



MEMORANDUM OF RECORD

WITNESS EMAIL

Lynn Spencer
Air Safety Investigator
Eastern Region Aviation

Date: February 3, 2022
Email Witness Report provided to NTSB from James Maly
Email: [REDACTED]
NTSB Accident Number: ERA22FA114

Narrative:

The following information was received at eyewitnessreport@ntsb.gov at 1701 EST on February 2, 2022:

Subject: Feb. 1 Cessna 310 Danville Crash

To whom it may concern,
I have an account of the Cessna 310 that tragically crashed yesterday, Feb 1.
I was on short final when I noticed the twin engine Cessna holding short of the runway. I proceeded to land and exited the runway at delta. While I was still on the runway he called that he was lining up and waiting on runway 2 and would depart after the Cherokee (me) cleared the runway. When I cleared at delta, I called that I was clear and taxiing back to the Averett ramp. I watched him as he lifted off the runway at 10:04am EST as I had cleared at 10:03. He climbed out past me. I remember thinking that the plane looked great. It was a normal takeoff and climb out, no smoke or fire visible, both engines were running and the plane looked and sounded healthy. He put his gear up and climb straight out over the end of the runway then executed a slight right turn and continued to climb. There didn't seem to be any issue with the plane or the pilot visibly. The pilot sounded normal on the radio when he made his call that he was departing after I exited the runway. Nothing seemed to be out of the ordinary to me during this stage.

Vr,
James

The following information was received in subsequent emails from Mr. Maly on February 3, 2022:

- There were no birds that I observed in the pattern or around the airfield.

- I just asked my friend if he observed any birds. He did a touch and go right after the 310 took off and he also said there were no birds he observed.



RECORD OF CONVERSATION

Family Interview

Lynn Spencer
Air Safety Investigator
Eastern Region Aviation

Date: February 3, 2022

Person Interviewed: Yoani Rosario (Mother of pilot) and family members

Contact # [REDACTED]

NTSB Accident Number: ERA22FA114

Narrative:

The following is a summary of a conversation that occurred with the individual named above:

Ms. Yoani Rosario, mother of the pilot, was interviewed in person on February 3, 2022, at 0900 EST. She provided a phone number of [REDACTED] and an email address of [REDACTED]. She was accompanied by other family members, including cousin Cerdi Beltre, who contributed to the discussion. During the interview, Jordi's stepfather, Dean Fariel, also contributed to the conversation. Participating in the interview was FAA Party Coordinator Steve Harness, and FAA Inspectors Jay Venable, Winston Chelf, and Daniel McSherry.

At the beginning of the interview, Ms. Rosario 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 agreed to the interview without representation.

Ms. Rosario stated that her son, Jordi, studied at the University of Central Florida (UCF) to go into management. At that time, he was not interested in becoming a pilot. She stated that his stepfather is a pilot for JetBlue, and Jordi said at the time he was not interested in becoming a pilot. After two years at UCF his stepfather gave him a "Discovery Flight" because he thought Jordi might enjoy the travel and have a great life as a pilot. About two weeks after the Discovery Flight, Jordi told his mother that he needed to stop some of his UCF classes because he was going to become a pilot. He began his flight instruction in Ft Pierce, Florida. Jordi mentioned to his mother that although he had thought about becoming a history professor, he did not want to accrue his flight hours by flight instructing because he didn't want to become a flight instructor. She encouraged him to not instruct if that was his preference and told him to just come live at home and "fly until you get your 1,500 hours." When the pandemic started, she went to Ft. Pierce to pick him up after he completed his training. He started applying for flying jobs to accumulate flight experience.

Ms. Rosario stated that he was working at another company, Vexcel, also flying aerial surveying in a Cessna 310, but he did not like how he was treated there, and Jordi was more interested in the quality of the experience rather than the money. He told her that he was enjoying the flying very much, but that he had other aspirations in

addition to being a professional pilot. He later told her that he had been speaking to Mr. Peter Makredes of SOL Aerial Surveys and had applied for a pilot position with SOL. Jordi arrived in Danville, Virginia, on January 25 and met Mr. Makredes in person. Ms. Rosario helped Jordi fill out his employment paperwork and felt that Mr. Makredes was very nice to Jordi and Mr. Makredes and her son connected well. For several days, Jordi flew the airplane with Mr. Makredes and explained to his mother that he was doing all the flying while Mr. Makredes showed him procedures and equipment. She asked how he felt flying the airplane and he responded, "Let me put it this way. Before, I was flying an Acura and now I am flying a Lamborghini. I prefer this company because all the airplanes are built after 2000. The other company was flying older airplanes."

