

## UNDERWRITING IN THE 21<sup>ST</sup> CENTURY: UNDERSTANDING THE RISKS OF PRIVATE AVIATION

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**Executive Summary:** With the tragic accident in 2006 of Yankees pitcher Cory Lidle shining a spotlight on the potential risks involved with private aviation, some in the life insurance industry have cast a concerned eye on their exposure when covering a licensed pilot. Underwriters are looking for more information to evaluate the latest crash data, as well as advancements in avionics and safety technology to better understand and quantify the risks involved with flying. Often a private pilot will be an individual of substantial net worth and most likely covered by life and disability insurance worth millions of dollars. In this article we will provide some basic reference information to better inform underwriters and claims examiners for cases involving a private pilot. Among the areas that we will cover: aviation basics, levels of licensing, technological advancements and statistics that categorize and quantify crash scenarios.

### **Introduction**

There are four basic areas to understand when considering risks associated with a private pilot:

#### *Aviation 101*

- **Licensing**

There is a variety of categories for a private pilot license: student, recreational, private, commercial and ATP. Pilots are also rated for flying using visual (VFR) reference and/or instrument (IFR) reference. An instrument rated pilot is able to fly relying solely on cockpit instrumentation in situations of reduced or zero visibility. Those pilots possessing a license designation of private pilot represent the highest percentage of crash totals among the license types. As crashes related to pilot error account for as much as 80% of all incidents, training, licensing and experience are all critical safety measures.

- **Aircraft**

Private planes are categorized across three classes of fixed-wing general aviation aircraft: single-engine fixed landing gear, multi-engine retractable landing gear and multi-engine. Other classes of aircraft would include jet engine, sport, glider, antique and homebuilt aircraft such as an ultra-light. Single-engine aircraft account for the highest crash totals, and although multi-engine aircraft have far fewer accidents, they are far more likely to be fatal when they do occur. Statistics show that the more complex the aircraft, the greater the chances of fatalities in an accident. In fact, the "lethality index" (percentage of accidents that result in death) in a single-engine aircraft is about 10%, compared to multi-engine aircraft at about 50%.

- **Flight Hours**

Private pilots are also ranked by actual flight hours in a specific type of aircraft. A pilot with less than 500

hours is considered a novice and generates the highest percentage of crash totals. Ironically, pilots with over 4,000 hours are considered very experienced but as a group represent a not insignificant percentage of crash totals—possibly indicative of overconfidence and higher risk tolerance. Over the last decade there was a 26% decrease in accidents per 100,000 hours flown and a 25% decrease in fatalities.

- **Type of Use**

There are three categories of non-commercial aviation: personal/recreational, business (uncompensated piloting) and corporate (compensated piloting). In terms of safety, each of these categories is successively safer than the other. Removing commercial aviation from the equation, the remainder across the three remaining categories breaks down as follows: Personal/recreational aviation accounts for 50% of all flying but 76% of fatal accidents; business use accounts for 15% of aviation and 3% of fatal accidents; and lastly, corporate aviation accounts for almost 6% of flying and less than one half of 1% of fatal accidents.

Highlights from crash statistics (*2005 AOPA ASF Nall Report - www.aopa.org*):

- There has been a 25% decrease in total and fatal accidents over the reported 10-year period—and within this period, since 2003, there has been a 7% decrease in accidents and a 3.5% decrease in fatalities.
- 75% of accidents can be attributed to pilot error as compared to less than 8% attributed to mechanical problems.
- Although landing is the leading category of accidents, it is one of the least likely to cause fatalities (due to the slower speed of approach and airport vicinity).

- Pilots using aircraft for training and recreation are seven times more likely to have an accident than those using aircraft for business (an important distinction for insurance underwriters).
- Weather related accidents have the highest percentage chance (94%) of ending in fatalities (and are one of the most avoidable with proper planning and equipment).

### **Perspective Based on Experience**

In October 2006, Eli Rowe, CEO of Parameds.com (PDC), addressed the current state of private pilot safety and aviation with over a thousand of the life insurance and reinsurance industry's leading risk management experts attending the Fifth Annual Meeting of the Association of Home Office Underwriters (AHOU) in Las Vegas, NV. Rowe, a nationally recognized instrument rated pilot who flies hundreds of hours a year, is a chief executive who has worked in the life insurance underwriting arena for well over a decade.

As the owner of a Cirrus SR-22 single-prop aircraft equipped with MFD/PFD and safety parachute, Rowe highlighted some of the recent advancements in aviation technology such as real-time satellite weather data-link and WAAS GPS, traffic collision avoidance systems, engine monitoring displays, terrain and ground proximity awareness systems, anti-icing technology, airbag seatbelts, and even the safety parachute that can be deployed in mid-air to save a crippled aircraft from crashing. Rowe pointed out that Cory Lidle's plane, which crashed into a building in midtown Manhattan, had many of these available technologies, and the true reason for the accident as well as the failure to deploy the parachute might never be known. He also pointed out that Lidle would fit into the novice class of pilot experience measured in hours of 500 or less which statistically has the highest accident rate.

