

# POPA Update

Volume 7, No. 1



## From the President

Happy New Year! I hope you all had a wonderful holiday season, complete with family, friends, fun, and flying. The final quarter of the past year was a busy one for your POPA Board of Directors, and hopefully you will discover some of the results of our efforts in the upcoming months. Let me share with you some of where we are focusing.

We have received a loud-and-clear message that flight safety is of paramount importance to all facets of the PC-12 operations. This message is repeated as the highest priority when it comes to design of the airplane and its systems; development of training programs for pilots; defining and implementing maintenance programs; right down to the color of switches and placards. Recently, the insurers have chimed in that they are willing to recognize this priority. Thanks to the efforts of PilBAL and certain insurance purveyors (such as Lance Toland, whose article is presented in this issue) the underwriters have finally recognized, AND HAVE BEGUN TO ACKNOWLEDGE, that the PC-12 is a differentiated aircraft when compared to turbo-prop aircraft of older design and less sophisticated technology and system implementations. As a result, our insurability is getting better.

Not satisfied with being totally dependent on the insurers to decide our fate, we are putting in place two efforts that should contribute to helping the owner operators in this realm by expressing their concern and focus on safety. First, thanks largely to the efforts of one of our members, we will soon have a template for a PC-12 Operations Manual available for members to use as a basis to develop their own, personalized Ops Manual for their aircraft. You should talk with your insurance agent about the value of an Ops Manual in supporting the agent in their presentation of you as an insurable risk when they bring the renewal process for your insurance. It can make a noticeable difference. Second, we are taking a lead from our brethren at MMOPA. They have established the MMOPA Safety Foundation, through which they periodically present a weekend-long safety course. The insurance underwriters have recognized the value of this, and if a MMOPA member attends annual recurrent training, AND attends the MMOPA Safety course between recurrent training sessions, they can achieve a 10% reduction in their annual insurance premium. We are now working

with both the underwriting community and SimCom to see if we can develop and offer a similar program to our members and have it make financial sense. Stay tuned; we hope to have more details to share by the time of our Convention 2004.

Speaking of our sky-mates who drive Malibu's, Mirages, and Meridians, Lisa and I attended the annual MMOPA convention in St Augustine this past October. They put on an admirable show! They had quite a turnout of all of the Malibu derivatives (including the JetProp) as well as a strong contingent of TBM700s. Only 2 PC12s made it to the gathering, but we were the envy of most everyone there. It is really reinforcing to see the admiration of our airplanes!!! After MMOPA, we were off to the AOPA Convention in Philadelphia to support PilBAL in presenting the PC12. I'm sure you've heard more than enough about the AOPA convention. What I will tell you is that my conversations with the insurance underwriters while at the convention reinforce my conviction that we can and will improve our situation.

On a final note, I just got my plane back from its 3rd annual inspection. So, having flown the plane for 4 years and 1200 hours, I finally have what I would begin to consider realistic numbers when it comes to cost of operation. My first comment would be that Pilatus has a pretty accurate crystal ball! I assembled my financial numbers for the four year period, and determined the following:

1. For the full four years the DOCs (including fuel, oil, maintenance, Pratt & Whitney ESP payment on the motor, and Extended Warranty on all avionics) were \$318/hr. (Hobbs). The latest year, DOC was \$371/hr. (Hobbs), and my average fuel cost was \$2.45/gallon, burning an average of 59 gallons/hr.
2. The TOC, which is the DOC plus the fixed overhead costs of being a plane owner and pilot, regardless of whether or not you fly (includes hangar, insurance, training, databases, etc.) was \$503/hr. (Hobbs) for 4 years/1200 hours of operations. On a year-to-year basis, this number varies significantly based on the total number of hours flown within that year, the cost of insurance that year, the number of recurrent trainings, etc.

# Members Forum

(Continued From Page 1)

3. My numbers DO NOT include cost of capital, depreciation, or any of the capital costs of owning the airplane.

During the completion of the annual, I finally installed both weather datalink and traffic information receivers in the plane. As soon as I have some operating experience, I will report back. Until then, keep the blue side up, the wheel side down, and keep flying safe!

Phil Rosenbaum  
POPA President  
S/N #289  
Austin, TX



## PILATUS AUSTRALIA

Pilatus Australia Pty Limited, based at Adelaide, is a wholly-owned subsidiary of Pilatus Aircraft Limited. The Company, which was raised in Canberra in 1998, now has a staff of seven, operates its own PC-12 for demonstrations and Type Endorsement training, and holds a substantial stock of spare parts. It operates a 24 hour/7 day a week AOG system.

There are 21 PC-12s in Australia including 17 PC-12 air ambulances in service with the Royal Flying Doctor Service of Australia flying in Western Australia, South Australia, the Northern Territory and Queensland.

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## CAN YOU FLY THIS AIRPLANE?

There is a variant of the Pilatus PC-12 in which a few POPA members may have had some experience. It is a unique aircraft, and you must be a very good pilot to fly it successfully. Many of you will have no interest in flying it at all as it has some peculiar performance characteristics.

At times it will have a thirty percent higher stall speed, and forty percent more drag than a "normal" PC-12. Fuel consumption will be increased, while range and maximum service ceiling are decreased. Rate of climb is diminished, as is cruise speed. Under certain conditions, un-commanded roll and pitch excursions may be encountered. The wing stall, and tail stall speeds may be within a few knots of each other. The usual indicators of an impending stall may be absent, or occur suddenly and later than normal. The conversion of a normal PC-12 this variant may take place in as little as two minutes. The aircraft could be that trusty steed that has served you honestly and well for many hundreds of hours. As you might have guessed by now, I am talking about a PC-12 that has had an icing encounter.

