



Pilatus Owners & Pilots Association

Summer 2011

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***“POPA... The Voice of the
Pilatus Community!”***

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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.

NOTE: Cover Photo by Jon Youngblut

From The President ...

Greetings!

The 15th Annual POPA Operations and Safety Convention was a resounding success. We had a record attendance and nearly record number of aircraft. PilBAL generously hosted an amazing reception on Friday evening amidst antique aircraft flown in for the occasion, a stunning night airshow and a creative fundraising performance by “The Three Painters”. Informative presentations added to create a POPA convention that has received rave reviews.

In addition to the credits noted in Bob Maclean’s Farewell Letter, many people tirelessly contributed to create a convention that was over the top including our very able Executive Director Laura Mason, PilBAL with special acknowledgement for Nicole MacMillan, your board, your advisors (Pete Wolak, Ty Carter, Phil Rosenbaum, Phil Winters and Everett Clark) and a record number of vendors.

As most who attended our 15th Convention know, Bob MacLean retired from the POPA board after three years as President and I have been elected to that position for the next two years. Bob has committed to continue his unwavering contribution as an advisor to the board. Other members of your board are Joe Howley, Vice President, Brian Cleary, Secretary/Treasurer, and Jack Long, newly appointed.

During Bob’s tenure, POPA has been transformed into a safety driven organization. Three years ago, your board changed the convention name from the POPA Annual Convention to the POPA Operations and Safety Convention. At that time, the board also developed a guiding mission statement which says: “The purpose of POPA is to help all PC-12 owners and operators achieve the safest, most reliable, cost-effective and comfortable turboprop operations in the industry”. We have come a long way toward fulfilling our mission by continuing to focus on improving our piloting skills and by making our relationship with PilBAL and Pilatus even more effective.

Your board has extensive Pilatus experience and is very committed to our mission. I joined the board in August 2007 and my flying experience in particular consists of total hours approaching 5,000 with 40% in a PC-12, 80% in complex aircraft and 15% in tail/sailplanes. I owned a legacy PC-12 (N267WF) for nine years starting early 2000 and in 2007 converted the avionics from Honeywell to Garmin. I have owned an NG (N65W) since early 2009.

Your board and advisors plan to keep our members in the aviation knowledge loop through our convention, website, quarterly publications, periodic information blasts and selective training experiences to help drive our safety record to a higher level of perfection.

Pete Welles
President

And, Farewell...

As we celebrate our 15th anniversary this year highlighted by our Annual Convention at PilBAL Headquarters in Broomfield, CO (It will have come and gone by the time you get this issue of POPA Magazine), and as my tenure as President and Board Member comes to an end, I am in a reflective mood.

First, let me say that it has been an honor, privilege and pleasure to serve you, our members, and to have continued the long-standing, unusual and very positive working relationship with Pilatus and our Advisors. I give credit to our past Presidents – Cary Marmis, Bob Wilson, Roger Block, Phil Rosenbaum and Ty Carter for having set the direction and the stage for where we are today. And in particular, I salute Laura Mason who has been our Executive Director for the past 15 years. Her dedication, hard work and level of professionalism are unsurpassed. And, if you think about continuity and progress, it’s all about Laura, and what she has helped us accomplish on a daily basis.

And where are we today? In my view, we have become the most credible and visionary Airplane-Specific Ownership Association in the business. By staying close to our members, to Pilatus, to our sponsors and OEMs, we have refined our vision and mission and transformed our magazine, website and Convention into a comprehensive forum for continued learning. When I first joined the Board, we coined the term “PPPP” – Pilatus Pilot Proficiency Program. It has been our beacon as we continue to try to understand what our members need and find most useful in the areas of Safety, Operating Costs, and Flying Skill development.

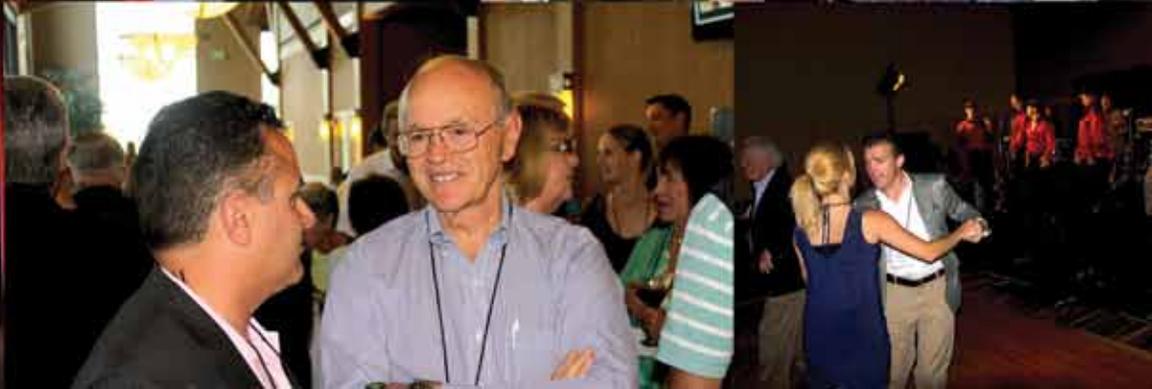
As you read the rest of this magazine, think about the content and how it is tuned to the PC-12 owner-operator. As you go to our website, take a look at the various forums. And as you reflect on our last convention, aside from all the fun and reconnecting with old friends while making new ones, who share our PC-12 passion, look at the content and the level of speakers we are able to attract who understand the sophistication of our audience and our thirst for knowledge.

We have lost some of our members along the way including past Board Members who, like those still with us, served voluntarily to get us where we are today. Also, too many have lost their lives flying the planes we love. In their memory we owe it to them and to ourselves to continue to learn from their mishaps in order to drive pilot error to zero, and to keep the PC-12 the safest high performance airplane in its class.

Farewell, safe flying, and may you all enjoy favorable winds.

Bob MacLean

2011 POPA CO



CONVENTION



Ask Lance Toland...

It was an honor to be a presenter at this year's 15th POPA anniversary celebration. I was also fortunate to celebrate the 10th year atop Mount Pilatus at the factories' gathering and speak on insurance. That said, I hope you will enjoy looking back at where we started, see where we are, and hopefully get an idea of where PC-12 insurance is headed.

Initial Challenges

My firm has been engaged with the PC-12 starting with serial number 103. This is the actual first unit sold in this country, as there were no sub-100 numbers in the production run. These early serial numbers presented a number of challenges to the Atlanta Aviation underwriting community. *"Are you kidding me Toland? A \$2M single turbine engine airplane that has 10 seats plus, no simulator, are you nuts? Pilatus? Don't they make toy airplanes?"* There were many other comments and no takers...our problems were real.

Serial Number 103 and Beyond

Establishing rates for the first aircraft was basically a shot in the dark for the underwriters. I had to convince them it was not a Cessna Caravan with its early issues; not to mention that a Caravan had just crashed south of Atlanta, killing 17 sky divers on takeoff. The cause of that accident was pilot error and contaminated fuel dispensed from a rusty 55 gallon fuel drum. (This loss is the reason you see "NOT FOR AVIATION FUELS" on most filters and hand fuel pumps, resulting from years of litigation. Of the 17 casualties, 10 were attorneys.

Convincing the underwriters that the PC-12 would be safer than a King Air was hard to sell, as well. Initial orders were mostly owner flown transitions, and even professionally flown PC-12s were rated up. Rule of thumb in the early days was double King Air rates minimum...then plus, if you were owner flown.

