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Sr. Air Safety Investigator
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All persons listed were interviewed by NTSB personnel:

The following is a summary of conversations:

BEN REED (CO-PILOT)

Mr. Reed stated that he was hired at the beginning of March and was just serving the position of a “support pilot.” He worked at Ameriflight before flying the Metros. He had flown with the pilot for 5.8 hours the day prior to the accident. His roll in the flights had been reading the checklists to the pilot, making radio calls, and helping with navigation. He stated that during the accident flight, he went through the checklists and they followed all the checklist parameters. When asked to elaborate, he did not recall any specifics but stated that everything seemed like every other flight. He commented that they used a one-sheet checklist.

Mr. Redd stated that on the morning of the accident, the pilot started the left and then the right engine. He commented that on start-up the pilot turned on the generator to “share the load” but didn’t know what load that referred to except that it was a “power load” for the airplane to operate. He just said that the lights illuminate and the load is split.

Mr. Redd stated that after departure, the pilot configured the airplane for a climb to 11,000 ft. He stated that he received an “RA Fail” and then a pitch-trim failure warning. All the screens went blank and he knew there was a loss of electrical. He and the pilot did not discuss the failure because he instantly began to look for the checklist for a “complete electrical loss.” He could not find that checklist or anything about an electrical failure. They used their iPhones and iPads to locate the airport. They located the airport, so he found the manual gear extension checklist.

The communications radios were off so they took an ear muff off to speak with each other. The pilot did not attempt to lower the flaps because he knew there was an electrical failure. The pilot pulled the landing gear circuit breaker and then pumped the gear down for about a minute and they could see the main landing gear (the handle still had pressure). At touchdown, the right landing gear collapsed followed by the left and nose.

KENNETH FIGG (PILOT)

Mr. Figg stated that he had amassed about 11,000 hours of flight time over the last 35 years. He started flying for AV Center about 1.5 years prior to the accident. He primarily flies a Cessna Citation XLS, a Citation Ultra. He has about 200 hours of piloting the KingAir which was acquired in both the accident airplane and in N155AV. He received his initial flight training about 13-14 months before October 2023 which is when he did his recurrent training. He stated that it was done in Wichita at CAE, but then said it was actually Flight Safety when I asked him.

Mr. Figg stated that he flew the airplane the day before the accident a total of 5.8 hours. The last leg of the trip was from Colstrip, Montana where he dropped off passengers and repositioned the airplane to Billings, where he and the co-pilot spent the night. [Colstrip is 80 nm east of Billings]. The morning of the accident, when they arrived at the airport they realized that Edwards Jet Center had not refueled the airplane. As the airplane was refueled, he performed the preflight inspection. Then he went inside and paid the bills as the co-pilot got ATIS and their clearance (inside the airplane). They planned for a quick 17 minute trip back to Colstrip to pick up the passengers at 8am. They were not hurried and made a normal start.

When asked numerous times to explain the start-up procedures this is what Mr. Figg stated: He performed the before-start checklist. He noted that as a company ritual, on odd days the pilots start the left engine first, and on even days, the pilot starts the right engine first. On the day of the accident, he started the left engine first. He first brings N1 to 12% (about 7-8 seconds to stabilize) and then brings the condition lever up to high idle (about 52%). Then he will “place” the “starter to generator,” which is done by resetting the generator by pressing down on the switch. He described that the switch has three settings.

He then reached up to the volt meters and confirmed there were 28.5 volts. He waited until the loads were below 50% (usually waits until 40%) and then he started the right engine with a cross-generator start. He does this by putting the “start switch back to gen,” and the generator “kicks offline.” He then puts the condition lever back to reach 12% N1. He made sure that the gauge showed 28 volts and that the left loads were 60% (he waited until they dropped). Then the right generator is on and he makes sure there is a parallel load. He does this on the panel above his head where he pushed on the knobs to show volts. He releases the knob to show amps. The battery was 23 volts. He then turned on the bleed air to heat the cockpit with the temperature on automatic.