FAA Inspector Jay Venable explained that these engines had accrued fewer than 25 hours. He explained the engine break-in period after Ms. Rosario asked him to explain it. She was concerned and I reassured her that we will be looking at everything. She had at one time asked Jordi about what he would do if he had an emergency, and he had responded that, "If I have an emergency, I will do exactly what I need to do." At his previous employer, when he was flying on Thanksgiving Day, he lost all electrical power and had no flaps and had to manually lower the landing gear. He told her that he had to turn something "55 times" and she was surprised that he had counted. That morning, she texted him at 8:46 am (she referenced her phone) because she felt concerned and sensed that he needed to talk to her, but he wasn't answering. She texted him to on that very moment because she had a feeling that she needed to talk to him, but he wasn't answering.

On Friday, January 28, Jordi texted his mom to say that he thought that Mr. Makredes wanted to fly with him one more day.

On January 31, the day before the accident, Jordi flew with Mr. Makredes then dropped him off at a friend's house and drove to Cary, North Carolina, to spend time with family. He recounted the loss of power experience, and the family was all shocked and almost didn't want to hear it, and he explained to them, "You cannot panic" and told them all of the things he was checking when that happened. He recounted the whole story and how he had landed faster than normal because he had no flaps, and that he had used lots of runway, but it was a long runway. Ms. Beltre added that Jordi had also mentioned that there was maintenance (an oil change) that needed to be done February 1 and he needed to give the key to someone and could not spend the night. They had wanted him to stay over, but he was texting Mr. Makredes and needed to be at the Danville airport the morning of February 1 for the maintenance.

The following questions were posed:

Q: Did Jordi do any flying before Vexcel?

A: He wasn't flying due to the pandemic. His mother told him, "You need to fly sometime, and we will pay for that, so that you stay current." She paid for a few flights at the L3Harris Flight Academy in Orlando Sanford International Airport, which is where he had his Discovery Flight. Mr. Fariel, Jordi's stepfather, who flies for JetBlue, stated via cell phone that Jordi was very responsible and conscientious and that he would not have pointed him in this direction had he not been very meticulous and smart. He stated that Jordi "took things very seriously and knew when he had to be serious." He had flown in the back seat during Jordi's Discovery Flight and stated that Jordi held his altitude within 50 ft and that both he and the instructor was impressed. After the flight, he asked Jordi if this was something he wanted to pursue and Jordi responded, "Yeah!" In training at the Aviator College in Fort Pierce, Florida, Jordi was flying a Piper Cadette or Warrior and then went to the Archer with the G1000 and then the Beech Duchess and Seneca for his multi-engine training. He was flying the Cessna 310 at Vexcel.

Q: What dates did Jordi work for Vexcel.

A: I will have to look at his logbooks. Their base was in Jacksonville

Q: Do you know how much Jordi flew with Mr. Makredes?

A: He told me “I don’t need training. I was flying exactly this same airplane before and this same job. I am going to be flying with him so that he can watch me fly. These are newer technology airplanes with more screens.” On Friday, January 28th at 1430 EST, he sent a text to his mother that said, “I think he wants to fly with me one day more.” He explained to his mother that he was flying the airplane Mr. Makredes was just watching him.

Q: Did you receive any text from Jordi on the day of the accident?

A: He returned to the hotel on Monday night. They needed to check the weather to know that they would be flying Tuesday. She asked him what time he worked and said that she was so glad that he spent time with his aunt and laughing. He thought he would return Thursday or Friday (February 3 or 4). She asked for pictures.

Q: Did Jordi have Foreflight?

A: Yes, and his email is [REDACTED]

The digest was e-mailed to her for review on February 5, 2022. She replied on February 28, 2022, with comments that were incorporated into the narrative. The corrected digest was e-mailed to her on February 28, 2022.



RECORD OF CONVERSATION

Friend Interview

Lynn Spencer
Air Safety Investigator
Eastern Region Aviation

Date: March 14, 2022

Person Interviewed: Jill Panica, friend of pilot

NTSB Accident Number: ERA22FA114

Narrative:

The following is a summary of a conversation that occurred with the individual named above:

Ms. Jill Panica was contacted by phone on March 14, 2022. She was called at [REDACTED] and provided an email address of [REDACTED].

Jill spent several days with Jordi immediately prior to the commencement of his training with Sol and was in touch with him during his training and on the day of the accident flight. I asked her to share with me how he was feeling about the start with this new employer, and whether he had discussed his new job with her. I also asked her about his general mood and sleep.

Jill stated that Jordi had mentioned that at his previous employer, things had been wrong with the airplanes, and they were always needing to be fixed. When he started this job at Sol, he flew with his boss for a few days, and he had not mentioned anything specifically about the airplanes. He seemed very excited and happy to have the job. He was also excited about the pay. He did not have anything bad to say about his first week with the company, and she and Jordi spoke every day.

