The PC12 is one of the best-built and safest aircraft of its type flying. Right?

By John Morris

Absolutely!

But with that being the case, then why has there been an unfortunate increase in [reported] incidents (1) / accidents (4 fatal) over the past 1 year period between September 2008 and August 2009?

The main reason given by the authorities for all of the PC12 accidents (considered closed) as well as most aviation accidents in the United States is human factor or spatial disorientation, usually meaning it's the pilot's fault. Blaming it on the pilot, by whatever type of wording used, seams at times too simple of an excuse and not fair even though it has become the national pastime to blame it on someone (or something) else. However, unlike all the other blame-gamers, the scope of an aircraft accident investigation and its conclusions DO, in the cases when human factor is cited, point towards some kind of error in judgment or decision that could have at least contributed to the final outcome. And as we should all be aware of the "chain" of events leading to that outcome, it is the actions, or inactions, of the pilot that can forge the links or break that chain.

So here we are again, discussing decision-making and risk management. Why? It looks to me like we need another review and maybe a different perspective. Risk management tools are available from the FAA [Risk Management Handbook-May 2009], AOPA and other sources. They are very useful and should be at least referred to regularly. But this article is going to focus on decision-making and risk management as seen from a different perspective, a perspective regarding possible overconfidence in the capabilities of the PC12, leading to poor decisions and increased risk.

Over my years of teaching I have usually mentioned how Pilatus did a fabulous job of "pilot-proofing" the PC12, meaning removing a great many of the classic ways that the pilot could cause a possible incident/accident. But nobody can completely take away the human factor or remove the means to beat the system. And at the end of the day gravity always wins. So we hopefully strive to cover all of the tangibles and prepare for the intangibles. This is where I wonder if the drivers might get overconfident in the PC12 and its capabilities.

Lets talk tangibles. Is technology contributing to this overconfidence? Today's technology is more amazing than ever and changing/improving in months instead of years. As a result I do believe that this can create problems, a link in the chain, until the pilots adjust to the newer available technology. Examples of this are improved, downloaded weather information, the WAAS upgraded avionics-autopilot interfacing and even the PC12NG with the Apex system. By adjusting I mean a proper understanding and utilization of this newer information as it applies to the enhancement of flying the PC12. This also means understanding the not so obvious limitations of this newer technology, thereby knowing when to use standard, basic flying judgment when in doubt.

Another tangible is a pilot's general proficiency in flying the PC12, not just instrument proficiency. The FAA has helped somewhat by changing the method of

receiving the WINGS awards. You are now required to actually fly in an aircraft with an instructor in order to receive the annual award. The down side to this [and the Part 91 Flight Review] is that you *still* can go 2 years before flying with an instructor and it does not have to be in the PC12. Speaking of regulations; how many landings are you actually doing in 90 days? Night? Are you bunching your flying time with long gaps in between? How many hours in a year? Do you think that because you are flying the PC12 that it doesn't matter how often you fly? I have seen that the majority of the PC12 community lands with less than full flaps as standard operating procedure. Fine. But do you really understand the increased landing distances as a result? Of course if you are operating in winter conditions or only land on large runways then you will operate with reduced flaps. But, are you NEVER going to land on a small airstrip? Are your NEVER going to use full flaps? Do you practice landings with various flap positions, including flaps 0°? Or are you confident that the flaps will always function as prescribed. Ask Mr. Murphy!

When airborne, how often do you actually hand fly the PC12? We know that it handles well (better if it is a /47, according to most opinions but I like both versions equally). I love the autopilot as much as the next driver but I also want to fly for proficiency just in case "George" decides not to work. During Initial and Recurrent training you will experience losses of various components relating to the EFIS or FMS causing a loss of the autopilot. Usually you can recover the use of the autopilot by following the prescribed emergency procedure. But sometimes the autopilot is lost for the duration of the flight. Of course the autopilot works or we will not fly, right?

Which brings me to the point of training and what you do *after* the training is completed. Do you put on your training hat only for the required course? How long after the training session is over do you go back to your personal standard operating procedures?

What are the intangibles? Airborne, the intangible that appears to be a possibility that *must* be reviewed by you (and your instructor) is getting into a spin and or inverted. I believe this because firstly, we cannot practice spins or upset recovery in the PC12 and I do not believe that the current synthetic training equipment is capable of accurately duplicating the potential effect. In addition, even if the synthetic training were capable, it would only happen (hopefully) once a year, which goes back to the previous paragraph about training. Secondly, in reviewing previous PC12 accidents, it appears to be a possibility that getting into a spin or inverted was a factor. But how is this possible with the Stall Warning / Stick Pusher System? Were you confident that with this system this could never happen? This is a great system. But it is not for every possible contingency, such as wake turbulence and weather events. It is definitely possible to get inverted or enter a spin, with or without this system.

Another airborne intangible is whether or not you are really willing to refuse an ATC request and if you have to, say the magic words "Declare Emergency". I am right there with wanting to *not* do that and actually being accommodating for them. But, you have to know when to say no. Better to have some paperwork later than the possible alternative.

Ground intangibles are thoroughly covered through the risk management tools but I will interject with my favorite "tool". It is quoting one of my favorite movie characters- Dirty Harry, and his philosophy about humans, "a man's got to know his limitations". For this application it simply means (to me anyway) that you have to be honest with yourself,

about your capabilities as it pertains to safely operating your aircraft. There is a lot of area to cover not directly related to the flight but since this is a single-pilot aircraft the person operating the mission should be the highest on the list. The best judgment I have experienced by PC12 pilots is to (1) get with an PC12 qualified instructor for some “flying” -mid year between required training if you are only averaging 100 hours a year, or (2) bring along another pilot, when in doubt about a planned mission, having considered pilot proficiency (see earlier paragraphs) and the possible effects on the single-pilot operation. Yes, I know this last paragraph sounds like a plug for what I do. So be it. Whether or not my fellow instructors or I are considered the end result is the same: safe flying and not reading about you in an NTSB report.

A safe pilot is always learning

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