When he verified there were two good starts he then reached over to power-on the avionics and set the temperature control to automatic. After start, the engines are at idle and the automatic ignition is on. When he taxied, he advanced the power and the automatic ignition goes out followed by two auto feather lights. He does not do runup checks. When asked about this and specifics, he said he would cycle the propeller when taxiing to the runway. When asked about when he would check the annunciator lights, he said he uses a press-to-test to get all red lights. I asked if there was any test for the green lights and he could not recall but then thought one button lit them all up.

On departure, he waits for 400 ft-lbs of torque and looks for the ignition lights to go out and then watched for the gen to go out. When asked to clarify three times he stated that he meant the governor, not the generator. He then said the autofeather lights were on. When the airplane was at 400 ft agl, he retracted the landing gear, put the yaw damper on and made a right turn to 310° (as instructed by the tower) with the intention to climb to 11,000 ft. He noted that they were in Navigation mode on the G1000. They were going direct to SHERY waypoint [location 55 nm east of the airport]. The pilot then stated the airplane was about 15 miles southeast of the airport at 10,600 ft when there was a “RA Fail” message followed by a PT Fail” amber light. The screens went blank and he made a “left turn” to the airport entering on a 45° for the traffic pattern to 10L. He “shut everything off,” and asked for the manual extension checklist.

The airplane was descending heading back to the airport and he was running the checklist for manually extending the landing gear. He saw the tower gave a green light and he opted to just make an extended base leg for 28R. He performed a “Hot Five” check which he stated consisted of 2 pitots, two statics and fuel vent and stall warning heats. He turned all electrical off. He pulled the circuit breaker replay on the base leg and took the emergency bar and gave it about 30 pumps (he estimated about a minute) until he felt pressure (when turning base to final) and saw the left gear outside the window. He noted that in training he had only performed the manual extension when he could confirm that three green lights were illuminated indicating the gear was down.

He brought the power to idle anticipating to float with no flaps (how it works in the simulator). One propeller started to go into beta and the landing gear buckled. There was smoke from the sheet metal against the asphalt. He turned the master and bleeds off as well as the temp controller. He then turned the battery off.

When asked if he performed any other checklists during the flight he stated “no,” there are no electrical checklists that he knows of.” They use the laminated one-sheet checklist. They do not charge the battery at night.

He could not remember if he did a reset. When asked what type of reset he went back and forth between start and generator. I asked him to describe the switch that he would need to do for a reset and he stated it was the silver switches (without a gang-bar). They have three settings the up position is for the generator and then you press down to reset the generators. We discussed back and forth as to what the switch under the gang bar were and he finally said those are only for starting. I asked if he turned those off and he said no that he only turned the battery power off. When asked why, he said he was flustered but usually does use the gang bar to turn them all off.

At the start of the conversation, the pilot stated that he did not recall resetting the generators but had told someone immediately after the accident that he did. He said people have told him since the accident that he forgot to use the starter switch, but stated that he followed the checklist and thinks both generators failed.

KEVIN CARSON (KING AIR ACADEMY)

If the generators were offline for more than 25 minutes, including two engine starts and possibly the use of electrical heating, the battery state could have become critical. Similar situations have occurred when pilots unintentionally moved the starter switches upward instead of the intended auto-ignition or ice vane switches, resulting in dual generator failures. In simulator training, playback often shows pilots continuing flight for 15–18 minutes before complete G1000 shutdown due to power loss.

The manual gear extension with one pilot takes a lot of pumping. We train to stabilize the aircraft (since you have no AP), pump x number of times, look up and continue to fly the aircraft, pump some more, look up again, and keep doing it until you feel the distinct pressure change in the pump handle. The only thing that affects a total electrical failure and a manual gear extension is you will not see 3 green lights, you will have to rely on the pressure change in the handle.