Jill explained that they had first started speaking in October, and then met up in Boston just before he started working for Sol, and they had talked every day since Boston and were dating. Jordi was going to be 3 weeks on/3 weeks off and she was planning to visit him in Florida the first week in March. She last texted back and forth with Jordi from 7-8:24 am the morning of his accident. It was small talk about what he ate and music they were listening to. The night prior he had visited his aunt and he talked about that visit. Nothing stood out about the call. His state of mind seemed calm. He had previously shared with her that he was always very in control and calm when he flew. "He really zoned in and took charge when he was flying."

I asked if Jordi ever expressed any feelings of depression or indications that he considered self-harm. She responded, "Absolutely not. He was very much in control of his feelings and his body." His last few moments in Boston at the airport he had thanked me and explained he felt the happiest he had ever felt, he promised it wouldn't be the last time we would see each other. I asked if she was aware of Jordi using any illicit drugs, and she responded, "No." I inquired the last time she heard from Jordi the night before his flight and she said that he had texted her at 1:30 am;

however, she had been asleep. She assumed that he texted when he got back to his hotel room after visiting his aunt, and she typically goes to sleep early and wakes up early, which they did in Boston. She stated that the few nights before the accident, he went out to dinner with his new boss. Jordi had been impressed that someone so young was running a company.

The digest was e-mailed to Ms. Panica for review on March 17, 2022. She replied on March 24, 2022, at 1208 EDT with comments that were incorporated into the narrative and additions that were placed into a Memorandum for Record. The corrected digest was e-mailed to her on March 24, 2022.



MEMORANDUM OF RECORD

SOL Pilot Statement

Lynn Spencer
Air Safety Investigator
Eastern Region Aviation

Date: February 3, 2022
Person Interviewed: Jonathan Heggie, Aerial Survey Pilot
Email: [REDACTED]
NTSB Accident Number: ERA22FA114

Narrative:

Mr. Heggie provided an email address of [REDACTED] and a phone number of [REDACTED]

Mr. Heggie has worked for SOL since Nov 10, 2021. He works 3 weeks on/3 weeks off and he has been working this job and a different job on his weeks off; however, he is just now transitioning to only working for SOL. He stated that he preferred direct questions during this interview and preferred direct questions. FAA Party Coordinator Steve Harness, and FAA Inspectors Jay Venable, Winston Chelf, and Daniel McSherry participated in the interview.

Q: When did you arrive in Danville?

A: Peter Makredes, Jordi Adamez and Mr. Heggie arrived Sunday, Jan. 30. He flew N61RW and Jordi and Peter flew the accident airplane, N622QT. They flew in from Greenville, SC and were scheduled to do surveying from the Danville Airport until the surveying was complete. As soon as weather was optimal, he started flying (Monday, January 31). Jordi and Peter did surveying work together on Monday also. They flew different tracks in the same area, communicating on the radio during flights.

Q: Were you aware of any malfunctions or anomalies on the accident airplane?

A: "No"

Q: What time did you arrive in town Sunday?

A: "Mid to late morning"

Q: Where did you stay in Danville?

A: "We secured our hangar, fueled and cleaned the airplanes and they went in a crew car to the Courtyard by Marriott." His wife picked him up as she is traveling with him now for his work.

Q: Where is SOL based?

A: "Las Vegas"

Q: How many airplanes does SOL operate?

A: He believes that they have five airplanes.

Q: Where are you in your 3-week work cycle?

A: He is currently 2 weeks into his 3 weeks. He started in the Atlanta area flying in Tennessee and then went to Greenville and then to Danville, Virginia.

Q: Did you see Peter any more on Sunday after you arrived?

A: "Not that I recall."

Q: Was Sunday the first day you met Jordi?

A: "No, I met Jordi in Greenville. It was a couple days prior to coming here."

Q: What were your impressions of Jordi?

A: "He was a nice, young kid. Happy-go-lucky, and very happy to be working with this company. He has previous experience, and he had a lot of positive things to say about this company." He hears that a lot from other pilots who come to this company.

Q: How old are you?

A: "32"

Q: What is your flight experience?

A: This is his first commercial job. He earned his pilot certificates and ratings several years ago; however, the FAA's "1,500-hour rule" pushed him into another industry and he just recently decided to get back into flying. He has about accrued about 550 flight hours, and about 50 hours on the Cessna 310 and 320. I have around 120-130 hours flying the Cessna 310/320 series aircraft, and about 250+ hours of multi-engine time.

Q: How long is your average surveying flight time?

A: "It varies. Sometimes it's long, sometimes short. I have never had an 8-hour day. The current sun angle is about 4.5 hours per day."