Our solution was to get underwriters who were pilots to fly it and educate them on the safety of the concept. We flew our pants off with any underwriter who would go flying, and it paid off. AIG's Atlanta home office pilots liked it, and they smelled blood. First one in gets the highest rates...others followed. Now we have competition, and our efforts have paid off. We had players willing to write PC-12, the rates started down, and limits started going up.

Early Days

With the first aircraft now flying and insured, I soon had the first losses. Actually, I had the first and second all in one flight. A PC-12 departed from a short strip down on the Baja, which was made even shorter by the pilot's discretionary call to not back taxi over the sand and gravel portion of available runway. On takeoff, rotation was followed by an impact of the main gear with a stone wall and chain link fence. Knocking one main gear off, and the other up through the wing! The second loss was on the landing of this aircraft some 100 miles to the south, with only the nose gear down. Luckily, it was uneventful. It did not even get a prop strike, all six passengers

walk away unharmed. When I received a call from the owner, (whom I had met several weeks before), he explained all of the details of the accident followed by, *"I have thirty minutes to get the aircraft off the runway. The airport commandant has a D9 Caterpillar standing by to assist me if I don't get something going."*

Welcome To My World!

Well...I will skip the details of how quickly Chris Finnoff and PilBAL responded. They secured the aircraft, and shipped it back to the states for inspection and repair. I will share with you that I got an immediate carpet call to be front and center to discuss this with AIG. They conceded I was right. It was a tough bird; just no more accidents Mr. Toland...please!

Timing IS Everything

The mid 1990s were seeing across the board increases in all lines of insurance. Aerospace was a rate rise leader with the loss of India's first satellite... *"it just kept on going,"* and so did aerospace rates. The satellite loss alone was \$480M. The late 1980 financial crisis escorted over eight GA and Aerospace underwriting facilities out of the arena: Aviation Offices of America, Omni insurance, Stewart Smith, Southern Aviation Insurance Group, Southern Marine and Aviation, and National Aviation Insurance. Several smaller markets were also acquired by larger underwriting concerns, and the rate race was off and running concurrent with the launch of the first PC-12.

History Always Repeats Itself...

The year 2009 handed aviation underwriters the Dulles hangar collapse. Collective claims represents over \$660M in losses and unsettled reserves. Global Aerospace paid out the first loss on one Global Express around \$38M within 14 days of the event.

During the second half of 2010, all three Asian space powers - China, India and Japan - suffered major satellite failures. Each failure is significant, but for different reasons. All launches were insured. What makes the loss of India's Insat-4B in early July, (the first Asian satellite on this list), so important is the possibility that the satellite fell victim to deliberate act of sabotage as the result of a cyber-attack. This involves the very malicious "Stuxnet" worm. I must emphasize that satellite failures happen rarely, but when they do it costs us all in Aerospace.

Last year, Air France handed in one off the coast of Brazil. Reserves are rumored to be set north of \$1B in passenger legal liability settlements, and the hull losses claim has been settled at around \$70M. These losses will translate into rate increases at future Aerospace reinsurance treaty renewals. Total reserves for these losses are set at around \$4.5B.

(Continued on Page 8)

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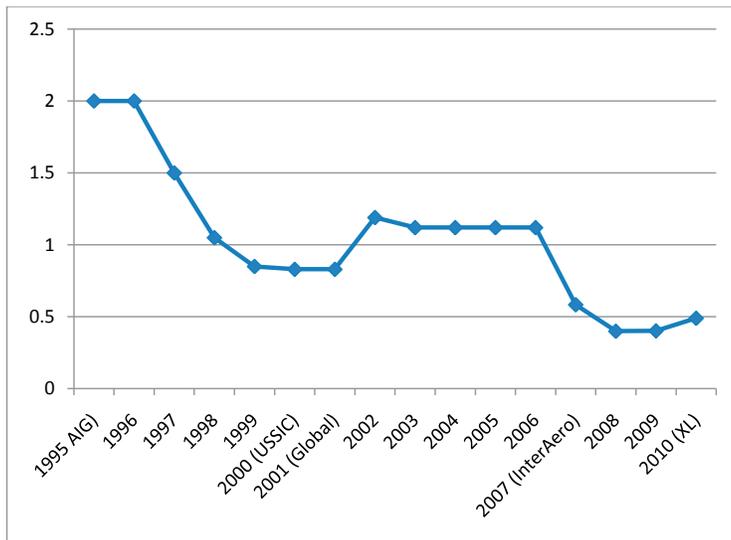
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ty@lancetoland.com lance@lancetoland.com

Ask Lance Toland...(cont'd from Page 6)

A Glance at Rate History

This chart represents an early serial number owner flown client. We tracked this serial number to reveal market changes.

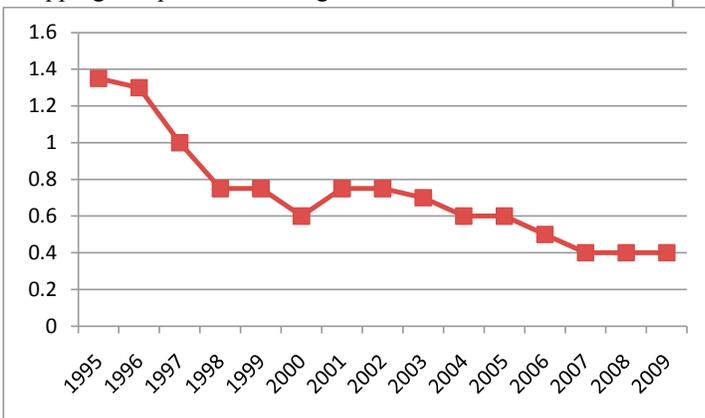
Note: Client has followed market, and jumped to several companies as premium savings and broader coverage were availed. You will note a trend down toward lowest rates, and a gradual increase as previously predicted. Rates are a percentage of per \$1,000 dollars in hull value.



Additionally, factor in 9/11, and the entrance of several new players bringing competition to the market starting in late 2005. Rates have trended down, but have bottomed out. They are expected to rise over the coming years.

Further, note the drop in rates on PC-12s in 1996 was largely due to our efforts with Pilatus and the dealer network demonstrating the PC-12 to the various markets. This was mostly conducted in Atlanta, Dallas, NY, and Los Angeles. Without the support of PilBAL and the dealer network, rates could be anywhere. Also, many key underwriters travel on my PC-12 (S/N 370), which keeps them acquainted with our fine mount.

Client two reveals a professionally flown risk that elected to stay with one market since acquiring the aircraft. Note there is only a slight variance in premium savings by moving from market to market. This client favors tenure over annual shopping and premium savings.



This chart represents a mean of major aviation markets' rate index. Note the premium experience of clients relative to market index. Also consider that Lance Toland's clients maintain a 95% renewal retention rate with the firm. We have over \$500,000,000 in Pilatus assets covered worldwide.