We are well into that time of year when there is ample opportunity to "equip" our aircraft with substantial amounts of ice across broad areas of the Continental United States, and Canada. Areas of special concern include those down-wind of the Great Lakes, areas where there is substantial orographic lift of moist air, or while flying parallel to frontal activity. Also remember that the turbo-prop fleet spends a significantly greater amount of time in icing conditions than the turbo-jet fleet due to the altitude structure in which we fly. Much that follows is simply a review. Perhaps this will become an article you can put away, for re-reading each fall.

## ICING REPORTS

You should report icing encounters when icing has been forecast; but also when it is forecast, but not encountered. Most importantly, report icing encounters when icing was absent from the forecast, but is observed during your flight. Along with icing information, it is possible you should report cloud bases, tops, and the freezing level, or levels, and any inversions. We are all generally familiar with the FAA's four different levels of icing encounters: Trace, Light, Moderate, and Severe. But often these are very subjective. How do you decide what it is that you have seen? NASA provides some guidance in "Icing Encounters for General Aviation Pilots".

Trace - Ice perceptible, rate of accumulation slightly greater than sublimation.

Light - Occasional use of ice protection required to remove or prevent accumulation.  $\frac{1}{4}$ " in 15 to 60 minutes.

Moderate - Frequent use of ice protection systems is required.  $\frac{1}{4}$ " in 5 to 15 minutes.

Severe - Rate of accumulation exceeds your ability to remove the ice.  $\frac{1}{4}$ " in less than 5 minutes.

# Members Forum Cont.

(Continued From Page 2)

## TYPES OF AIRFRAME ICING

### Clear (Glaze) Icing

Lumpy and translucent, or clear and smooth.

Typically found at temperatures between 0c and -15c.

Clear Ice is dense/hard, usually more transparent than rime ice.

Slow Freezing process leading to "shapes" and "horns".

Clear Ice can cause a dramatic disruption of airflow over an airfoil.

### Mixed Icing

Forms in conditions between clear and rime, but in generally the same temperature range of 0c to -15c. Like clear ice, mixed icing may form "shapes". Dramatic disruption of airflow over an airfoil can be seen as with clear icing

can be seen as with clear icing

### Rime Icing

Milky, opaque, like the frost in a freezer that needs defrosting.

Typically found in temperatures below -25c.

Droplets freeze on impact.

Adopts the basic shape of the airfoil.

Less disruption of airflow, and therefore fewer handling difficulties.

Keep in mind that there has never been a civil aircraft certificated for flight into continuous moderate or severe icing conditions. Flight into areas containing super-cooled large droplets will result in moderate or severe icing encounters.

### Super-Cooled Large Droplets (SLD)

SLDs can be up to 100 times larger than the droplet size for which aircraft are certificated for flight in. Freezing drizzle, freezing fog, and freezing rain are examples of SLD droplet size. SLDs strike, or migrate aft on the airfoil to unprotected areas. Activation of deice equipment may remove leading edge ice, but may allow the creation of a ridge which significantly disrupts airflow.

## EVALUATING THE REPORTS OF OTHERS

Most pilots consider icing reports to be subjective. Not only due to the individual pilot making the report, but also due to the equipment being flown. Light icing to an airline class turbo jet climbing at 250 knots, and three thousand feet per minute, may constitute moderate (or worse) icing to a PC-12. The turbo-jet's wing will have a heat rise of 7.5 degrees centigrade, while the 140 knots aircraft will see a rise of only 2.3 degrees. Light icing for a PC-12 may bring down a light-to-medium class unprotected aircraft.

## HANDLING AND PERFORMANCE

Structural ice increases weight and drag, but its most detrimental effect is the change in airflow across the airfoils. This causes a loss of LIFT. As the airfoil's ability to create lift is decreased, the wing's A.O.A. must be increased to compensate. A vicious cycle may be developing..ice may now accrete on unprotected areas.

## HANDLING DEGRADED

Disruption of airflow over the ailerons or elevator can alter the aerodynamic balance of those control surfaces and render the

aircraft UNCONTROLLABLE! Normal warnings seen with clean airfoils may disappear. Both roll, and pitch upsets may be caused as a result of wing stalls or tail stalls.

One of the most significant traps for the unwary pilot who fly aircraft equipped for known icing, is the tail stall. We all practice recovery from a wing stall, but few of us have had significant exposure to tail stalls. The hidden hazard is the fact that recovery from a tail stall is exactly the opposite of the wing stall..with a tail stall, you maintain back pressure on the yoke. This is not innate to our "aeronautical conditioning". Additionally, one type of stall may easily be confused with the other.

In most aircraft, the center of gravity is forward of the center of lift. This works well for a badminton birdie, but would cause the average airplane to make a good "lawn dart," rather than a good transportation vehicle. To counter this stability problem, the horizontal tail is similar to an upside-down wing. It's "lift" acts in a "downward" direction. Where as the airflow over the top of the (main) wing must not be interrupted, the airflow over the tail must be smooth along the lower surface. Interrupt that smooth flow causes the tail to stall, and the nose pitches down. The lawn dart is re-born!

As we know, an airfoil contaminated with ice will stall at a lower angle of attack than an uncontaminated airfoil. With the flaps retracted, a small negative A.O.A is seen at the tail. The application of flaps causes a larger negative A.O.A at the tail, and potential for cascading air from the flaps.

NASA has been conducting research in Tail Stalls for slightly more than thirteen years, and there is much that is not clearly understood. The Icing Research Team at NASA's Lewis Research Center designed a tailplane icing program, which identified critical icing information thought to be valuable to pilots in the prevention of accidents. According to the study, aircraft involved in suspected tailplane icing encounters share some common design characteristics:

1. Un-Powered Controls - Those aircraft that rely upon aerodynamic balance to keep stick forces neutral. The horizontal stabilizer has a fixed leading edge and the elevator is held in position by adjustable trim tabs.
2. Large Flap Deflections - These produce large amounts of downwash resulting in a high A.O.A. on the tailplane.
3. De-Icing boots as opposed to a "hot wing".

