK. She then told him they were losing the No. 1 cylinder. He maintained altitude or was at least not descending much, while she pointed out to him places to land. On her side (left) she had a good view but did not have a good view to the right of the airplane. She saw a highway, and about 2 minutes later they lost the No. 1 cylinder. At that point they executed the partial loss of engine power checklist which included advancement of the mixture control to the full rich position. They then started losing altitude, while the propeller continued to rotate and the mixture forward (full rich). With partial loss of engine power and following the loss of the second cylinder she told him to pitch down and the owner maintained best glide speed of 100 knots. Her next call to him was that the oil pressure which had been in the green arc was slowly dropping. The oil pressure went to 0, though the oil temperature was OK. She recalled seeing the engine rpm increase to 2,900, blinking red and the needle full deflected to the right in this CGR instrument, which the owner attempted to correct very gently by reducing power.³ He was able to get the rpm to 2,300, but she did not recall if it went below 2,300. She indicated that the engine rpm was not sufficient to maintain flight. After losing the second cylinder she began looking for a place to land while the owner flew the airplane. The flight was descending, and the owner added full power. She did not recall lights in the airplane. They both agreed the flight would not reach the runway at AVP, and she told him to fly making no turns. At first the airplane was descending very fast, and the airspeed was fast. She looked at him and noticed smoke and said “fire.” The corrective procedures included closing the vent, and the owner initiated an emergency descent, though she could not see evidence of fire. She re-focused on finding a place to land and the owner turned to the right. He told the controller that the flight was unable to reach AVP, and he said they would try to land in a parking lot. She said they had past that, and he then flew straight ahead. The airplane hit a transformer and the next thing she recalled was being on the ground.

³ According to the Airplane Type Certificate Data Sheet, the maximum red line rpm for all operations was 2,700.

The owner told her we need to get out of the airplane. She had trouble releasing the latch of her restraint and was fighting to open it. He rolled out of his seat onto the wing and she fell onto the wing. She then helped the owner away from the airplane. The police and fire departments came fairly fast.

After the second cylinder had failed, her primary focus was looking outside, adding that it was dark. She did not see any of the landing gear down and locked lights, and the landing gear did not auto extend. The owner at that time looked outside the airplane and said the landing gear was not extended.

She indicated that while in-flight they were communicating and could not figure out the reason for the oil pressure issue. Before the turn towards the parking lot radio calls were made.

As part of the preflight was the engine checked, and if so what was done?
He did not open the engine cowling. She did see him check the fuel and oil. He said the airplane was “looking good” and they then went inside.

Do you recall him saying anything about the oil quantity?
No I do not.

What was the planned flight duration?
2 hours 30 minutes.

Where on the instrument panel was the engine monitor and what was her leaning procedure?
It was not analog. She trained in an airplane that had the same type engine monitor, so she was familiar with it. The instrument shows a top “peak” line with a temperature above that. When leaning the fuel to air ratio slowly, she did so until only 1 cylinder hit the peak, then stopped leaning. She “added mixture” to obtain the optimal temperature. She also used the instrument to see the cylinders health and all engine instruments. She asked the owner what the optimal temperature was and he said -85°F from the peak. She enriched the mixture to attempt to obtain the optimal temperature.

What was the maximum optimal temperature you obtained?
She was able to obtain -50°F. When enrichening a little bit more there was no “happy medium.” All cylinder readings were OK. There was no indication of an issue or a cylinder would fail at that time. A couple of minutes later she felt a vibration.

Did the owner attempt to obtain the optimal temperature and could not?
Yes, he tried twice, but at the time he did not think that was an issue. On the second attempt the readings were high for peak temperature. She saw -270°F. That was too high, too much.

What did he or you do after that reading?
He tried to lean the mixture, and she felt a vibration right away. She asked him if he felt that and he said what vibration. She declared an emergency. He took over as the vibration started and felt the No. 2 cylinder fail.

What was the action at -270°F?

She does not recall if the mixture was leaned, because at that value the fuel to air ratio was too rich. They lost the No. 2 cylinder and then started losing the No. 1 cylinder.

Do you recall any cylinder head temperature (CHT) or exhaust gas temperature (EGT) readings?

She does not recall, but they were in the green. She switched pages on the engine monitor and was not sure why they were confused. The oil pressure at that time was still in the green.

Did positive transfer of aircraft control take place?

Yes, but with different words. She said, “your aircraft” and he replied “ok.” She then said, “you have the aircraft” and he replied, “I have the aircraft.”

Was the best glide speed of 100 knots maintained during the descent?

She did not look at the Pilot’s Operating Handbook (POH) but thought that was the correct best glide speed. He maintained it well. He kept that speed until he passed the parking lot. She noted he was moving the controls but thought there was no corresponding change in airplane attitude.

Did you hear the stall warning horn or feel airframe buffet?

No. The owner maintained best glide speed. When he turned to the right, as he was moving his arms it looked like he was struggling with the controls. She saw him moving a lot and he said at that time the landing gear and was looking outside. She glanced to the landing gear selector but the landing gear down and locked lights were not illuminated. He asked her about the location of the parking lot and she said it was behind them.

Explain the fire comment?

She did not notice or see any fire, but there was smoke and a smell of burning rubber. There was a lot of smoke coming from the floor area. She told him there was a fire and they needed to do an emergency descent. He added that it all happened so fast.

Explain what was done to eliminate the smoke from the cockpit?