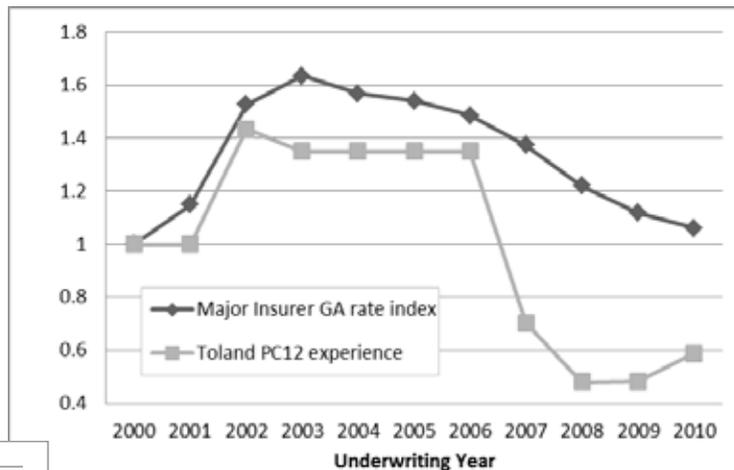
Comparison of domestic single engine turbine loss statistics from DOT: King Air 200 and 350 experience a higher per 100,000 loss rate. Statistically PC-12 losses are insignificant relative to insurance rates. Rather, rates are set from overall aerospace pool loss performance. There is no statistical data to support that owner flown PC-12s have a higher loss record as a group. This is due to pre and post pilot simulator training, and on-going learning through POPA seminars and articles.

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I fly because it releases my mind from the tyranny of petty things . . .

— Antoine de Saint-Exupéry



CE-208 / TBM-700 / PC-12 / PA-46-500TP Accident Involvement Comparative Data

U.S. and Canadian Registered Fleets (Aircraft Introduction Through 2010)

	<u>CE-208</u>	<u>TBM-700/ TBM-850</u>	<u>PC-12</u>	<u>PA-46-500TP</u>
Fleet Size (Year end 2010)**	871	366	691	328
Hours Flown	7,454,410	665,599	2,221,360	444,926
Accidents	133	22	20	22
Fatal Accidents	49	8	8	9
Accidents due Power Loss/ Mechanical Malf/Failure	17	1	3	2
Accidents per 100,000 hrs.	1.78	3.31	0.90	4.94
Fatal Accidents per 100,000 hrs.	0.66	1.20	0.36	2.02
Power Loss Accident Rate per 100,000 flight hours	0.23	0.15	.014	0.45
Power Loss Fatal Accident Rate per 100,000 flight hours	0	0	0	0

****Active fleet size data supplied by AvData, Inc.**



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Leaders in Business Aviation

If the engine fails. Keeping it simple...Or is it?

By John Morris

Does this title seem familiar? If you have been reading the POPA newsletter since 2007 (Winter '08 Issue) or have been to my website, then it is familiar. Except this time I will discuss the “infamous” after takeoff turn back to the airport after an engine failure. The keeping it simple part is a matter of opinion.

Barry Schiff, a regular article contributor to AOPA (and a former guest speaker at POPA) recently wrote about the “impossible turn” in the April, 2011 issue of AOPA. I thought it interesting enough to expand on his thoughts into how it could, or couldn't, work using the performance of PC-12.

Highlights of Mr. Schiff's article included bank angle, direction of turn, climb/glide speed, use of full power at takeoff, and the 5-second (reaction) delay - all classic discussion points when dealing with a single-engine aircraft. Using those highlights I will incorporate the PC-12's performance into the discussion by choosing to analyze the only two known cases of an engine failure after takeoff/return to the airport by a PC-12; Yellowknife, Northwest Territories (Chart 1) and Trenton, New Jersey (Chart 2).

In both cases the aircraft successfully returned to the airport with only one minor injury resulting from the Trenton incident. But will that always be the case? How successful was it, really? Both aircraft had two professional pilots in the cockpit. Did that make a difference?

CHART 1		
Yellowknife, NT (CYZF): 9/16/1999		
Reference	ALTITUDE	DISTANCE
1: Takeoff Rwy 15	800 AGL (Reported) VMC	7250': From T/O with 7 kt Headwind
2: Radius point	500 AGL (22 Seconds)	1300' abeam from #1
3: Over Runway	200 AGL (11 Seconds)	2296' to 50' agl
4: Touchdown	Landing Total = 3111' - 7 kt Tailwind	
5: Plane stopped	Pilot used high-speed taxiway to avoid going off end of runway	
A: Total Landing distance: 5407'-using 200' over runway, tailwind component (7 kts) and Landing Total (POH) flaps 30		
All non-reported numbers are estimated using POH for all performance procedures to 1000 AGL and landing, TABLE 1 and where applicable-based on established glide rate of 114 KIAS/ 800 fpm		

CHART 2		
Trenton, NJ (KTTN): 10/16/2002		
Reference	ALTITUDE	DISTANCE
1: Takeoff Rwy 6	700 AGL (Reported), IMC	6950': From T/O with 0 kt Headwind
2: Radius point	450 AGL (24 Seconds)*	1500' abeam from #1
3: Over Runway	75 AGL	625' to 50' agl
4: Touchdown	Landing Total = 4026' - 20 kt Tailwind	
5: Plane stopped	Against perimeter fence	
A: Pilot probable squared downwind RWY 6 for RWY 16 landing - VMC		
B: Total Landing distance: 4026' Landing Total (POH) flaps 30- tailwind component (20 kts) *Note: If 200' AGL over runway add 2500' to total landing distance		
C: Pilot choose to exit runway towards the right of runway to avoid railroad berm on other side of perimeter fence		
All non-reported numbers are estimated using POH for all performance procedures to 1000 AGL and landing, TABLE 1 and where applicable-based on established glide rate of 114 KIAS/ 800 fpm * Engine partial power when initiating left turn to assigned heading 290°		

TABLE 1

	Entry speed of 120/140 (KIAS)				114 (116)
Bank angle	26° (FD)	35°	40°	45°	40°
RADIUS at 180° (feet)	2626/3575	1830/2490	1527/2078	1281/1744	1378 (1427)
RADIUS at 180° (time) Seconds	41/47	28/33	24/28	20/23	23
RADIUS at 270° (time) Seconds	62/71	42/50	36/42	30/35	35
STALL SPEED (/47. NG)	96 (98)	101 (103)	104 (106)	108 (111)	104 (106)

Calculated distance/time based on Maximum Gross Weight stall speed-clean configuration and standard day conditions with no wind.

140 KIAS radius does not account for deceleration in turn

(Continued from Page 12)

I will let the diagrams / charts speak for themselves. Let's look at the factors regarding the decision making process. This is where the "keeping it simple" is not so simple.