Q: How well is your airplane maintained? Have you ever been asked to perform any maintenance on the airplane, and if the airplane does require maintenance, what is the process?

A: "Maintenance here is great. Everywhere I go I get compliments from A&P's who say the aircraft appears to be extremely well maintained. I have never been asked to perform any maintenance on the aircraft myself. I am not an A&P. To my knowledge, only A&P's perform maintenance on our aircraft. When something needs attention on the road, we schedule with the local shop wherever we are, and we give them the credit card. If there is an airworthiness issue, then we are grounded until it is fixed. I have never even been asked what the cost is, our company cares more about fixing the issue than what the cost is."

Q: Can you tell us about your flying Tuesday morning (February 1, 2022)?

A: Both airplanes were topped off the day before after we landed (Sunday); they arrived and do their preflights together; they met at the airport and coordinated where they were going to be in the air making sure to keep spacing. Jonathan took off first, perhaps 2-3 minutes before Jordi. There was another airplane that took off or landed in between their departures. They were in the run-up area together, so he assumes that Jordi did his run-up while he was doing his own.

Q: Was there anything noteworthy on your departure?

A: He recalled thinking, "Wow, there are no birds." On Monday, there had been geese off the departure end of Runway 2. On the day of the accident, they took off on runway 2 and he had expected to see birds because he had seen birds the day before and he's an avid hunter.

Q: What kind of birds to you hunt?

A: "Quail, pheasant, snow geese." As he departed, he heard Jordi mess up his radio call and was going to joke him about it later. Jordi had said, "Taking runway 2 for departure" then corrected himself and announced, "Lining up to wait on runway 2." Jonathan was looking down watching and could see another airplane on the runway either taking off or landing. He picked up flight following with Washington Center about 2000 msl on the departure frequency 124.05 and they gave him a squawk code. He was deviating for some traffic. He heard Jordi say his n-number on the frequency right about the time he was deviating. He was handed off to Center and did not recall when exactly he heard Jordi and stated that he heard only Jordi saying his n-number and then either the transmission cut out or Jonathan was changing to his frequency at the time he heard that.

Q: Did you train with Peter?

A: "I did."

Q: How many hours?

A: He flew with Peter enough to feel very confident flying the airplane. Peter made sure I was confident in my ability to operate the aircraft and systems as a single pilot. I am unsure exactly how many hours that was.

Q: How was Peter in the airplane?

A: He felt confident learning the systems he was shown. The management of the airplane that Peter showed him "fell very much in line with the POH and the way Cessna would want it done."

Q: Did you and Jordi have any discussions about his flying with Peter?

A: "Not that I recall. He was very excited to be signed off. He was excited to be on his own and with a good company." As far as operationally, he does not recall discussing any specifics.

Q: Does your airplane have an autopilot?

A: "Yes."

Q: Was there training on the auto-pilot?

A: "I reviewed the Autopilot supplement and was asked questions to make sure he understood it." We talked about run away trim and where to locate the auto pilot circuit breakers and service bulletins that had been put out in the past. "I was made to feel very comfortable." He has never been told that he is to engage auto-pilot at any specific time during the flight. He uses autopilot to get to and from the survey area, and typically hand-flies the aerial work. Auto pilot is viewed as a tool to assist us when needed. The choice to use auto pilot has been left up to myself as PIC."

Q: Did you have any personal conversations with Jordi? Did he share anything personal with you?

A: "Somewhat. NFL playoffs. Flight experience. we talked about his previous survey company, and he had several negative things to say. He said he was extremely grateful to get out of there. We talked about my kids and Jordi express an interest in having kids someday." He found him to be a happy person and he did not get any sense of anything unusual about him or his personality. "He seemed healthy and fit for flight." He has chair flown that whole day hundreds of times and he cannot pinpoint anything unusual although he really wants to."

Q: How do you start up the recording equipment?

A: "We initialize the camera system prior to starting the airplane. The aircraft run-up is for the aircraft systems only, not the camera. They need to do items before reaching the survey area, and it makes sense to do it on the ground. It wouldn't make sense to do it in the air. They do camera start-up/computer start-up. The laptop is

behind them and midpoint between pilot seats, and “it would be a challenge to do that from the air. I’ll throw the autopilot on and then turn back and press “start collection.” When transitioning from one survey to the next. Most pilots hit “start collection” on the ground or while initializing.”

He stated that Washington Center called later in his surveying flight the day of the accident and asked him about Jordi’s n-number. Peter monitors their flights from the ground, and he believed that Peter called in the ALNOT. The last he heard Jordi was when he heard Jordi say his n-number and he looked back when he heard him come onto the frequency as he was climbing out. “I attempted to reach Jordi at the beginning of survey time around 1030. I used air-to-air frequency 123.42.”