Sound like a PC-12? We know that the profile of the tail airfoil causes it to accrete ice sooner, and at a greater rate than the wing's airfoil. We also know that in most general aviation aircraft, the tail is not visible from the cockpit. NASA advises that if you can see ice on any portion of the airframe, you should assume that the horizontal tail has an even greater amount of ice.

# Members Forum Cont.

(Continued From Page 3)

There have been at least sixteen fatal turbo-prop accidents involving tail stalls, perhaps more. The evidence is often gone by the time investigators arrive. However, it is known that tail stalls in icing are almost always associated with flap extension, application of flap increases wing downwash and increases the AOA of the horizontal tail. This AOA increase can change the airflow (under) the tail resulting in less effective elevator.

Elevator oscillation may be the first clue...Autopilot use may mask symptoms.

Wing Stall Occurs:

At a slower speed

When flaps are retracted early

Action Required: Lower nose to decrease the WINGS'S AOA

Tail Stall Occurs:

At a higher speed

When flaps are extended

Action Required: Raise nose to decrease the TAIL'S AOA  
Get rip of the flaps!

## SOME RULES OF THUMB

Stratus clouds normally have a small water droplet size which results in rime or mixed icing. Near the cloud tops larger droplets are usually found, especially in areas where lifting is present. A 3,000' altitude change, up or down and/or 50 nm of lateral distance traveled will often allow you to exit icing conditions. This may not be the case in areas downwind of large, open bodies of water, or if flying parallel to a front.

Lake effect icing results from the passage of cold air over (relatively) warm bodies of open water, causing the addition of heat, and moisture. Precipitation is seen on the lee, or downwind side of the lake. Ice fog may also result from these conditions.

A cold front with freezing rain or sleet can spread icing conditions for 100 miles behind the front. Sleet, or ice pellets on the surface usually indicates warmer air aloft. However, you may have to climb through 4000 feet of freezing rain to get to temperatures that are above freezing.

Icing may extend 300nm ahead of a warm front. Occlusions trap warm air aloft, and widespread icing conditions may result.

## AIRCRAFT

The PC-12 manual reminds us of a number of important factors:

1. "During flight in icing conditions, if there is a failure of any of the ice protection systems or generator 1 or generator 2, exit icing conditions. Contact ATC for priority assistance if required.

2. Prolonged flight in severe icing should be avoided as this may exceed the capabilities of the aircraft ice protection systems.

3. During flight in icing conditions or flight with any visible ice accretion on the airframe, the following flap maximum extension limits apply:

With operational airframe pneumatic deice boots-15 Degrees Flap  
After failure of the airframe pneumatic deice boots-0 Degrees Flap

4. Flight in freezing rain, freezing fog, freezing drizzle and mixed conditions causing ice accretion beyond the protected areas of the pneumatic boots is not approved.

5. The aircraft must be clear of all deposits of snow, ice, and frost adhering to the lifting and control surfaces immediately prior to takeoff."

We all recall that "all the shaker and pusher actuating points are shifted down by eight degrees" when the stall warning/stick pusher system is operated in the "PUSHER ICE MODE". NASA has found that the wing may stall as much as eight degrees sooner with a contaminated wing. I did not contact Pilatus to inquire about this coincidence, but NASA was interested in providing data to manufacturers upon completion of their icing study. Perhaps there is a relationship?

Michael McKendry

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Michael McKendry is the Portland (Maine) FSDO and New England Region Aviation Safety Counselor of the Year for 2003. He holds a certificate in Aircraft Accident Investigation from Southern California Safety Institute, a member of the International Society of Air Safety Investigators, Flight Safety Foundation, and the National Business Aviation Association. He has more than 16,500 flight hours, and holds an ATP ASELS&S, AMEL with type ratings in the Beech 300 & 1900, Cessna 500, IA Jet, IR Jet, and G-1159. He also holds a Commercial AMES, Helicopter, and Glider, CFII-II, ME, IGI, and Aircraft Dispatcher certificates.

2003 Queen of the Fleet



# Press Releases & Pilatus News!

## PILATUS RANKS #1 IN PRODUCT SUPPORT

October, 2003 - Proving "Relentlessly Swiss" is a company mantra, Pilatus once again ranks No. 1 in product support for its highly regarded PC-12. For the second year in a row, Pilatus took first place in Professional Pilot magazine's annual survey of corporate turboprop operators, which ranks product support performance of business aircraft OEMs.

"It's hard to get on top, but you have to work even harder to stay on top," says Piotr Wolak, Vice President of Customer Service at Pilatus Business Aircraft. "It all boils down to the dedication of the people who work here. When you combine the initial Swiss quality built into every PC-12 with the pride taken by those who support it, you have a tough combination to beat."

Pilatus cites its worldwide network of service centers as a huge asset for its customers. The majority of the centers have been with Pilatus since the PC-12's introduction. The service centers' expertise with PC-12 systems is unmatched, and continues to improve each day. New service centers are only added after extensive screening, and then they must undergo rigorous training before getting authorized by the factory. PC-12 owner Phil Rosenbaum has appreciated the results, "The Pilatus service network has grown significantly without degrading quality, and parts availability has kept up with growth."

## PILATUS MARKETING PROMOTIONS

October 2, 2003 - Pilatus Business Aircraft's Board of Directors has appointed Tom Aniello to the senior leadership team at its US-based operations. Previously Vice President of Marketing for Pilatus, Aniello's expanded role within the company is in recognition of his contributions to Pilatus' sales and marketing efforts since joining the company early in 2001. Aniello joins Thomas Bosshard, President and Chief Executive Officer, and Martha Geissshuesler, Chief Financial Officer, in the newly created role of Chief Marketing Officer at Pilatus Business Aircraft, Ltd. in Broomfield, Colorado.