1. Day/Night, VMC/IMC: How would/should that affect the thought of a return to field.

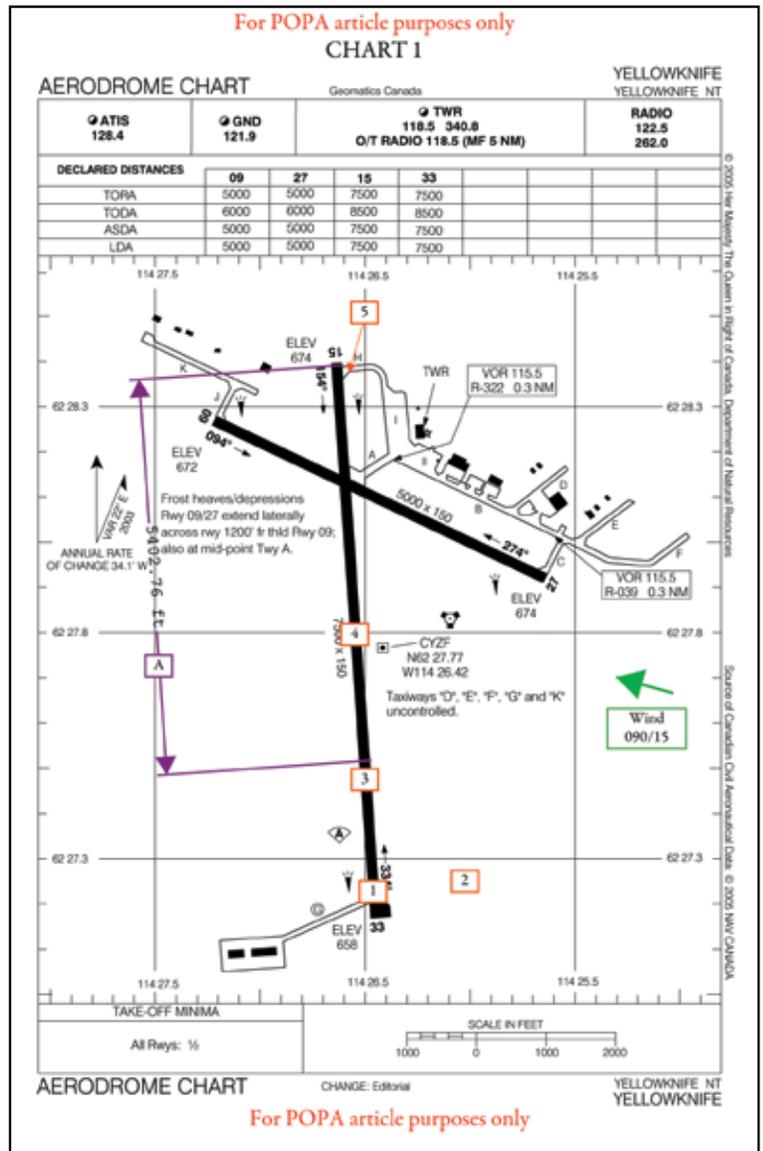
2. Available runways: length versus favorable winds (see both PC-12 incidents).

3. Takeoff/climb power: I have observed over the years some pilots not using maximum available power at takeoff and/or reducing power prior to 1000' AGL! Saving the engine for maintenance costs?

4. Climb speed: Mr. Schiff discusses the best climb speed as between V_x and V_y . For simplicity we should stick with a V_y climb to 1000' AGL. I request this of my students, although it is not adhered to often enough, myself included. So why not climb at a higher initial airspeed? Why V_x/V_y ? If we always knew that the minimum altitude before an engine were to fail would be 800-1000' AGL, then why not? I picked 140 KIAS as the other example in Table 1 since in most cases if takeoff is made with the flight director selected to go-around (and the pitch is maintained to the command bars), the aircraft will pass 140 KIAS at about 800' AGL. 140 KIAS is the most common I see during a standard takeoff when passing 800' AGL, with/without the flight director.

5. The five (5) second delay: Recognition/Reaction to the "oh sh&t!" moment is the best reason for (at least) V_y since the natural reaction of holding or pulling the yoke, will cause the aircraft to decelerate towards glide speed until realization. Oh, by the way, FEATHER THE PROPELLER!

6. Direction of turn: Obstacle awareness/avoidance of the airport environment and immediate vicinity? Do you plan before arriving at the aircraft for that possibility? First time at airport? Landed at airport at night so did not see potential obstacles?



7. Direction of turn: Wind. Should always turn into the wind, except what about those potential obstacles? Our natural tendency to turn left for better pilot visibility may not be the most favorable.

(Continued on Page 14)

If the engine fails... (Cont'd from Page 13)

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8. Bank angle: *VERY* important as it relates to radius of turn & the time it takes for a 270° turn back to, and over the runway. Table 1 shows the bank angles, radius and time for the PC12 stall speeds.

9. Bank angle: *AIRSPEED*. From years of observation once the bank angle turn is initiated the pilot is looking for the runway and not paying enough attention to the airspeed! Bad thing to do, possibly fatal. Of course we want to see what we are aiming for but until at least a 180° turn is performed we should concentrate on flying the aircraft to its best glide speed/bank angle.

10. Wild card: *FLAPS*. When do you deploy the flaps and how long does it take for them to be at full down? Will you remember to reduce your glide speed (angle of attack) as a factor of the flaps?

11. Wild card: *Landing gear*. The landing gear extended will increase the rate of descent (angle of attack) as a factor of maintaining best glide speed causing a shorter time airborne.

12. *THE wildest card: Human factor*. Rest, proficiency, single pilot/dual pilots, training etc... From the many years of being a PC-12 instructor and discussing/simulating the “turn back”, at the end of training I always remind the student that the first one (simulated turn back) is the only one that counts. So how was the outcome of your first attempt? Even after you know it was coming?

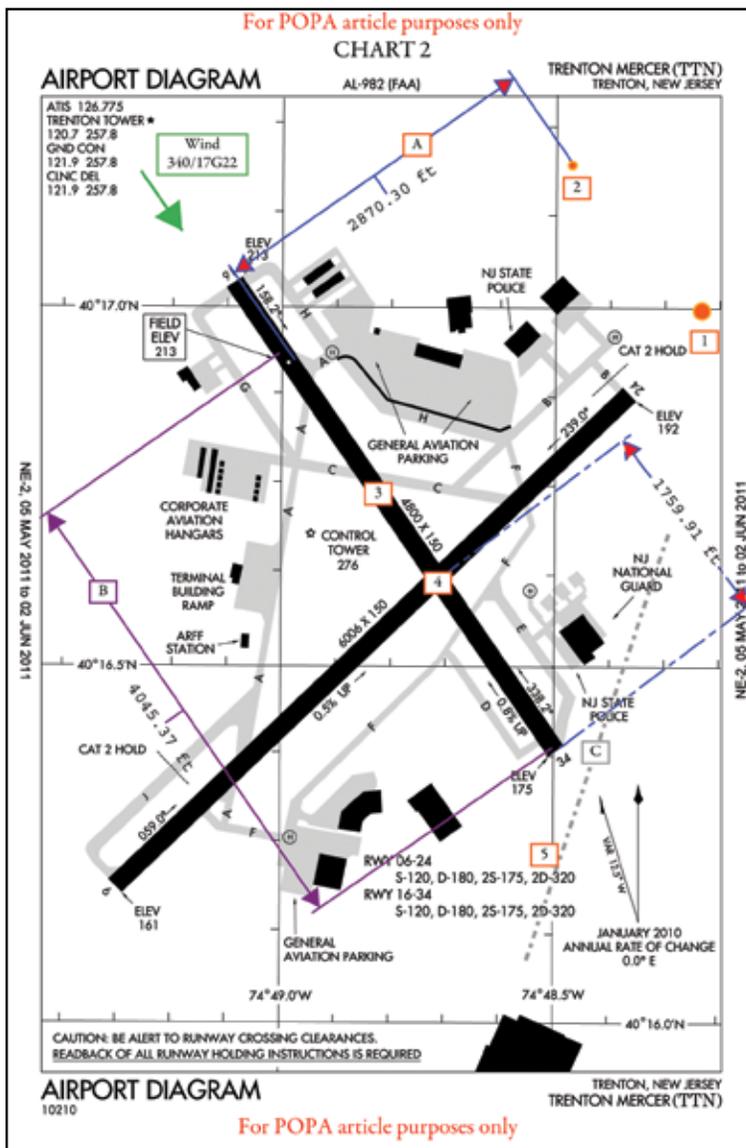
Seems like an awful lot of factors that have to be checked before deciding to make “the turn back”. And how much time do we have to make this decision? I am using the best glide of 800 feet per minute for reference. If at 800’ AGL, we have 1 minute until ground contact. 1 minute to find a point in front, or to the sides, or turn around (270°) while also configuring the aircraft and maintaining control of the aircraft and ourselves. Can it be done? Yes. I have shown two known (successful) examples involving the PC-12. But consider the circumstances and outcome of those two incidents.