The digest was e-mailed to him for review on February 5, 2022. He replied on February 5, 2022, at 8:19 PM EST with comments that were incorporated into the narrative. The corrected digest was e-mailed to him on February 7, 2022.



RECORD OF CONVERSATION

Operator Interview

Lynn Spencer
Air Safety Investigator
Eastern Region Aviation

Date: February 8, 2022

Person Interviewed: Peter Makredes, Sol Aerial Surveys president and owner

NTSB Accident Number: ERA22FA114

Narrative:

The following is a summary of a conversation that occurred with the individual named above:

Mr. Peter Makredes, was interviewed via telephone on February 8, 2022, at 1100 EST. He provided a phone number of [REDACTED] and an email address of [REDACTED]. He was joined on the call by his attorney, Alan Farkas, who provided a phone number of [REDACTED] and an email address of [REDACTED].

At the beginning of the interview, Mr. Makredes 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 with representation.

Q: Are you a flight instructor?

A: "No."

Q: Are you a commercial pilot?

A: "Yes."

Q: Did Jordi's training/observation flights include any discussion or training on fuel management procedures?

A: "They did. We cover that a lot in cruise as we talk about fuel systems. You can manipulate the fuel system quite a bit in the 310, and when you are manipulating you are changing the fuel path to the engines and there are variables that you must take into consideration."

Q: How long did you discuss fuel management and management of the tanks?

"We do quite a bit. Perhaps 30 minutes per flight because it's a pretty important discussion, especially during the surveying portions of the flight. We are going to fly until we need to return to base for fuel or the weather no longer allows us to collect good imagery, so its super important to manage fuel and power settings. I am big on engine management as it relates to fuel burn. Given about 30 minutes per flight, and we had five flights, we likely spoke about the fuel tanks/fuel management about 2.5 hours."

Q: What tanks would you expect your pilots to be on for takeoff?

A: "I would expect the left engine to be on the left main tank, and the right engine to be on the right main tank for the first 90 minutes. I am very particular about this. I never say, "Left engine, main." I say "left engine, left main tank."

Q: Can you explain the preflight fuel testing/flow procedures?

A: "We do a crossflow test every flight. We make sure the fuel in each tank is good because all six fuel tanks are independent of each other and have their own fuel caps and fuel lines. The airplane has a total of six fuel tanks. During this test, we ensure that the fuel is good, and the fuel lines are pressurized with fuel. After startup and the completion of the initial checks we begin the crossfeed test: we switch the left engine to right main and right engine to left main and monitor fuel flow and observe engine functioning. Then we switch to left engine to left aux tank and right engine to right aux tank and again watch to ensure that the engine is stabilized. Next, we go to left engine, left main tank and right engine, right main tank and pressurize the fuel lines for the locker tanks. We select the forward tanks and engage the wing locker fuel pumps and the make sure that the lights illuminate to show that fuel is transferring into the main tanks. We ensure good fuel flow. When that is done, the engines are already set to their left engine/left main tank and right engine/right main tank positions for takeoff."

Q: How would you describe Jordi's reaction to the observation flights?

A: "He did pretty well. On the first day, there was quite a bit to learn. I really stress that I am only there to make them better pilots. I'm there to train him on our processes and make him better. He was nervous the first day. The planes have a lot of more advanced avionics that I find most pilots aren't used to using. I believe my pilots are only as good as what I provide to my pilots. I have a lot of avionics to support my pilots. The second day, I was amazed by how much he picked up. We flew in and out of the SFRA (Special Flight Rules Area) in Manassas, and we flew a SID (Standard Instrument Departure) and that SID requires an extra level of briefing. I was really impressed by Jordi and how he was taking notes after the flight."

Q: Did Jordi have a professional demeanor during flying?

A: "Yes."

Q: How would you describe Jordi's piloting skills?

A: "He was probably ready a few flights before I allowed him to fly alone, but I have a high standard. I don't think it's right to toss pilots the keys and say, 'Figure it out.' There is a lot of responsibility and I want to set them up for success as much as I can."

Q: Are your engine out procedures on your laminated checklist the same as those in the POH?

A: "Yes, there are verbatim from the POH. I don't want my pilots to have to go search through the POH for checklists, so I have that card. The card makes those processes right at hand so that his pilots don't have to look up the POH."

Q: I notice that the engine failure after takeoff checklist is different from the engine failure in cruise flight checklist. Do you discuss the engine-out procedures during the training/orientation flights?

A: "Yes. In cruise flight, if you lose an engine, you have more time."

Q: Do you discuss with your pilots at what altitude they should differentiate between those lists/utilize those different checklists?

