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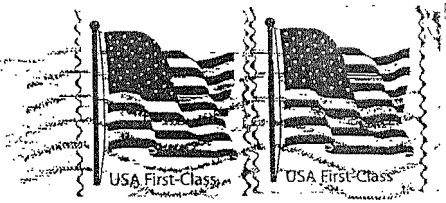

NTSB

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Ed Malinoski and NTSB,

I watched the report to the board on the crash of DHC-6 N203E, and have a few questions and comments;

The report mentioned that the pilot did not dip the left wing 5 degrees into the good engine, per single engine procedures. I believe that it is also worth mentioning that the aircraft was climbing to clear trees and wires in the configuration that he was maintaining and that he was following the right hand airport traffic pattern in order to return to the runway. At that point, after feathering the prop, he may have been confident that he was going to be able to return to runway 24. That is a fact of the flight that should have been included as a possibility.

According to official statements, the 2 witnesses nearest the crash, (one inside the house that was almost struck, approximately 10 meters away, and the one in the pool, approximately 70 meters from the impact) both said that they heard the good engine go silent several seconds prior to impact. That is a factor that could be significant as to why the aircraft was unable to return to the airport. The witness in the pool also stated that the airplane was wings level and silent prior to contacting the tree tops. Why did the good engine go silent prior to the impact? Did he pull the power to initiate landing, or did the engine lose power due to some other cause? That question was asked repeatedly, but never addressed. At one point it was suggested that the good engine demonstrated evidence that it was producing some power at impact. If it was spooling down, it would still appear to be producing some power.

The preliminary report states that the aircraft struck trees then a power utility pole prior to impact with the ground. Once an aircraft makes contact with a tree or power pole, it is at that moment, in a stalled state, regardless of its state just prior to that contact. Whether the stall warning light illuminated a millisecond prior to impact or 30 seconds prior, it would be hot enough to exhibit stretching upon impact. The fact that there were branches in the right wing tip, branches laying on the ground below the tree located south of the impact site along the line of flight, and visibly broken branches 30 feet up in that tree in the photos taken of the crash site, are facts of the crash that should have been disclosed. It is very plausible that the impact of the right wing with the tree caused the aircraft to cartwheel into the ground. It is just as plausible as it is that the aircraft stalled and rolled. It could have been either one. The facts do not show only one possible answer, but show more than one. They all should be speculated without prejudice toward one or the other.

The report stated that the pilot did not follow the service bulletins for the engines. However, it did not mention that half of the part 91 aircraft in this country do not follow the manufacturers recommended time between overhaul recommendations. Further more, that it is approved by federal aviation regulation and not unusual in any way. It also failed to mention that each of those engines were completely disassembled and reassembled during frequent hot section inspections, and that most of the parts and blades were replaced over time during those intervals. Even though it is not technically referred to as a factory overhaul, it is a form of a progressive overhaul. The report should also mention that neither engine had over a thousand hours since its last hot section inspection and that there was not a single part in the hot sections of either of those engines that were original. Brand new engines are also documented to have hot section blade failures, just as older engines can. Airliners have documented cases of this happening hundreds of times with new or factory overhauled engines as well. The report and discussion that followed implied that this practice was illegal or at the very least, immoral.

The fact that the auto feather system was placarded inop did not make the aircraft illegal as stated. It is perfectly legal to disconnect and placard the auto feather system on an aircraft that was certificated without it. In fact, most twin otter operators that make a lot of take off and landings, intentionally disconnect the auto feather because it has feathered propellers during throttle reduction after liftoff, and actually caused crashes and near crashes. The report also failed to mention that it was disconnected prior to the pilot's purchase of the airplane.

When the report stated that the propeller was not feathered completely, it was also implied that the auto feather system probably would have made sure that it was feathered all the way. That is pure speculation. Instead of saying it was not all the way, it should have stated that it was 98% feathered, which would have been much closer to the facts. By stating that it could not be determined whether the auto feather was a factor in the crash, it implied that it probably was and that it was safer if it had been connected. That is an opinion, not a fact. Most high time otter pilots would disagree with that assumption.