So should you attempt it? As in the AOPA article, it is always up to the PIC to make that final decision. It is a decision I hope to never have to make. One of the reasons for owning/operating a PC-12 is the PT6A. It is a very reliable engine that has proven itself repeatedly over the decades. But nothing is perfect and in aviation we must always be prepared. And with a single-engine aircraft we have a select set of factors unique to our type.

So to give us the best opportunity to avoid this decision or to help make the right decision we maintain the engine/airframe to proper standards. We should be aware of the airport environment (runways and buildings) and its immediate surroundings. We should brief, even to ourselves, the engine-out procedure, including wind direction. We should *always* use maximum available power through a minimum of 1000’ AGL and climb at Vy until at least 1000’ AGL.

“A safe pilot is always learning”

John Morris - ACFT Services
www.acftservices.com



John Morris – Formerly with Simcom Training Centers-Orlando for 14 years with 1999 being the first year teaching the PC-12. Program Coordinator for the PC-12 from 2000 until resigning in 2007 to start ACFT Services.

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RECURRENT TRAINING WITH ALPHA FLYING

BY PETE WELLES

18

I have always found training with different instructors beneficial since learning the same skills from varied perspectives generally provides greater understanding and useful insights.

For those of you unfamiliar with Alpha Flying, they fly the largest fleet of PC-12s in the world with 32 total /45, /47 and /47E aircraft. Alpha has many experienced pilots and instructors. Alpha cumulative hours are 130,000 over 15 years and their pilot roster now totals 118. They train their pilots and maintain all aircraft in house.

Joe Howley (POPA Vice President) and I had recurrent training at Alpha's Portsmouth, NH facility for three full days (from 8am to well after 5pm) in early May. Necessary pilot experience, aircraft requirements and their training syllabus follow this article. Although the course is expensive, Alpha is considering alternative approaches to provide a competitively priced product.

Their training is high quality. Although Alpha's recurrent training would benefit any PC-12 pilot, it is particularly insightful for the experienced PC-12 pilot with the foundation to grasp the subtle aspects of PC-12 avionics and flight procedures. Their classroom training consists of the standard charts and graphs for all the aircraft systems yet Alpha's instructors shine in the related Q&A sessions. Further, they have developed proven profiles for all phases of flight, which are discussed in detail during training. Examples are: closing the inertial separator at 2,000' agl and opening it at 5,000' agl (precipitation permitting) which has allowed Alpha to reduce the cost of the hot section by minimizing contamination present at lower altitudes; never takeoff or land in freezing fog, drizzle or rain; and never be the first to land at an airport after a snow without a prior visual inspection.

The most insightful aspect of the course was ground training in our aircraft with systems on gpu power. The first day's session covered the subtleties of the NG's Apex avionics, which are numerous. Particularly important was understanding format commands for entering airways and non-published intersections, which are not intuitive but critical especially for flight in the New York airspace. The second day's session covered emergency procedures with the QRH. Actually working through the steps for many emergencies by finding the proper switches and/or circuit breakers was most helpful and far better than just seeing the particular steps on a classroom overhead screen.

Flight training to proficiency was done in our own aircraft during flights each day and was equally thorough. Varied in-flight maneuvers, approaches, assorted field techniques and emergency procedures were executed.

Training with Alpha is all about their countless insights, which their extensive experience has created. Including Alpha as part of your personal training is well worth your time.

Experience & Prerequisites

Since this course has been designed for the experienced PC-12 pilots, we expect you come with the following qualifications:

- Private Pilot (minimum) with Instrument Rating
- Current 3rd Class Medical Certificate (minimum)
- High altitude, complex, and his performance endorsements
- Previously attending an initial PC-12 course

Aircraft Requirements:

For us to conduct training in your aircraft, it must be airworthy by FAA standards. Our maintenance department will perform a comprehensive overview of your aircraft to ensure airworthiness. They will look for the mandatory items listed below:

- A current annual inspection
- A current 100 hour or 150 hour inspection
- Compliance with all Airworthiness Directives
- Compliance with all mandatory Service Bulletins
- In accordance with 91.213, all open discrepancies must be repairs unless properly deferred in accordance with approved MEL
- A current GPS database

If any discrepancies are found, we will make arrangements to complete the flight portion after they have been resolved. If you are able to send the aircraft logbooks ahead, prior to the course date, we can determine this ahead of time. *Please note, we will provide current charts for flight training in our local area.*

Insurance Requirements:

We require that you have Alpha Flying, Inc., and affiliates listed as an additional insured on your insurance policy with a waiver of subrogation.



Ground Training Syllabus

Monday, May 2, 2011

0830-0900: PC-12 Systems Introduction

0900-1100: PC-12 Avionics/ APEX Overview

1100-1200: PC-12 Systems

- Flight Controls and Trim, Wing Flaps
- Stick Shaker and Pusher
- Landing Gear

1200-1300: Lunch

1300-1430: Avionics in the aircraft

1430-1500: Aircraft preflight

1500-1700: Flight Lesson 1

Tuesday, May 3, 2011

0830-1200: PC-12 Systems (continued from day 1)

- Engine Fuel and Fuel Delivery
- Aircraft Powerplant and Engine Power Management
- Oil
- Propeller

1200-1300: Lunch

1300-1500: Weight and Balance / Performance

1500-1700: Flight Lesson 2

Wednesday, May 4, 2011

0830-1100: PC-12 Systems (continued from day 2)

- Electrical
- Environmental (ECS, heating, cooling) and Cabin Pressurization
- Anti- and De-Ice

1100-1230: Summer and Winter Operations

1230-1330: LUNCH

1330-1500: CRM; Aircraft Checklists

1500-1700: Flight Lesson 3

Thursday, May 5 - Friday, May 6, 2011

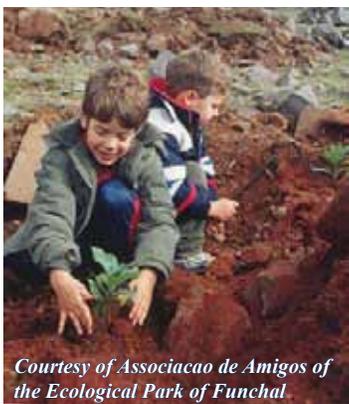
Flight lessons as required to complete flight training

Take off on an Exciting Eco-Adventure

By Christine Knauer

Before you take off for your next vacation, consider choosing an adventure that weighs a little lighter on the planet. Depending on your destination, you can shave a few tons of carbon dioxide emissions, reduce pollution of waterways, preserve an acre of rainforest, build a school, help fund vital research and more. Plus, you'll get a whole new view of the world.

A growing trend, eco-tourism or eco-light vacations focus on travel to exotic, fragile or protected natural areas where sustainable practices are observed. Ideally, the trip minimizes impact on nature, helps build environmental and cultural awareness and respect, and provides direct financial benefits for conservation efforts and the local people.