The vents were closed and the heater which had been on was turned off. Also, the windows were opened. She told him to do an emergency descent, and he turned towards it. After opening the windows, the smoke wasn’t an issue. When she woke up he was shaking her telling her they needed to get out of the airplane because it could explode.

Did this airplane have the autogear extender installed?

She was not sure. She never reached for the lever to keep it up. They wanted no drag from the landing gear. When the engine rpm increased, there was no warning. She did not reach for the emergency gear extender. She was not sure what the owner did. They still had electrical power and the radios were working. The engine monitor was still on after getting out of the airplane.

How close to AVP was the flight when the airplane impacted the powerlines?

She knew they were close. When the emergency was declared, she knew where the airport was located but was not sure where it was exactly located at the moment of impact with the power lines or transformer. But she knew they were closer to it than when the emergency was declared.

Describe the restraint system she was wearing? How was it cinched tight, snug, etc.?

She was wearing the 3-point restraint. Hers was tight throughout the flight, then as the emergency she pulled her seatbelt as tight as she could.

What were her injuries?

She sustained an abrasion to her knee, her neck was stiff, and the left side of her jaw was swollen. Her right elbow was sore, and she had back pain. She did not have any broken bones. She also had a goose bump on her head, and she experienced headaches.

Was she medicated at the time of the phone call?

She was taking over the counter (OTC) pain medication Tylenol for pain.

I should have asked at the onset of the call, but do you feel clear headed for the interview?

Yes, I am.

If there are any clarification questions how should these be handled?

Mr. Uehlinger said the communication could be made directly to her. They were advised that typical clarification would be done by e-mail and I could send to both.

Is there anything you think is important that I have not asked?

No.

She indicated that she did want to be kept apprised of the status of the investigation.

Was she willing to make a written statement in her own words describing in detail what occurred during the flight?

No. She would prefer to use the NTSB Record of Conversation as her description of the events.

Do either of you have any questions for NTSB at this time?

No, none at this time.

They were advised that the NTSB Pilot/Operator Aircraft Accident/Incident Report is required to be completed in part by her because she was PIC at the start of the flight up until the cylinder issue developed. They were advised that it was required to be returned within 10 business days of receipt. The report should be sent to both of them.

The call ended at 1540 EDT.

On September 23, 2020, clarifying questions were sent to Ms. Eryka Cristina Xavier Da Silva and her attorney. The questions are included below:

1. You flew from Charleston, SC in the morning. Please clarify
2. On the 1st leg you said you were mission assistant. What airports was that for?
3. My notes reflect you had a checkride scheduled. Please clarify.
4. Who turned on the runway lights at AVP?
5. Please advise when if at all after the No. 2 cylinder failed was the mixture enriched. If so when and by whom and was it to full rich?
6. You indicated that the engine rpm increased to 2,900 and the owner gently reduced it and was able to get it to 2,300 then was unable to get the engine rpm enough to maintain flight. Did it drop below 2,300? Please clarify.
7. My notes reflect that someone said something about the landing gear and the owner at that time looked out and said the gear was not extended and you did not see any green lights for the landing gear. Please clarify who and when this was said along the flight.

On September 24, 2020, at 1451 EDT Mr. Gerry contacted NTSB via [REDACTED] and indicated that he had communicated with Ms. Eryka Cristina Xavier Da Silva and had the following response:

1. The reference to Charleston, South Carolina and the flight to HEF was a different pilot. Eryka Cristina Xavier Da Silva had nothing to do with the flight from Charleston, South Carolina to Washington, District of Columbia. When the airplane owner and her flew from DMW to HEF, the patient (Kathleen) and her husband along with the other Angel Flight pilot were at HEF. The other Angel Flight pilot waited for them to arrive and transferred the patient and her husband to them.
2. The flight from HEF to BTV. Because she did not have the total flight time required by Angel Flight to be pilot-in-command, she was the role of assistant.
3. Her checkride for a flight instructor certificate was scheduled with Harry Kramer on October 14, 2020 at Frederick, Maryland, KFDK Airport.
4. The runway lights were already on because it was past dusk, but the controller said they would turn the lights up for you.
5. Mr. Uehlinger asked to clarify if the question was asking about the second cylinder that failed or was it referring to the cylinder position (No. 2). He was advised the question was about the cylinder position. He indicated that the No. 2 cylinder was the first cylinder to have an issue. When that occurred, she immediately turned the controls to the owner who became the pilot-in-command (PIC) at that time per their agreement before departure from BVT. At departure from BVT she was in the left seat and was the PIC and remained the PIC until the first cylinder had an issue. Mr. Harper (airplane owner) became the PIC after the first cylinder issue and manipulated the controls. When the first cylinder failed, they executed the partial engine failure checklist. That checklist called for putting the mixture control to full rich, which it was done at that time.
6. She did not recall if the engine rpm went below 2,300. It dropped after the second cylinder failed and at that time, she began looking for a place to land while the owner was flying the airplane. She was focused on looking outside.

7. It was after the second cylinder had failed. Her primary focus was looking out the window. It was dark. She did indicate that none of the landing gear down and locked lights were illuminated. The airplane's landing gear did not auto extend.

Clarifying questions to her were sent via e-mail on September 23, 2020. The questions and answers were incorporated at the end of the document and/or also into the digest. The digest was e-mailed to her and her attorney for review on September 24, 2020. She replied on September 25, 2020, at 1157 EDT with comments that were incorporated into the narrative. The corrected digest was e-mailed to them on October 5, 2020.