Pilatus also announced the promotion of Nicole MacMillan to the position of Manager, Trade Shows and Promotions. In this position, reporting to Aniello, MacMillan has management responsibility for Pilatus' trade show activities and properties, as well as Pilatus' branded merchandise sales and other promotional branding efforts. "Nicole has exceeded our expectations with regards to improving Pilatus' presence at trade shows," said Aniello. "She really deserves ultimate credit for raising the bar to make our public appearance consistent with Pilatus' high standards for quality. I'm very pleased to have her take on this expanded role." MacMillan joined Pilatus in April 2002.

## PILATUS OFFERS ENHANCED VISION SYSTEM FOR THE PC-12

October, 2003 - Using advanced infrared technology, PC-12 pilots can now navigate more safely in total darkness and during unexpected periods of inclement weather-environments that previously created challenging flying conditions and delayed or cancelled flights.

The Max-Viz EVS system made its PC-12 debut on the aircraft in the Pilatus NBAA display, and will be offered as an option on future aircraft. The EVS system uses uncooled, long-wave infrared sensors to gather data about runways, terrain, and any potential obstacles on the ground or in flight. These images are enhanced, relayed, and displayed on a multifunction display in the cockpit.

EVS stands for Enhanced Vision System, a forward-seeing imaging system that consists of an exterior mounted camera using real-time sensors, typically infrared (IR) technology; signal processing; and a cockpit display monitor. During poor visibility conditions, such as fog, haze, smoke, precipitation, and darkness, EVS provides the pilot with actual images of terrain, runways, taxiways, aircraft, and other potential obstacles to greatly extend critical reaction time.

For years, military aircraft have used infrared sensors for nighttime missions. Recent advances technology and miniaturization have finally made EVS feasible for nonmilitary applications. As airports and airways become more congested and as more flights venture into less sophisticated airports of the world, aviation is demanding what EVS promises-improved flight crew situational awareness to reduce runway incursions during take-off and landing, Controlled Flight Into Terrain (CFIT), and approach and landing accidents.



Employees of Pilatus Business Aircraft, Ltd., at the 400th PC-12 delivery ceremony at the company's U.S. factory headquarters.

# Members Forum Cont.

## A LITTLE QUIZ FROM SIMCOM....

(Below are questions from the Fall issue and their answers.)

### Question #1

Top row of EIS fails after EIS Test but before engine start. Can you proceed with the engine start?

### Answer #1

EASY ANSWER IS NO. LIMITATIONS REQUIRE THAT ALL THE ENGINE INSTRUMENTS FUNCTION [MEL] AND THIS WAS A PRE-FLIGHT (PRE-START) CONDITION. BUT THE QUESTION RELATES TO STARTING THE ENGINE AFTER THE MALFUNCTION. YOU WILL NOT BE ABLE TO START THE ENGINE, ASSUMING YOU HAVE SELECTED THE ALTERNATE (MENU) FOR READING TORQUE AND ITT. THE AUTO IGNITION WILL NOT FUNCTION SINCE THE CONDITIONS FOR AUTO IGNITION IS ITT < 500°C AND Ng > 10% AND IN THIS CONDITION THE EIS IS NO LONGER INDICATING Ng. THE POH DOES NOT ADDRESS A FAILURE OF AUTO IGNITION FOR STARTING THE ENGINE SO YOU SHOULD NOT ATTEMPT A START WITHOUT CONSULTING WITH YOUR SERVICE CENTER OR 1-800-PILATUS.

### Question #2

On the ground (cold engine), before engine start the CAWS Red OIL QTY indicator is illuminated. What is the appropriate action?

- Start the engine, run for 3-5 minutes then shut down the engine and check if the CAWS Red OIL QTY illuminates again.
- Check the oil level, fill to top based on the dipstick reading, then do the above procedure.
- Check the sight gauge. Fill to where you can see oil in the Green Band then do the procedure from answer A.
- 1-800-PILATUS

### Answer #2

'C' IS THE BEST ANSWER OF THE GIVEN CHOICES. HOWEVER, YOU SHOULD CHECK THE DIPSTICK INSTEAD OF THE SIGHT GAUGE BUT STILL JUST ADD ENOUGH OIL TO INDICATE IN THE GREEN BAND THEN START THE ENGINE, RUN FOR 3-5 MINUTES, SHUTDOWN AND RECHECK THE OIL LEVEL WHEN WARM.