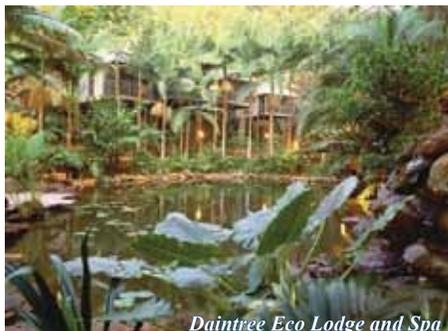
Courtesy of Associacao de Amigos of the Ecological Park of Funchal

“Voluntourism,” a form of ecotourism, combines volunteering and vacationing into one trip, offering an opportunity for personal growth and a hands-on learning experience while providing invaluable services to an organization or local community. On a volunteer vacation, you often live and work side-by-side with local people. It's a first-hand look at life in another culture not possible on a typical vacation.

If you want to get involved, organizations such as the Sierra Club offer a variety of specially organized outings for a fee. For example, an eight-day trip coming up in November costs \$1,295 and gives you the opportunity to join other volunteers on a Caribbean habitat restoration project in El Yunque National Forest, Puerto Rico. After you park your PC-12 on the tarmac, you'll spend time building and maintaining wilderness trails.

This year, the Earth Watch Institute is offering an archeological expedition from six to 13 days excavating the Roman maritime settlement of Poggio del Molinoyou. The six-day adventure in Italy starts at \$1,895. Other trips include working with the Samburu people of Kenya to protect biodiversity and helping protect Pacific grey whales by tracking them in their summer feeding grounds off the west coast of Vancouver Island.

If you prefer less work and more play, sustainable or eco-friendly travel options include places like the Daintree Eco Lodge and Spa in Australia.



Daintree Eco Lodge and Spa

Highlighted by the BBC's Lonely Planet and Oprah's Ultimate Australian Adventure, the family owned and operated boutique resort features 15 treehouses perched in a rainforest that's more than 110 million years old.

If you love the water, Seacology, an international environmental non-profit organization that focuses on saving endangered species, habitats and cultures of islands throughout the world, offers extraordinary island adventures. A diving expedition like the one coming up in October gives you a seven-night sea voyage aboard the state-of-the-art Odyssey ship, and provides an insider's view to the organization's conservation efforts. The nearly \$7,000 eco-cruise features a visit to one of Seacology's conservation projects in Chuuk, a Micronesian archipelago north of Papua New Guinea. Guests enjoy diving in the Chuuk lagoon to see exotic fish, coral reefs and some 20 shipwrecks.



Courtesy of Seacology/Jeff

For more ideas, Travelocity's Travel for Good Website offers a list of green hotels, green travel options, and vacationing volunteer opportunities.

While you're looking, be wary of businesses that “green-wash” their products and services. Placing a hotel in a fragile landscape will severely damage the ecosystem regardless of how much recycling the staff does. However, a small, family owned inn might be providing an alternative income to logging or wildlife poaching.

Discerning the difference isn't easy so start with reputable, proven organizations, and ask lots of questions. With a little effort, you'll likely find a fabulous eco-adventure that's easy on Mother Nature and creates memories to last a lifetime.

Christine Knauer, a freelance aviation writer, has more than 13 years experience writing for and about aircraft and avionics manufacturers, flight service centers, aviation technology and industry-related issues. A contributing editor for Avionics News, her articles also have appeared in Twin & Turbine Magazine, AutoPilot Magazine, American Bonanza Society Magazine, International Federation of Airline Pilots Association New Technology Journal and other industry publications.



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HOBBY LOSS RULE...

DOES IT AFFECT YOUR AIRCRAFT DEDUCTIONS?

24

Internal Revenue Code (IRC) Section 183 (Activities Not Engaged in for Profit) limits deductions that can be claimed when an activity is not engaged in for profit. This is sometimes referred to as the “hobby loss rule.” For example, the tax court docket has many cases involving horse breeding activities disguised as profitable businesses by taxpayers. As aircraft have come under increasing scrutiny by the IRS, examiners have attempted to apply this code section to business aircraft owners.

Is your aircraft really an activity engaged in for profit? This is the question an IRS auditor likes to ask. A properly structured and documented business aircraft should seldom have to deal with the hobby loss rule.

Unless you are involved in an aircraft rental and leasing business, your aircraft should be viewed as an asset being utilized in your operating business, and not a stand-alone aircraft business, as it is often difficult to justify the aircraft as profitable on a stand-alone basis.

For example, if you are a construction contractor and you use your aircraft to visit job sites and vendors, attend trade shows and conventions, your business aircraft is, in fact, a business tool for your construction business, similar to a bulldozer and other construction equipment. This is obvious when the aircraft is owned within the contractor business entity.

For various legal, financial and tax reasons, a business aircraft is often owned by a separate legal entity, like a limited liability company (LLC). This is when the IRS likes to invoke the hobby loss rule in an attempt to disallow the aircraft deductions. For this reason, determining who should be the member of the aircraft LLC is critical.

Case laws support the concept of grouping, where the contracting or operating business and the aircraft “business” are grouped together when the profitability test is applied. If the contracting business is profitable, by virtue of a grouping election, your aircraft business is also profitable. The requirement to group is met by demonstrating that the two businesses are inter-related, which is typically the case when the aircraft is used for various contracting business trips. A detailed and well documented flight log and a business plan or financial projection are useful in proving the appropriateness of grouping the aircraft with an operating business.



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Tel: 800.342.9589 Cell: 317.716.3388



Whether or not an activity is presumed to be operated for profit requires an analysis of the facts and circumstances of each case. Deciding whether a taxpayer operates an activity with an actual and honest profit motive typically involves applying the nine non-exclusive factors contained in Treas. Reg. § 1.183-2(b). Those factors are:

1. Manner in which the taxpayer carries on the activity
2. The expertise of the taxpayer or his advisors
3. The time and effort expended by the taxpayer in carrying on the activity
4. Expectation that assets used in activity may appreciate in value
5. The success of the taxpayer in carrying on other similar or dissimilar activities
6. The taxpayer’s history of income or losses with respect to the activity
7. The amount of occasional profits, if any, which are earned
8. The financial status of the taxpayer
9. Elements of personal pleasure or recreation

Hobby loss cases are driven by each taxpayer’s specific facts and circumstances. Failure to earn a profit does not mean that a business activity is a hobby. There are factors that are outside the control of the taxpayer that can contribute to losses for a business. In a United States Tax Court case, *Rabinowitz vs. Commissioner of IRS* (TC Memo 2005-188), the taxpayer operated a charter business and incurred losses from 1985 to 1997. The Tax Court ruled that “the taxpayer engaged in the jet charter activity with the primary, predominant and principal purpose and intent of realizing an economic profit independent of tax savings during the relevant years” and allowed the losses.

Disclosure Under IRS Circular 230: To ensure compliance with requirements recently imposed by the IRS, we inform you that any tax advice contained in this communication, including any attachments, was not intended or written to be used, and cannot be used, for the purpose of avoiding federal tax related penalties or promoting, marketing or recommending to another party any tax related matters addressed herein. Aviation Tax Consultants, LLC assists aircraft purchasers in acquiring aircraft in a tax efficient manner. Our services include the elimination or reduction of sales tax at the time of purchase, maximizing income tax savings, controlling the cost of personal use of the aircraft, complying with passive activity loss and related party leasing rules and Federal Aviation Regulations. Cooperation with client’s current tax and legal advisors is welcome and encouraged.