"Quite possibly," Rowe said, "the headlines about many of the accidents we have been seeing with TAA (technologically advanced airplanes) might be the indirect fault of all these technological advances. The irony, in my opinion, is that some pilots may be suffering from a false measure of extra confidence that his or her equipment is a constant blanket of protection, and, possibly, a license to take much more substantial risks than might otherwise have been taken. This false 'license-to-take-chances' might be the reason so many Cirruses, known to have a built-in parachute for the entire plane and loaded with advanced features, have had accidents in spite of their features."

During the month of October 2006, there had been three crashes of Cirrus aircraft that resulted in eight fatalities—the Lidle aircraft among them. The manufacturer of Cirrus aircraft urged all those operating their planes to exercise prudence when making flight

plans and not to challenge the elements, or their own skill levels, with a false sense of security or increased capabilities due to all of the advanced technological and safety features.

"From a mortality and morbidity perspective," opined Rowe, "life insurers and reinsurers need to be able to determine whether these increased safety features, that should reduce accidents, instead may possibly contribute to them as more pilots attempt to fly in conditions that might otherwise have prohibited a pilot from taking off, and as such actually increase the risk of an accident—and ultimately mortality—triggering a payment of policy."

Rowe concluded by saying, "As a private pilot and an insurance industry veteran, I recognize the importance of this type of insight into quantifiable risk statistics and advancements in avionics and safety technology. Insurance underwriters are very detail oriented and constantly on the lookout for accurate information to use as a basis to inform their risk evaluation process. With so much recent advancement occurring in safety and avionics and, at the same time, private aviation so intensely scrutinized in the headlines, the timing could not be better for underwriters to seek out the latest data on the current state of general aviation and technologically advanced airplanes."

### **Conclusion**

"The desire to fly is an idea handed down to us by our ancestors who, in their grueling travels across trackless lands in prehistoric times, looked enviously on the birds soaring freely through space, at full speed, above all obstacles, on the infinite highway of the air." (Wilbur Wright)

"What is it that makes a man willing to sit up on top of an enormous Roman candle, such as a Redstone, Atlas, Titan or Saturn rocket, and wait for someone to light the fuse?" (Tom Wolfe, *The Right Stuff*)

Flight is arguably humankind's most significant "invention." The ability to travel by air shrank the globe and made possible the world we live in today. But aviation is not just a statement on the ingenuity of humankind; it is also a reflection of our adventurous spirit and willingness to take risks while advancing our interests (be they commercial or personal). One cannot separate the science from the art of flying just as one cannot separate the true nature of people: the pragmatist vs. the adventurer.

Perhaps this should be taken into account when measuring the risks associated with a private pilot. Technology in aviation has reached an unprecedented level of advancement and safety, yet the true determining factor of risk (as demonstrated by statistics) lies

with the individual. Statistically speaking, how well you know the applicant is probably more important than what you know about the plane he or she flies. How much time spent flying a particular class of aircraft is critical. How do these pilots plan to use personal aircraft—for business or recreation? Are they thrill-seekers? Will they or won't they fly in adverse weather or visibility challenged conditions?

Do they have the hours and licensing that indicates experience? Even more so than the type of plane an applicant flies, who these individuals are as well as how and when they plan to fly may be the real key questions to measuring risk.

### Bibliography

- 1) Krey, Neil; 2005 NALL Report, AOPA Safety Foundation, 2006
- 2) Landsberg, Bruce; *Safety Advisors and Safety Pilot*, AOPA Safety Foundation, various 1996-2006

## GRAPHIC DISPLAY OF AVIONIC ADVANCEMENTS

### Glass Cockpit

TAA - Technically Advanced Airplanes

- Cockpit Resource Management
- Altitude Pre-Select Autopilot
- Improved Artificial Horizon



**About the Authors***Eli Rowe (Chief Executive Officer – Parameds.com)*

Parameds.com, a PDC company, was founded in 1998 by the company's CEO, Eli Rowe, and since then has emerged as the premier provider of APS retrieval and summary services, exam solutions and expert automated underwriting/claims support for the life, disability, long-term care and health insurance industry. Eli graduated Summa Cum Laude with a business degree from Touro College, while simultaneously becoming one of NYC's youngest Level 4 Paramedics. He volunteers in many industry and non-industry charity and association organizations, and is the secretary and treasurer of MUD (Metropolitan Underwriters Discussion Group), an active volunteer paramedic, an avid instrument rated pilot, and a father of two little boys and two sweet girls. Eli has spoken as a keynote speaker on the mainstage of the annual meeting for the Association of Home Office Underwriters and is published in the scholarly journal of the Academy of Life Underwriting, *ON THE RISK*.

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Chris Orestis held senior positions on a number of political campaigns before working in 1993 and 1994 for both the White House and the Senate Majority Leader on Capitol Hill. From that point, he spent the next several years representing the health and life insurance industry as vice president and senior vice president, respectively, for the Health Insurance Association of America (HIAA) and the American Council of Life Insurers (ACLI). As senior management for both organizations, he was responsible for external affairs and activities related to revenue generation including membership, marketing, business and financial development, industry conferences and industry-vendor coalitions/partnerships. In 1999, he was awarded the Robert R. Neal Medal by HIAA for distinction and service to the industry. Most recently, Chris served as the head of sales and marketing for Global Insurance Resources.