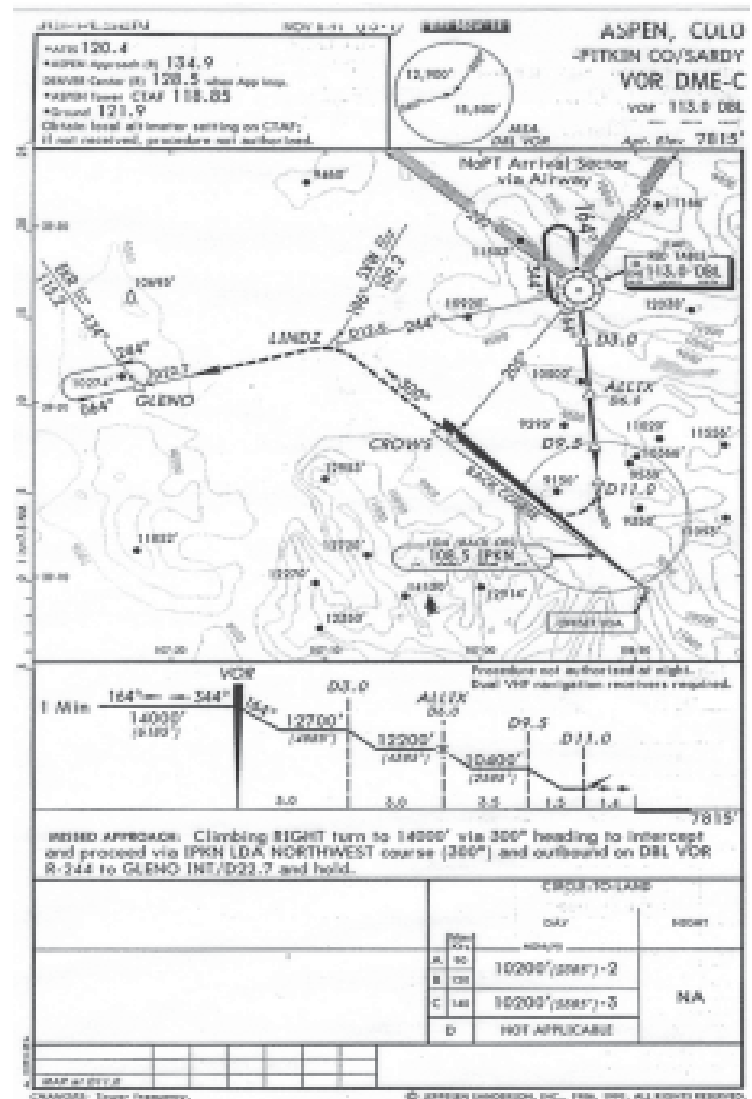
### Question #3

Use the approach at your right. You are inbound from the southwest at FL 200. You are now cleared direct RED TABLE (DBL), cleared VOR DME-C approach Aspen. What actions are you going to take and where?

### Answer #3

FIRST ACTION SHOULD BE TO CONFIRM ALTITUDE CROSSING RED TABLE. THE CONTROLLER (ME) SHOULD HAVE INCLUDED IN THE CLEARANCE TO CROSS RED TABLE AT FL200 [AIM 5-4-6(c)]. (THIS ACTION STEMS FROM THE UNITED AIRLINES ACCIDENT NEAR DULLES ABOUT 25 YEARS

AGO WHEN THE FLIGHT WAS CLEARED FOR THE APPROACH APPROX. 60 MILES OUT. THE CREW DESCENDED THE AIRCRAFT TO THE ALTITUDE PUBLISHED FOR THE FIRST SEGMENT OF THE APPROACH AND STRUCK A HILL APPROX. 25 MILES FROM DULLES) [AIM 5-4-7(c) (f)]. ONCE ARRIVING AT DBL YOU WILL EXECUTE A HOLD-IN-LIEU-OF PROCEDURE TURN (NOTE IN THE PROFILE SECTION OF THE APPROACH PLATE TIME FOR THE PROCEDURE TURN INSTEAD OF DISTANCE). IF UNABLE TO DESCEND IN TIME, OR UNCOMFORTABLE ONCE ESTABLISHED INBOUND, YOU CAN MAKE ANOTHER CIRCUIT (HOLDING PATTERN) TO PROPERLY ESTABLISH YOURSELF TO EXECUTE THE APPROACH (MUST NOTIFY ATC IF THIS IS THE CASE). [AIM 5-4-8 (a) 2,4] THIS TYPE OF APPROACH IS HAS BEEN IN USE FOR MANY YEARS AND IS ONE OF THE THREE TYPES OF PROCEDURES USED WITH RNAV (GPS) APPROACH. THE REST OF THE APPROACH IS STANDARD (PILATUS) OPERATING PROCEDURE.



# Members Forum Cont.



## SIMCOM QUIZ CONTINUES....

Below are new questions from SimCom. Answers will be published in the Spring issue.

### Question #1

During the COCKPIT/CABIN FIRE, SMOKE OR FUMES procedure you are asked to do the following:

If smoke/fumes persists:

3. BUS TIE CB (overhead panel)                      Rll

### Question:

What will happen as a result of pulling the BUS TIE CB?

- A. Generator 1 will be isolated.
- B. Generator 2 will now power the BATTERY BUS.
- C. Non Essential Bus will be OFF Line.
- D. C only.
- E. A, B, C

### Question #2

If the Alt Stab Trim circuit breaker [RIA] is pulled or open, will the secondary (Autopilot Stabilizer Trim) motor still function?

- A. NO
- B. YES

### Question #3

When doing the Pusher Pre-Flight test one of the requirements is Torque > 5psi. This is needed for what purpose?

- A. To uncover the PCL microswitch by the physical movement of the PCL.
- B. To make contact with the PCL microswitch by physical movement of the PCL.
- C. To send a Torque signal to the Pusher Computer via the torque transducer.
- D. To create airflow over the Elevator so the Pusher will not pull you out of your seat when completing the test.
- E. A and C
- F. B and C

The Honeywell logo, consisting of the word "Honeywell" in white serif font on a red rectangular background.

## PILATUS PC-12 RVSM UPDATE

Honeywell is developing a RVSM group approval SIC for the Pilatus PC-12 aircraft. The U.S. FAA Domestic Reduced Vertical Separation Minima (DRVSM) requirement is scheduled to go into effect January 20, 2005. The DRVSM requirement affects all aircraft operating within the airspace between Flight Level 290 and 410. The regulation calls for aircraft compliance with RVSM specifications, pilot training, and a continued airworthiness maintenance program. RVSM airspace allows 1000 foot vertical separation between FL 290 and 410 requiring a more accurate altimetry system with dual pitot static systems.

Group Approval for the PC-12 allows any PC-12 operator to update the altimetry systems to meet the aircraft compliance requirement. To obtain group approval, five aircraft must be tested to measure static system error with the final aircraft demonstrating compliance through the completion of a Supplemental Type Certificate (STC). Four PC-12s have been flown to date to measure static source error. Two of the aircraft tested were originally delivered with single pitot static systems and converted to dual pitot static systems so that aircraft with single pitot static systems are upgradeable. The fifth aircraft is planned for a mid-January certification program that will result in Group Approval of all PC-12 aircraft that meet minimum requirements. TSO approval for the RVSM compliant AM 250 Altimeter is on track for December 2003 with FAA approval is expected in the first quarter of 2004.

We would like to take the opportunity to thank Phil Rosenbaum, Laurie Pittman, Steve and Ty Carter, Kansas City Aviation Center, and Pilatus Business Aircraft Ltd. for their support by providing their aircraft for this program. A large number of POPA members offered aircraft that we did not use and we genuinely appreciate the kind and generous offers.

