

Accident Review, Saranac Lake 4 Fatalities

by Dick Rochfort

The following is a report from The National Transportation Safety Board Washington, D.C:

The private pilot, who was experienced flying the accident airplane, was conducting a personal flight with three passengers on board the single-engine turboprop airplane. Earlier that day, the pilot flew uneventfully from his home airport to an airport about one hour away. During takeoff for the return flight, the airplane impacted wooded

terrain about 0.5 mile northwest of the departure end of the runway. There were no witnesses to the accident, but the pilot's radio communications with flight service and on the common traffic advisory frequency were routine, and no distress calls were received.

A post-crash fire consumed a majority of the wreckage, but no preimpact mechanical malfunctions were observed in the remaining wreckage. Examination of the propeller revealed

that the propeller reversing lever guide pin had been installed backward. Without the guide pin installed correctly, the reversing lever and carbon block could dislodge from the beta ring and result in the propeller blades traveling to an uncommanded feathered position. However, examination of the propeller components indicated that the carbon block was in place and that the propeller was in the normal operating range at the time of impact.

the V/S and the KFC150 will hold the new V/S. In my opinion, using the VTS to change V/S is far safer than using the rotary (concentric) knob on the Altitude Preselect. When the rotary knob is used, the potential exists that the altitude on the Altitude Preselector can be unknowingly changed, removing the ARM feature. If the ARM feature is unknowingly knocked off, the KFC150 will not capture the altitude desired, which can be downright dangerous. When possible, use the VTS to make V/S changes.

Pitch Attitude Mode: When in Pitch Attitude Mode, the VTS can be pushed to make small changes in pitch attitude. The manual advises that the rate of change is "0.9 degrees of change per second." But, this is not useful advice since there's no way a pilot can see tenths of a degree of change. The best way to understand the expected changes is to make small pushes to the VTS. If you make a series of small tiny pushes, the pitch attitude will change so slightly that your passengers will not even be able to tell that you've started a climb or descent.

I hope you gained some new information about the KFC150! In the next edition of MMOPA Magazine I'll write about the "Top Ten" nuances of the other autopilots in the PA46 fleet. AMMOPA

Joe Casey is an ATP, CFI, CFII (A/H), MEI, CFIG, CFIH, as well as a U.S. Army UH-60 Standardization Instructor/ Examiner. He has been a PA46 instructor for 14-plus years, and has accumulated 11,800-plus hours of flight time, 5,000 of which has been in the PA46. Contact Joe at: www.flycasey.com, by email at joe@flycasey.com, or by phone at 903.721.9549.



Pilot Training



Providing Excellent Training & Consulting Services Worldwide to Pilots and Instructors of the Piper PA46 Aircraft M350 - M500 - M600 - Matrix - Malibu - Mirage - Meridian



"There are Only Two Kinds of Pilots in The World...

Those Who Love the Piper PA46 ... and Those Who Have Never Flown One"

Dick Rochfort

PERSONAL TRAINING WEBSITE PRO CARD CERTIFICATION THE MENTOR PROGRAM SIMULATOR TRAINING

ONLINE REFERENCE LIBRARY AIRCRAFT RELOCATION BUYER CONSULTING EXPERT WITNESS

Dick Rochfort, ATP, CFH **Master Instructor**

Excellent Training Doesn't Take Any Longer... And It Doesn't Cost Any More

Fly Safely - Train Often

+1 410 435-3333

www.rwrpilottraining.com

Additionally, the airplane had been operated for about nine months and 100 flight hours since the most recent annual inspection had been completed, which was the last time the propeller was removed from and re-installed on the engine. Therefore, the improper installation of the propeller reversing lever guide pin likely did not cause the accident.

Review of the pilot's autopsy report revealed that he had severe coronary artery disease with 70 to 80 percent stenosis of the right coronary artery, 80 percent stenosis of the left anterior descending artery, and mitral annular calcification. The severe coronary artery disease combined with the mitral annular calcification placed the pilot at high risk for an acute cardiac event such as angina, a heart attack or an arrhythmia. Such an event would have caused sudden symptoms such as chest pain, shortness of breath, palpitations or fainting/ loss of consciousness and would not have left any specific evidence to be found during the autopsy.