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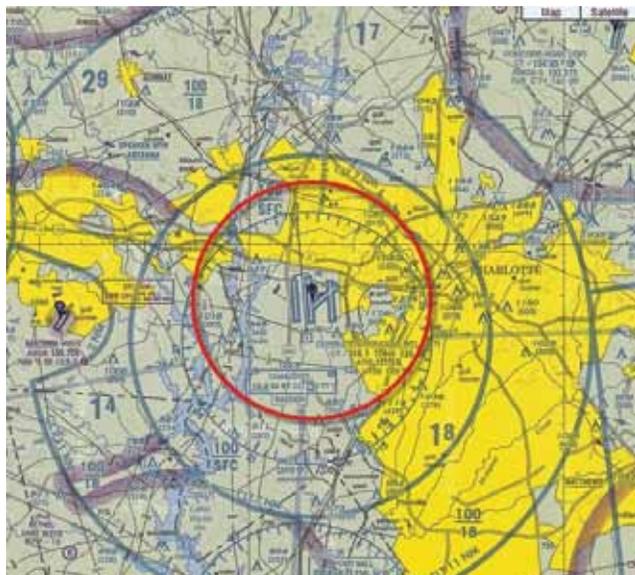
by Scott C. Dennstaedt

Let's say you are flying into Charlotte/Douglas International Airport (KCLT) arriving in the early afternoon. In the morning you get online and notice the 1200 UTC terminal aerodrome forecast (TAF) for Charlotte simply says FM091600 12012G18KT P6SM VCSH BKN070 which represents the prevailing weather conditions for the entire afternoon. Showers in the vicinity of the terminal area with high cloud bases doesn't seem very threatening for most pilots even for a pilot flying VFR into Charlotte. Would you believe me if I said this is a forecast for thunderstorms?

Sure, this technically is not a forecast for thunderstorms. Instead, it is one of several methods that a forecaster will use to quantify his or her uncertainty while attempting to address the threat of convection in the near future. Few pilots understand this and part of the challenge is learning to read between the lines of a TAF.

Forecasting the weather is largely a game of quantifying uncertainty. That is, forecasters are ever rarely 100-percent certain of any particular weather event, especially when it comes to convection. Despite the wishes of many pilots wanting miracles from meteorologists, convective weather is just not that predictable more than an hour or two in the future – even then, forecasters often play a game of catch-up. So, they use a probabilistic approach to quantify their uncertainty; this is an approach that bothers many pilots.

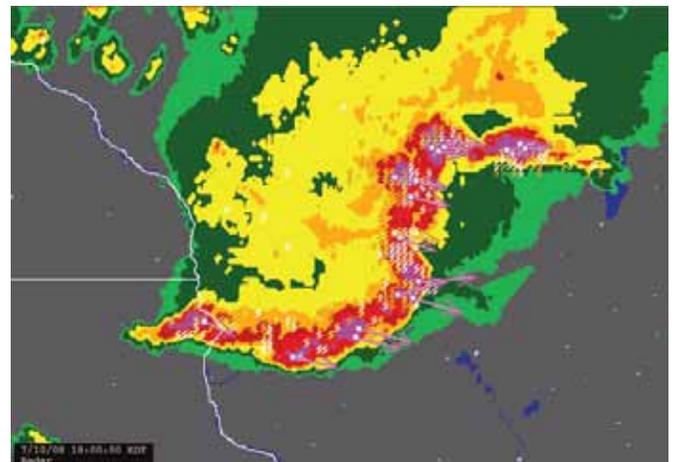
Is a TAF a probabilistic forecast? Yes and no. If a forecaster places TSRA in a FM group such as FM091800 12012G18KT P6SM -TSRA BKN025CB, they are suggesting to the pilot that there's a 50 percent or greater chance for light rain and thunderstorms to impact the terminal area beginning at 1800 UTC in this instance. If the forecaster believes there's less than a 50 percent chance of thunder in the terminal area, you won't see TSRA.



With a 5 statute mile radius, the NWS considers a TAF to be a point forecast. Shown here by the red circle is the size of the terminal area for Charlotte/Douglas International Airport (KCLT).

Here's the issue. The terminal area is defined as the region that is within a 5 statute mile (SM) radius from the center of the airport's runway complex. That's such a small area of real estate that the NWS considers it a "point" forecast. In other words, it's not a zone or area forecast and should never be used as such. When thunderstorms are a threat, can the forecaster be absolutely confident that a thunderstorm will develop within or roll through this tiny forecast area six hours from now or even three hours from now?

When a weather system associated with a front or developing area of low pressure exhibits strong atmospheric dynamics or forcing, then the forecaster might be more certain of the timing and impact of a convective event within the terminal area. In that case, he or she may identify the threat specifically with -TSRA or VCTS (thunderstorms in the vicinity of the terminal area). These dynamic situations do not describe the normal convective scenario throughout the year; most convective events have a much higher degree of uncertainty. This is especially true for a forecast of convection more than four to six hours in the future.



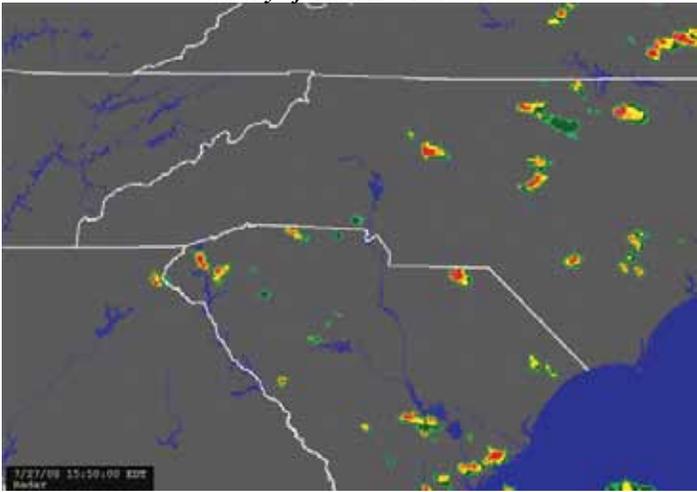
There's no doubt that you'll see a couple dozen TAFs containing a forecast for thunder ahead of the path for this kind dynamic convective event.

What are the forecaster's options when there is a fair amount of convective uncertainty? Most local weather forecast offices (WFOs) have developed their own local forecast rules or guidelines based on specific forecast criteria. Forecasters will apply these rules based on their professional judgment for airports that are serviced by a TAF that fall within their county warning areas (CWAs). Every WFO is essentially allowed to develop, manage and apply these homegrown guidelines as they see fit. And there's absolutely no requirement to publish them. In other words, pilots have no way of appreciating what a forecaster is trying to convey in a TAF. Moreover, guidelines may change as the forecast philosophy changes at that particular WFO.

So, what are some of these guidelines? Well, the forecaster could simply leave it out any mention of a convective threat

(Continued on Page 29)

When thunderstorms are expected to be scattered or isolated as they are in this radar image, don't expect to see thunder added to any of the TAFs in the area.



(Continued from Page 28)

and let the next forecaster on the short term desk deal with the issue. This may be the preferred method when the convective event isn't expected for six or more hours. They may simply use CB (for cumulonimbus clouds) for the lowest layer of clouds. For example, you may see FM102000 26009KT P6SM SCT025CB BKN060. Notice there isn't any mention of TSRA or VCTS in this forecast. Another favorite is to just include VCSH (showers in the vicinity of the terminal area) or -SHRA (light rain showers in the terminal area). In these cases, the cloud group may or may not contain CB in the cloud group such as FM191600 33005KT P6SM VCSH BKN060CB. What the forecaster adds or omits is conveying his or her confidence at that moment.