Happy New Year!

Bob Compton  
Honeywell  
Olathe, KS

# Members Forum Cont.

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## Are RVSM and TAWS Right For Your Airplane?

As we get closer to the RVSM and TAWS deadlines, one has to ask whether these requirements, or should we say restrictions, are really necessary. Personally, I think TAWS was jammed down the FAA and our throat, by the manufacturers. Someone came up with the idea that if we can make a product that saves lives, the FAA will have to require it on airplanes. Great marketing plan! Do you think the FAA would say no to such an idea? Some inside the FAA think they have an obligation to protect us from ourselves. Perhaps this is true for some pilots, but not for all. Many of the CFIT numbers show pilots not using common sense. The real question may be; if they were not a CFIT statistic, would they make any other questionable decision which might have resulted in the same outcome. The FAA cannot make a test, nor give a test, that contains all the "what ifs" a pilot will have to decide during their entire flying life. Perhaps requiring a pilot to take a short course in statistics or odds making might help.

The only time we can have a CFIT event is when we are near terra-firma. Most of the time, this will be around an airport. Perhaps learning to fly in the mountains may help but hills can also be a hazard. Knowing what is around you before you take off or land is just as important as knowing how much fuel you have. In the old days, we seem to have had less CFIT numbers. Is this a reflection on our instruction; the higher speed of our aircraft; the greater range of our planes; fatigue; the increase in the number planes flying or is it we have more approaches to airports which yesteryear were VFR only? Perhaps it is a little of each combined with pilots who gamble on their abilities to fly a published approach to an unfamiliar airport in non-VFR weather and or night conditions. Perhaps someday we can have a computer program to "practice" our approach to unfamiliar airports before we ever fly into them. This would help more than having a TAWS gadget in the cockpit lulling them into a false sense of security that it alone will protect them from bad pilot decisions.

We are taught to use every piece of equipment in the airplane. Your weather radar makes a great way to "see" terra-firma. If you know how to use your weather radar and become familiar with how to use the tilt for your particular radar, you will know what to look for when ATC lowers you down into the clouds around mountainous terrain.

I will get TAWS for my airplane, someday. I like the fact we have good competition and hope the price will continue to come down after the mandate date. Until then, I will fly day or clear nights with good moonlight with five seats. I will use my WX radar when necessary and play only when the best house odds favor a successful outcome.

As for RVSM, this is even more of an economic decision. Even though I like the ability to fly non-stop at 290 when going to the east coast, one has to balance the jet stream push verses the cost of upgrading. Serial #185, my plane, does not have two pitot

systems and the upgrade cost of that alone makes RVSM cost prohibitive. Someday we will use GPS for vertical separation and position in a nationwide ADS-B system. Just think, no more altimeter settings, changing them to 2992 or worrying about whether the altimeter in the other guy's plane is accurate. Personally, I will wait for the technology.

Roger Block  
P O PA Board Member  
S/N #185  
Reno, NV

## GREAT LOOKING PC-12s!

Would like to take this opportunity to welcome one of our newest members, S/N #488, N56EZ, "NIGHTSTAR" owned by Mr. Jozef Pilch, DEVCO Air, out of Warsaw, Poland.



The paint scheme on the PC-12 was so unique, we wanted to share it with the entire membership! Please send me pictures of your PC-12. We are looking for photos to be included in a new P O PA brochure and future newsletters.

Thanks in advance!

Laura Mason  
Executive Director

# Member Forum Cont.

## 2004 Convention News!

It's that time again! Mark your calendars for April 28-30th, 2004. The 8th Annual POPA Convention is upon us! We will be holding the convention at the beautiful Broadmoor Resort in Colorado Springs, CO. Colorado Springs Airport is only eight miles from The Broadmoor and approximately one and a half hours by car from the Denver International Airport. PC-12s can fly directly into Colorado Springs. Round-trip shuttle service is available to The Broadmoor.

We anticipate this convention to have a great turnout. The opportunity to visit Pilatus Business Aircraft in Broomfield, CO is reason enough to attend. Pilatus is only a quick 90-minute drive, or a small hop in your aircraft. Pilatus will be hosting tours of the completion center for all of you that are interested in seeing where your beautiful aircraft receives its finishing touches. Conditions permitting, Pilatus is offering an open house/tour, as well as BBQ lunch at the Completion Center at Jeffco Airport on Wednesday afternoon (4/28) for those interested.

We hope you can make it! Details, proposed agenda, and convention forms will follow shortly. We will be mailing information via US mail, and post all the information on the website at [www.pilatusowners.com](http://www.pilatusowners.com).

We look forward to seeing you in Colorado!

Laura Mason  
POPA Executive Director

## TOP 10 THINGS TO DO IN COLORADO SPRINGS

1. Visit Garden of the Gods.
2. Climb at stairs at Seven Falls.
3. Tour the Air Force Academy Chapel.
4. Take the Cog Railroad to the top of Pikes Peak.
5. Take a trip back in time to the "Gold Rush" days with a visit to Cripple Creek.
6. Enjoy an afternoon of spelunking at Cave of the Winds.
7. Drive across the world's highest suspension bridge, the Royal Gorge Bridge
8. See where future gold medalists train: tour the Olympic Training Center.
9. Get acquainted with the local wildlife at the Cheyenne Mountain Zoo and then enjoy the breathtaking panoramic views from Will Roger's Shrine of the Sun.
10. Shop, dine, and tour local galleries in Old Colorado City and Manitou Springs.

For more information about events and activities in and around Colorado Springs visit [www.pikes-peak.com](http://www.pikes-peak.com).

## Aviation Insurance Update!

As many of you know my efforts with POPA and Pilatus relative to insurance have been a long dusty road. Since the early serial number 101+ days insurance has been a challenge for certain classes of operation, and now almost ten years later it seems that we are still facing some of the earlier obstacles in obtaining coverages and reasonable premiums. Don't read between the lines here, there is some good news on the horizon so keep reading!!