The report stated that the seat belt configuration was undocumented. There was a 337 issued for the jump configuration that included jump door, hand rail, seat track and seat belts through an fsdo office. If the document was not located at the crash site or in the airframe log, it may have been found with the previous owners, the maintenance shops that maintained it prior to the pilot purchasing it, or by checking with the fsdo offices where the aircraft came from.

The report also stated that it could not determine if the rear occupants were wearing seat belts. The emergency workers who removed the harnesses from the injured and dead jumpers could have provided that information if interviewed over the phone. Every jumper on board the aircraft had the seat belts still attached to their harness. I would have to expect that they are probably visible in the crash site photos of the victims as well.

The investigation stated that if the seat belts had not failed, more of, or all of the cabin occupants may have survived or had less severe injuries. That is pure speculation with absolutely no scientific evidence to make such a claim. The seat belt study that was referenced in the report can not accurately predict the exact same forces. There is no way to know what g forces were generated when the aircraft cart wheeled out of the tree and into the ground, nose first. The forces generated included centrifugal as well as vertical and longitudinal impact accelerations.

The fact that the nose of the aircraft was crushed all the way to the wing root should be enough evidence to establish failure of any seating configuration. I would counter speculate that any regular aircraft seat and belt arrangement would have failed in exactly the same manner. The seats and belts would have been pulled from the tracks and thrown toward the nose of the aircraft, crushing all occupants with not only other human bodies, but aluminum seats as well. This is a well documented phenomenon when aircraft impact nose first into the ground. The crushing of the cockpit into the cabin was all the way to the wing root, a location that would have included the two tandem pairs. There is no way to determine if any other seating or belting arrangement would have prevented their injury or death. The belts were not a factor in their injuries, even though they remained attached and in place. The jumpers would have been crushed between the ground and the other jumpers and seats, regardless of the configuration.

Obviously, had the pilot elected to use the entire length of the runway, the outcome may have been different. However, he used more than enough runway to meet the legal and documented performance of that type aircraft, (especially with such a light load). It was designed specifically for short, unimproved runways in the bush and on islands. That is what it does best. I have been on well known turbojet airliners on several occasions where we did an intersection takeoff. It is not illegal or immoral.

Lastly, it seems that there was more effort put into the seat belt configuration research and discussion, than went into finding out how the engine failed or why the aircraft was unable to return to the airport. The seatbelt issue is a non issue if the engine doesn't fail or the aircraft makes it back to the runway. It seems that whenever the reason for the crash cannot be determined, the ntsb always blames the pilot instead of stating that there may have been some other undetermined factor. I have heard of and witnessed many near crashes that were caused by something that would have never been discovered, had the pilot perished. For example, intermittent fuel supply interruption, pilot seats that are not locked in properly and slide back during rotation, soda cans getting jammed behind rudder pedals, jackets getting snagged on control yokes, aircraft fuselages full of water from washing or melting ice, etc... If any of those aircraft had crashed and the pilot perished, the investigator would have never been able to determine those causes.

I understand the concern with passenger safety and seating configurations. I have spent my entire adult life riding in jump planes, and still do at least 5 days a week, but finding the cause of the crash is paramount. I truly don't believe that the pilot just failed to maintain airspeed, there was another factor that has yet to be determined. I realize that there are only enough resources to do so much investigation, and that the agency is overwhelmed with crashes and accidents, but that is an even more compelling reason to leave more room for doubt or speculation beyond the pilot's ability or mistakes.

An example would be; "the pilots inability to return to the airport for undetermined reasons" or "the pilots inability to climb above obstacles and maintain controlled flight which led to inadvertent contact with trees" or "the pilots inability to climb on one engine resulted in a forced landing in unsuitable terrain" or "the loss of the right engine just after rotation, followed by the inability to climb and maintain altitude and airspeed to return to the runway for undermined reasons, resulted in a forced landing in unsuitable terrain". All of these type conclusions would take into account the inability to explain why the aircraft was unable to climb, and eventually crashed.

Respectfully,

Jim Cowan