A: "No. I haven't done this before, but it is worth a discussion for sure. The big difference I see between the two is an "After Takeoff Failure" is a "no-time" situation and a "In-Flight Failure" allows you more time to assess the problem and fix it without going to a takeoff configuration. So, the question becomes how much altitude do you need to change an engine out from a "no-time" situation to something that you can take a moment and diagnose before making significant changes?"

Q: Is there any situation that you are aware of where the checklist calls for the fuel selector to be changed to crossfeed from the opposite tank during normal flight?

A: “No. I am not aware of a specific checklist item in the Normal Operations Checklist, but you could crossfeed in cruise to correct a fuel imbalance during normal operations. Engine fuel flows can vary at the same power setting and the heater takes fuel from the right main tank crossfeed line, so it is not uncommon to have slight fuel imbalances between the left and right.”

Q: After an engine failure?

A: “No. The only reason you would crossfeed is if you had a fuel imbalance or if you are doing a crossfeed test. The checklist for ENGINE FAILURE IN FLIGHT says “Fuel Selector – AS REQUIRED” so I guess it does imply you could select a crossfeed position. However, after an engine failure you are to land as soon as practical so unless you are over uninhabitable terrain, you probably wouldn’t be crossfeeding. In most situations you should have enough in the operative engines main fuel tank to land without switching.”

Q: Do you know the approximate weight of the airplane with the surveying equipment and fully fueled off-hand?

A: “I cannot tell you right off the top of my head, but I can draft one. I know it will be under max gross and within CG.”

Do you have any questions/comments for me?

“The crossfeed test is part of the taxi checklist. It’s at the end of the taxi check. You don’t start to taxi until you complete the test, and it sets you up for the run-up. You want to do the run-up in the state you are going to takeoff in, so you run-up with the fuel tanks supplying to their respective engines. I don’t have very high regard for Jordi’s previous employer. They told him in his interview that “you’ll get so good at running this airplane that you will be able to do the runup while taxing.” One of the things we discussed was that you do NOT do that. You won’t do anything on the move. Jordi had already learned that was not alright and it deserved re-emphasis. I would never tell my pilots to do it “on the fly.” Same thing with the mag check. Pretty common to see people check the left magnetos at the same time then the rights, and that is not something we do. We do one at a time. It’s deliberate.”

The digest was e-mailed to Mr. Makredes and his counsel for review on February 8, 2022. He replied on February 9, 2022, at 1801 EST with comments that were incorporated into the narrative. The corrected digest was e-mailed to him and his counsel on February 10, 2022.



MEMORANDUM OF RECORD

SOL Pilot Statement

Lynn Spencer
Air Safety Investigator
Eastern Region Aviation

Date: August 19, 2022
Person Interviewed: Jonathan Heggie, Aerial Survey Pilot
Email: [REDACTED]
NTSB Accident Number: ERA22FA114

Narrative:

Mr. Heggie was called for some follow-up questions on August 19, 2022 at 1404 EDT. He provided an email address of [REDACTED] and a phone number of [REDACTED].

I inquired about the taxi and engine run-up. Mr. Heggie stated that they taxied to the approach end of runway 2 in trail of each other and he was in front of Mr. Adamez. As they approached the run-up area, Mr. Heggie positioned his airplane at about a 45° angle to incoming airplanes (toward the wind), and Mr. Adamez stopped for his run-up while still on the taxiway heading facing the incoming traffic to the runway.

I described where the relative wind was to their respective positions, and he stated that his own exhaust would not have been reaching Mr. Adamez from his position, and it would have been more likely that the exhaust from Mr. Adamez's airplane would have been coming toward his airplane. He stated that if you had a window open or the door open you might get exhaust in the cabin, and that the heaters were super-warm on the ground so it would not be unusual to have a window or door open. He stated that he believed he could have gotten his own exhaust in calm winds. However, he did not have an electronic CO detector that day. (They have since installed them in all of the airplanes and he has seen the CO numbers increase when in a stationary position with the doors and/or window open.)

I asked how long they were taxiing and performing their run-ups and he stated about 3-4 minutes of engine start and taxiing, and then about 4-6 minutes for the run-up, so each was in their airplane with the engine started for about 8-10 minutes before takeoff.

The digest was e-mailed to Mr. Heggie for review on December 23, 2022. He replied on December 23, 2022, at 2100 EST with comments that were incorporated into the narrative. The corrected digest was e-mailed to him on December 27, 2022.