In the last 24 months I have personally met with and demoed the PC-12 around the country to all underwriting companies willing to listen. With the support of both Pilatus Business Aircraft and Pilatus South making their time and equipment available for these important dog and pony shows, I am proud to announce that the underwriters are listening. As a result some underwriters are now giving the PC-12 product line favorable considerations over other single engine turbo props. AIG in particular is offering a 10% reduction in premium to insured's who maintain 6 month SIMCOM recurrency at renewal. Their position is very clear, not one day beyond 6 months to be eligible for the credit.

Other markets that we have courted are now writing the PC-12 favorably, Phoenix Aviation Insurance managers headquartered here in Atlanta having been very aggressive on some renewals. This is good news as I consider them to be one of the most conservative best run underwriters in the business, US Specialty based at Addison Airport in Texas is still providing competitive terms as well, however they are limiting liability to a maximum of two million dollars. WR Brown has shown more interest lately in the PC12 and is following the market affording up to five million dollars in legal liability for some owner flown exposures.

As we end 2003 and enter a new year I expect to see no real surprises; simply put...we have seen the top of the Christmas tree on rates. Many of our client renewal negotiations are enjoying the same rates as they did last year and I expect rates to further drop not withstanding any unforeseen global cataclysmic aviation loss event. At this year's NBAA I ran into many POPA members who expressed concerns to me about the insurance industry. Several commented on the POPA convention and the insurance seminar which they found informative and by some accounts revealing about a misunderstood business. I hope that in the future a similarly comprehensive session can be arranged, not just to talk about rates, but rather pursue the real issues of tying together your association's safety performance record and implement operational objectives of the group. This will further my efforts and hopefully yield lower rates for POPA members while maintaining needed coverage limits for those of you who are committed to excellence.

Best Wishes For The New Year!

Lance Toland  
Griffin, GA

# Member Forum Cont.

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## New Zealand Trip with Pilatus Australia

We've had the trip of year (decade) with the wonderful people from Pilatus Australia (Terry, Sebastian and Ruedi), their Pilatus PC-12 and a visit to the land of the long white cloud, Norfolk and Lord Howe Islands. Stewart spent most of the nine-day trip in the right hand seat and got to fly the aircraft manually, take-off and land and learn the involved systems (involved for a private pilot not used to modern turboprop equipment). He was in seventh heaven and now aspires to improve his flying credentials so maybe he could fly this aircraft himself - in case our ship comes in!

We left home on in a pea soup fog that was covering the whole region. We met the Pilatus crew at VH Aviation, Canberra Airport where we cleared customs and then loaded our bags. After a wait of about half an hour we were able to take-off through the clouds and head east to New Zealand. We flew direct to Christchurch but saw little of the country or ocean because of the solid cloud cover.

We had no qualms about travelling over such a distance over water. Neither Stewart or I gave this any thought but had to justify our decision to many friends and family.

The flight to Christchurch took just over five hours. We had a beautiful lunch en-route and we found the aircraft extremely comfortable. The ground crew at Christchurch was brilliant and looked after our every need. The following day we flew down to the Alps near Queenstown and back to give Callum McPherson and the staff of Pacific Wings Magazine a real experience of the aircraft.

Wednesday we had to de-ice the PC-12 before we could take-off for Lake Tekapo. A most interesting experience and the first time this particular aircraft was de-iced. Lake Tekapo was of particular interest to both Stewart and I as it is the home of three Australian built Nomads, one of our favorite aircraft Air Safari Services (Richard Rayward) owns and operates the Nomads along with a Cessna Caravan, a new Gippsland Aeronautics Airvan and a couple of Cessna 207s.

The Nomads and Airvan are particularly suited to the sight seeing services offered by Richard and his friendly team. We had to have our photographs taken with one of the Nomads because they are difficult to find these days, especially ones still operating.

Next stop for the day, Queenstown. Visibility was a problem and our pilot would have to decide whether we turn back. Thank heavens, we found Queenstown under the fog layer. It is a most interesting approach even for those of us in the rear of the aircraft. A mountain on the left wing and ski slopes off the right wing and water just ahead of the airport. A beautiful landing and taxi to meet another delightful ground crew operator, Dianne Aitcheson, Manager of Airline Ground Services.

Queenstown is a very pretty setting, the village surrounding the lake and hemmed in by steep mountains. We did a lot of walking

to take in the town centre and sights. This helped us walk off the effects of being still in an aircraft for a few days. We walked again after dinner even though the walkways were iced over and slippery - a most enjoyable day.

Next morning we found the airport closed by a fog and locals felt it would not lift until the afternoon. A trip to Wanaka was organized. The Fighter Museum was an interesting diversion and the workshop across the road even more interesting for the aircraft it held.

Back to Queenstown which was now clear of fog, refuel the PC-12 and take-off for Wellington. Stewart did this take-off and hand flew the aircraft to 25,000ft to "see what it was like" then it was back to auto pilot. He hoped we didn't know in the back; but we did. The auto pilot is so smooth making minute adjustments all the time. We arrived near Wellington in the dark, in clouds and the route is from the north to clear the mountains on the west of the city. We didn't see anything until we were on final and came under the clouds to see the city lights and water near the airport.

Another city, another perfect ground crew. This time Peter van Dyk, the boss of Capital Jet Services looked after us and delivered us safely to our hotel. We taxied across the active runway to the other side of the airport to Vincent Aviation. Peter Vincent and wife Jill are now operating charter flights out of Darwin. We were to spend a couple of days here as the PC-12 decided it didn't want to fly today.

The problem proved to be a dirty microswitch. It took Pilatus' engineer Ruedi traveling from Adelaide to Wellington with his toolkit and spare parts to solve the problem. This threw up some interesting aspects as to who may or may not touch an Australian registered aircraft in New Zealand and sign off on any repairs. Vincent Aviation offered us the run of its premises and staff to solve any problems.