It is likely that the pilot was acutely impaired or incapacitated at the time of the accident due to an acute cardiac event, which resulted in his loss of airplane control. The National Transportation Safety Board determines the probable cause(s) of this accident as follows: The pilot's loss of airplane control during takeoff, which resulted from his impairment or incapacitation due to an acute cardiac event.

Health Risk Factors for SP Operations

According to the National Institute for Health, sudden cardiac arrest (SCA) is a condition in which the heart suddenly and unexpectedly stops beating. If this happens, blood stops flowing to the brain and other vital organs. SCA usually causes death if it's not treated within

minutes. The Mayo Clinic's website points out that sudden cardiac arrest is different from a heart attack, which occurs when blood flow to a portion of the heart is blocked. However, a heart attack can sometimes trigger an electrical disturbance that leads to sudden cardiac arrest.

We have all been briefed on the risk factors for cardiac arrest, but what is the reasonable course of action for single-pilot operators? Is a prudent course embedded in regulation or do we need to do more? What about the recent medical reform law?

I for one think that each pilot is responsible for the safety of the flight, no matter what regulations require. As it exists today the regulations provide a baseline strategy; that is all. In addition to complying with all pertinent regulations, pilots

should be trained and encouraged to self-report known health risk factors to the proper professional if and when they occur. In the case of cardiac symptoms it would be your physician. Your physician will likely refer you for additional evaluation. Nobody (especially pilots) likes to ask a question to which they cannot stand the answer. The psychologists call this "loss aversion." But, to do otherwise undermines the very principle of proper risk management.

Predicting the consequences of an adverse event is relatively easy. It is much harder to know the probability because our minds are wired to see greener grass; it's called confirmation bias.

"There are known knowns: These are things we know that we know. There are known unknowns. That is to say, there



are things that we know we don't know. But there are also unknown unknowns. There are things we don't know we don't know."

Donald Rumsfeld Strategies for Better Decision-Making

In the risk management matrix shown here, risk is understood as a relationship between probability and consequences. With careful mitigation, I suggest numbers 1-3 represent an acceptable level risk.

Here are some excellent strategies, which I consider to be essential to good decision making:

Be your own devil's advocate. Consider all the options, but before you commit to your decision, ask yourself "What if I am wrong?" Remember, a seemingly good decision made too soon is invariably based on old information. In a rapidly changing

Evaluating Risk

Likelihood

All and the		1 Remote	2 Unlikely	3 Possible	4 Likely	5 Certain
Severity	1 Trivial	1	2	3	4	5
	2 Minor	2	4	6	8	10
	3 Lost Time	3	9)	(0	12	15
	4 Major	4	8	12	16	20
	5 Fatal	5	10	15	20	25

environment this could be a bad decision; A decision made too late is by definition a bad decision.

Regularly remind yourself of that which you do not know. This is tantamount to asking yourself "What could go wrong?" Endeavor to make timely decisions. Do these by having in mind at all times those options you prefer and those options you will accept. The best way to accomplish this is to have and use well-vetted checklists, flows, memory items and SOP (Standard Operating



Procedure). These are the simplest and most effective tools to get to the correct operational decision at the right time in right sequence. This process demonstrably reduces the number and severity of PA46 accidents. This methodology is not as hard to adopt as you may think, but it will require you to consider changing some potentially long-held habits. It may even require you to challenge your flight instructor in search of "the one best way" to accomplish each single-pilot operation. This process is the essence of excellent training.

If you are flying any PA46 you should consider yourself lucky. In my opinion it is the most capable GA aircraft available today and it is getting better every year.

Fly Safely - Train Often.

△ MMOPA

"There are known knowns: These are things we know that we know. There are known unknowns. That is to say, there are things that we know we don't know. But there are also unknown unknowns. There are things we don't know we don't know." - Donald Rumsfeld

Dick Rochfort is an Airline Transport rated pilot and full-time PA46 Master Certified Flight Instructor. He provides excellent training and consulting services worldwide to pilots and instructors of the Piper PA46 aircraft (Matrix, Malibu, Mirage, M350, Meridian, M500 and the new M600, through his company RWR Pilot Training and The Professional Association of PA46 Pilot Instructors (PAPPI) of which he is a founding member.

If you would like more infor-mation on this or other strategies for improving the safety of your flying, or if you have comments or questions, you may contact Dick directly at mail@rwrpilottraining.com, by phone at 410.435.3333, or visit his website at www.rwrpilottraining.com