RECORD OF ☐ VISIT ☐ CONFERENCE OR ☒ TELEPHONE CALL		TIME 1405	DATE 2/3/2022
NAME (S) OF PERSON (S) CONTACTED OR IN CONFERENCE AND LOCATION		ROUTING	
		SYMBOL	INITIALS
Barry Cardwell			
SUBJECT Witness N622QT			
DIGEST			
Inspector spoke with Mr. Cardwell who notified the state police that he observed an aircraft appearing to be the aircraft accident. He stated, to the inspector, that he was working down the road on a tractor hauling brush when he saw the aircraft. He stated he looked up and saw an aircraft upside down. He only got a glimpse of it and he only saw the aircraft for about a second. He didn't hear any noise coming from the aircraft since he was operating a tractor at the time. He stated the aircraft was south of the fairgrounds coming down. He said it looked like a great big wing. He didn't observe the aircraft's windows, landing gear, and couldn't see any engines. He stated it looked dark and coming in flat. He stated the aircraft was not in a turn and not spinning; it looked like it was coming in flat and falling out of the sky. He stated he didn't have any additional information to provide. The inspector asked why he didn't notify anyone regarding the aircraft. Mr. Cardwell stated, "I didn't think anything more about it."			
CONCLUSION, ACTION TAKEN, OR REQUIRED			
DATE 2/4/2022	TITLE Aviation Safety Inspector	SIGNATURE Stephen Michael Harness Digitally signed by Stephen Michael Harness Date: 2022.02.04 14:04:30 -05'00'	

RECORD OF ☒ VISIT ☐ CONFERENCE OR ☐ TELEPHONE CALL		TIME 1440	DATE 2/3/2022
NAME (S) OF PERSON (S) CONTACTED OR IN CONFERENCE AND LOCATION		ROUTING	
		SYMBOL	INITIALS
Jonathan Heggie - pilot of N61RW Cessna 320			
Aerial Survey Pilot employed by SOL Aerial Surveys			
SUBJECT Conversation regarding his employment with SOL Aerial Surveys/Interaction with			
Jordi Adamez			
DIGEST			
While the FAA was interviewing personnel at the Danville Regional Airport FBO, it was discovered that an additional aircraft, N61RW, a Cessna 320, was also at the FBO at the same time and accompanied Jordi Adamez in the FBO. N61RW is an aerial survey aircraft and the pilot, Jonathan Heggie, was identified as the pilot for that aircraft. Mr. Heggie was asked to meet with the FAA and NTSB for an interview. Mr. Heggie stated he worked for SOL Aerial Surveys and this was his first commercial job as a pilot. He has worked for this company since November 10, 2021 as a part time pilot. He currently works for this company on a 3 week on and a 3 week off schedule. He is going to begin working for this company on a full time basis. Mr. Heggie arrived on Sunday, mid to late morning. He operated N61RW and Peter and Jordi arrived in the other aircraft, N622QT. Both aircraft departed KGYH, Greenville, SC before arriving at Danville (KDN). He stated he is staying in Danville until the aerial project is complete. He flew a mission on Monday, January 31, 2021; Pete and Jordi flew a mission as well. Both conducted aerial surveys but on different tracks. Mr. Heggie stated they do utilize a company frequency to speak to one another for logistic purposes (in case they have overlapping aerial tracks). On Sunday, they secured the aircraft in the hangar, fueled, and cleaned the aircraft. He stated Pete and Jordi took the crew car to the hotel. Mr. Heggie's wife accompanied him in Danville so he didn't see Pete or Jordi that evening. Mr. Heggie stated he had met Jordi in Greenville a couple of days prior to arriving at Danville. He said Jordi was a nice young kid who was happy to work for this company (SOL Aerial Surveys). According to Mr. Heggie, Jordi only had positive things to say about the company. Mr. Heggie said the aircraft at SOL are maintained great. If he becomes aware of a maintenance issue, he notifies Peter and it gets repaired. He stated Peter has never told him not to fix anything that isn't operating and has never asked the cost for any repairs. On Tuesday morning, Mr. Heggie departed first, approximately 2-3 minutes before Jordi departed.			
CONCLUSION, ACTION TAKEN, OR REQUIRED			
DATE 2/4/2022	TITLE Aviation Safety Inspector	SIGNATURE Stephen Michael Harness	

Digitally signed by Stephen Michael
Harness
Date: 2022.02.04 15:40:02 -05'00'