Saturday afternoon we took for Auckland. Auckland was wet and dark and we seemed to taxi forever to reach Air Center (sic) One's parking area. Dare I say it, another city and another perfectionist ground crew. Raynor Simich was responsible for all our air services here and around NZ, she certainly picked the right people to make our trip so easy..

To be continued...

The conclusion of the New Zealand Trip with Pilatus Australia will be concluded in the next newsletter!

Above is a story that was written by Wendy and Stewart Wilson. Stewart Wilson is one of Australia's leading Aviation writers. He and his wife accompanied Pilatus Australia us on a demo trip to New Zealand earlier this year. This story is their account of the trip

# Announcements

## NEW MEMBER WELCOME!

On behalf of the entire POPA Board and general membership, we extend our sincere Welcome!

S/N #101 Brad Hoyt  
N312BC Wayzata, MN

S/N #107 Robert Picerne  
N813PC Altamonte Springs, FL

S/N #194 Doug Bradley  
N455DK Salina, KS

S/N #303 Steve Merrill  
N912R Brian O'Maley  
Grass Valley, CA

S/N #363 Michael Bleus  
S/N #379 Royal Flying Doctor Service  
S/N #396 Western Operations  
S/N #400 Jandakot, WA  
Australia

S/N #430 Mike Webster  
N8421E Robert Webster  
Pryor, OK

S/N #435 Allen Morris  
N435PC Coral Gables, FL

S/N #450 Ron Johnson  
N450PC Colorado Springs, CO

S/N #484 John & Patty Rickert  
N484AF Rye Beach, NH

S/N #488 Jozef Pilch  
N56EZ Wroclaw, Poland

S/N #495 Adam & Susan Carroll  
N495PC Palos Verdes Estates, CA

S/N #503 William Stefan  
N503WS Blairsville, PA

S/N #505 Robert Pomfrey  
N505P Syracuse, NY

S/N #510 John Arnold  
N861PP Jim Fox  
Harrisburg, PA

S/N #523 James Lyle  
N523JL New York, NY

## PC-12 Technical Committee

In 2002, Pilatus Business Aircraft announced the desire to establish a PC-12 Technical Committee. Throughout 2003, a number of operators expressed interest and, in fact, were instrumental in bringing the group together. The Technical Committee is now up and running! The purpose of the committee is well as defined in the Committee Charter is: "The committee will promote issues pertaining to safety, operations, maintenance, service and support of the Pilatus PC-12 aircraft. After the collection and evaluation of data from PC-12 operators, the committee will provide input and suggestions to Pilatus Aircraft, Ltd. to improve satisfaction and aircraft support."

This is a major step forward in the support of the PC-12 aircraft. Pilatus structures their Support Organization based on customer feedback. Each committee member will contact PC-12 operators to gather field feedback. Pilatus, in conjunction with the committee, will review all items and establish improvements. Feedback to the fleet will be through a number of methods; Servicework News, POPA's Annual Convention, POPA Newsletter, NBAA Annual Maintenance & Operations Seminar, etc.

The committee will meet with Pilatus twice each year. Currently there are 12 members on the committee, representing various operations for the PC-12. The following list identifies each member and their contact information.

<u>Committee Member</u>	<u>E-Mail</u>
Todd Smith	tsmith@atlaspilatuscenter.com
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Todd Nelson	todd@goldstonoil.com
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Lloyd Marcum	marcairtc1@aol.com
Chad Barta	cbarta@native-air.com
Ken Fenning	kfenning@native-air.com
Stu Phillips	stu@usvp.com

If you would like to offer feedback to Pilatus through the committee, please forward your name and contact method (whether phone or e-mail) to Kathy Bormuth (Pilatus Business Aircraft) at kbormuth@pilbal.com.

Please join Pilatus in thanking all the committee members for offering their valuable time in an effort to better the PC-12 aircraft with special recognition to Todd Nelson, who volunteered for the difficult and oftentimes unacknowledged position as Committee Chairman.

# Publishing Notes

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## NON-PROFIT ORGANIZATION STATUS

The Pilatus Owners & Pilots Association has been granted exemption from income tax under Section 501(c)(7) of the United States Internal Revenue Code. The Internal Revenue Service (IRS) has classified POPA as a "social club" and has assigned Employer Identification Number (EIN #31-1582506 to our Association. A first-year return was filed in May, 1998. Future returns are filled in a timely manner in accordance with IRS-mandated rules. Annual dues are not deductible as a charitable contribution, but members will likely be able to deduct annual dues as a business expense. Consult your tax advisor for details.

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Send all comments and future articles of interest to the Executive Director.

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Board Members: Dick Wikert  
Ty Carter

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## Newsletter Submission Deadlines

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All Members and Associates are invited to submit articles on any subject. The deadlines for receiving articles are:

<u>Issue</u>	<u>Period</u>	<u>Deadline</u>
Spring	Jan. - Mar.	Mar. 1
Summer	Apr. - Jun.	Jun. 1
Fall	Jul. - Sept.	Sept. 1
Winter	Oct. - Dec.	Dec. 1

We reserve the right to edit, correct, or delete information to fit the POPA newsletter format.

## DISCLAIMER

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Neither the Association, nor its directors, officers, nor the editor or publisher gives any official sanction to any of the articles, stories, letters or information contained herein.

THE PILOT IN COMMAND (P.I.C.) IS RESPONSIBLE FOR THE SAFE AND PROPER OPERATION OF HIS OR HER AIRCRAFT. IT IS THE RESPONSIBILITY OF THE P.I.C. TO OPERATE THAT AIRCRAFT IN COMPLIANCE WITH THAT AIRCRAFT'S PILOTS OPERATING HANDBOOK AND OTHER OFFICIAL MANUALS AND DIRECTIVES.

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