They met at the airport prior to departing. Mr. Heggie departed runway 02 at Danville (KDAN). He assumed Jordi performed the run up of his aircraft since he was in the run up area at the same time as he was. Mr. Heggie stated when he departed, he didn't observe any birds. There were some on the previous day, snow geese at the end of runway 02. He heard Jordi make a radio call that he was "taking" runway 02, then he stated, he was lining up and waiting on runway 02. Mr. Heggie was going to give Jordi a hard time about that radio call (jokingly). Mr. Heggie stated he picked up flight following after switching frequencies from unicom to departure (Washington Center). He believed he heard N622QT on departure frequency identifying his tail number. The inspector inquired about and it was determined that Washington Center did not receive any calls from N622QT on this date and time. Mr. Heggie felt confident learning the system and the training from Pete was in line with the POH. Mr. Heggie spoke with Jordi on one occasion where Jordi stated he was excited to be on his own. He stated Jordi never discussed anything specific about his training with Pete. Mr. Heggie was familiar with the S-Tec auto pilot system and how to disengage in case of runaway trim. However, he couldn't recall if they had practiced this in the aircraft. He has never been told to engage the autopilot during aerial surveys but he typically used the autopilot while enroute to the survey areas and on the return flight. He would normally hand fly during the surveys for better photography. He stated he and Jordi attended the same flight school. He stated Jordi never spoke about anything personal except the NFL playoffs, as well as asking about his children. Jordi stated he wanted kids one day. Jordi and Jonathan texted the morning of the accident but only about the weather.

RECORD OF ☒ VISIT ☐ CONFERENCE OR ☐ TELEPHONE CALL		TIME 2/3/2022	DATE 1100
NAME (S) OF PERSON (S) CONTACTED OR IN CONFERENCE AND LOCATION		ROUTING	
		SYMBOL	INITIALS
Nishad Menon - Assistant FBO Manager/Line Service			
[REDACTED]			
SUBJECT N622QT @ FBO			
DIGEST			
Inspector spoke with Nishad Menon at the Fixed Base Operator location at the Danville Regional Airport (KDAN) on February 3, 2022. N622QT and the pilot, Jordi Adamez, were at the FBO on the day of the accident. Mr. Menon stated both N61RN and N622QT arrived on Sunday, January 30, 2022. Jonathan Heggie was the pilot for N61RN; Jordi Adamez and Peter disembarked N622QT. He didn't see who was operating from the left seat. He stated both aircraft were aerial survey aircraft. Both the pilots and Peter left the FBO after they closed up and wiped down the aircraft. Mr. Menon did not work on Monday but believes both aircraft flew on that day. On Tuesday, Mr. Adamez arrived at the FBO, followed by Mr. Heggie shortly afterwards. Mr. Menon stated Jordi appeared to act normal; he did not observe anything out of the ordinary. Mr. Adamez and Mr. Menon held normal conversations. Mr. Menon was on the ramp when Mr. Adamez taxied out and departed runway 02. Mr. Menon possessed a handheld radio which was tuned to the unicom frequency at the time. He heard Mr. Adamez communicate on the radio. Mr. Adamez announced his taxi, his departure from runway 02, and his departure to the southeast. Mr. Menon did not hear anything after the last call from Mr. Adamez. He also did not observe the aircraft since he was working on the ramp at the time. He stated the radio calls made by Mr. Adamez sounded normal with no distress. The inspector asked about fuel receipts for N622QT. Mr. Menon provided two separate fuel sheets. One for 1/30/2022 and one for 1/31/2022. N622QT received 33.6 gallons of 100LL on 1/30/2022. N622QT received 65.4 gallons of 100LL on 1/31/2022. Titan is the name of the fuel supplier for this FBO. Both the fuel truck and the fuel farm's fuel was tested immediately after the FBO received notice of the aircraft accident. Mr. Menon provided the results of the tests. Both the fuel truck and fuel farm showed "clean" and "bright." Mr. Menon also provided a statement.			
CONCLUSION, ACTION TAKEN, OR REQUIRED			
DATE 2/4/2022	TITLE Aviation Safety Inspector	SIGNATURE Stephen Michael Harness	

Digitally signed by Stephen Michael
Harness
Date: 2022.02.04 14:49:50 -05'00'

Personal Statement – N622QT

Date: February 1, 2022

Location: KDAN

Name: Nishad Menon

Position: Assistant to FBO Manager

At approximately 0815, the pilot for N622QT, Jose Adamez, arrived to the FBO lobby to begin flight planning and informed me that he wanted to wait on improved sunlight before retrieving his aircraft from storage. During this time we engaged in friendly conversation where he relayed to me that it was his first week with Sol Aerial Surveys. He seemed to be in a pleasant mood. About 15 minutes later, the second survey pilot for N61RW, Jonathan Heggie, arrived to the lobby and both proceeded to plan their flights for the day.

Around 0840 they asked to have both their aircraft pulled from storage out of the Averett hangars on the north ramp. With assistance from Mark Ballard, Dir. of Maintenance, we transported the pilots to the hangar and pulled both aircraft out of storage with no issues. Both pilots were left to conduct preflight inspections on their respective aircraft. Shortly after 1000 N622QT successfully taxied to and departed Runway 02. The last communication heard over the Unicom frequency was that he had departed to the southeast.

  2/3/22