As the event begins to unfold, future scheduled TAFs will likely change as forecaster confidence increases or decreases. They may add VCTS such as FM192200 30006KT P6SM VCTS BKN050CB. Or they can also include a TEMPO group such as TEMPO 1919/1923 3SM TSRA OVC030CB. In some cases, this might be issued after you've already departed; that's why it's important to always get updates to the forecast while en route.

In addition, a forecaster can amend the TAF at any time to reflect a higher degree of confidence. That's typically the scenario when the expected convection is within the first six hour period after a TAF is issued. It is not unusual to see a TAF go from -SHRA BKN050 to VCSH BKN050CB to VCTS BKN050CB to -TSRA BKN050CB all within a two or three hour period. Pilots may see this as the forecaster just covering his or her mistakes when, in fact, it is just a way for the forecaster to express his or her confidence in the forecast.

What about the PROB30 group? If the forecaster is really uncertain about convection, why not just add this to the terminal forecast? Even though forecasters are encouraged to "give it their best shot," the NWS has a strict "directive" that says PROB30 groups cannot appear in the first nine

hours of the forecast. In fact, their software checks all outgoing forecasts to be sure this directive is indeed met. By the way, in the U.S. only PROB30 groups are allowed in TAFs constructed by the NWS...PROB40 was banned from NWS TAFs more than a decade ago. However, you may still see PROB40 in TAFs for military airports. Many forecasters prefer not to use PROB30 in a TAF even after the first nine hours.

One of the best tools is to read the area forecast discussion (AFD). After the forecaster issues his or her TAFs, the same person is responsible for developing the AFD. Every AFD has an aviation section designed to allow the forecaster to express his or her uncertainty. For example, in Charlotte forecast we looked at originally (FM091600 12012G18KT P6SM VCSH BKN070), the forecaster at the Greenville-Spartanburg WFO suggested the following...

"SCATTERED SHOWERS AND A PERHAPS A TSTM... ARE EXPECTED ACRS THE NC PIEDMONT FROM THE AFTERNOON UNTIL EARLY EVENING AND WILL CARRY VCSH FOR NOW TO COVER THAT THREAT."

In fact, at 1813 UTC on that day, Charlotte/Douglas airport reported a thunderstorm in the terminal area base on this METAR...

KCLT 271813Z 07003KT 10SM TS SCT040CB BKN090 BKN200 16/09 A2956 RMK AO2

TSB13 OCNL LTGIC TS SE-SW-W MOVG E CB NW-N MOVG E.

I live about 30 miles south-southeast of the airport and we had a severe thunderstorm roll through the area including small pea-sized hail. If you based your decision to fly to Charlotte solely on the 1200 UTC TAF, you might have been a bit surprised if not annoyed having to work your way around these thunderstorms and not just some high-based rain showers in the vicinity of the airport. And yes, the TAF went through a couple of amendments including this one at 1642 UTC...

FM271700 26008G18KT 6SM -SHRA BR BKN045 OVC070CB

and this one at 1739 UTC...

TEMPO 2718/2720 25010G20KT 5SM -TSRA BR SCT030 OVC050CB

This last amendment was just 34 minutes before the thunderstorm entered the terminal area. While you may think the forecaster produced an inferior forecast, don't be so quick to make judgments. Imagine trying to forecast the weather for just your immediate neighborhood. That's what it's like to forecast for a terminal area.

(Continued on Page 30)

Terminal Thunder...

(Cont'd from Page 29)

For airports that have commercial operations, forecasters have a whole different set of outside pressures. This is especially true for high impact airports. When a forecaster includes TSRA as the prevailing condition or it is included in a TEMPO group, airlines landing at this airport during this time must file an alternate which implies that they must carry additional fuel. So, forecasters are extra sensitive to placing a forecast for thunderstorms in the terminal area when there's very little confidence. Of course the goal between the NWS and the airlines is to balance economics and safety.

Despite these outside pressures, TAFs have real limitations due to the extremely small size of the terminal area. If you are looking at the TAFs the night before your flight, don't depend them alone to highlight areas of convection for the next day. Meteorologists are a long ways from being able to do this with any degree of accuracy. Depending on the circumstance, forecasting deep, moist convection (thunderstorms) in the terminal area is either incredibly difficult or fundamentally impossible more than a few hours in advance. Meteorologists can look at all the available data, with all the available scientific understanding, and still be way off in their terminal forecast.

Scott C. Dennstaedt is a CFI and former NWS research meteorologist. He is an IFR magazine contributing editor and writer for Twin & Turbine. You can reach him by e-mail at scott@avwxworkshop.com or visit his website at <http://avwxworkshops.com>.

INITIAL AND RECURRENT PROGRAMS

The flowchart illustrates the training process. It starts with two main categories: **INITIAL** and **RECURRENT**. The **INITIAL** path involves **Approx. 24 Hours** of **ATM Ground School** and **Up to 10 Hours** of **ATM Flight School**. The **RECURRENT** path involves **Approx. 16 Hours** of **ATM Ground School** and **Up to 5 Hours** of **ATM Flight School**. Both paths lead to a **CERTIFICATE OF COMPLETION** from AM Aviation Training Management. The certificate is for **Luke Martin**, who has satisfactorily completed a 24-hour initial ground and flight training course in the PC-12 on the 9th day of April, 2007, signed by **Dave Garvey**, Instructor. This leads to **INSURANCE APPROVAL**.

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Is Apple's iPad ready for primetime as an EFB?

Apple iPad's touchscreen interface, snappy response time and instant-on capability make it a natural for the cockpit but is the popular tablet suitable as a portable electronic flight bag (EFB)?

The answer is yes and no. For PC-12 owners flying in the United States under Part 91, the answer is likely yes. However, the FAA is still weighing the issue.



The Federal Aviation Administration (FAA) makes it clear that portable and semi-permanently installed devices do not meet any FAA-required information or function, according to Wes Ryan, manager of programs and procedures of the Small Aircraft Directorate for the FAA.

"You might use one of these things as backup if you're flying IFR and you have installed-GPS or other nav aids that you're navigating by. It gets a little grey if you're talking VFR only. [The FAA] needs to clarify what's appropriate from an operational perspective," said Ryan, speaking at the Aircraft Electronics Association's International Convention and Trade Show held in March.

In February, Executive Jet Management, a subsidiary of NetJets, received FAA authorization to use Jeppesen's Mobile TC App on the Apple iPad as an alternative to paper aeronautical charts. With the authorization, Executive Jet Management can use the iPad and Jeppesen software as the sole reference for electronic charts, even during taxi, takeoff and landing.

For the rest of us, the FAA offers some guidance on the issue in FAR AIM & Part 91 Handheld Systems and Portable Devices. Given the popularity of the iPad and other consumer gadgets, the FAA will likely clarify the issue soon.

Regardless of the rules, the iPad may not be an ideal EFB for sole navigation. It has its limitations. Heat, moisture, limited battery life and electronic glitches can wreak havoc on the tablet, and on your flight. When it comes to your safety, even the iPad's incredible convenience and capabilities may not outweigh the peace of mind of a proven albeit more expensive, panel-mounted EFB.

This flight bag is already packed.



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I've had the distinction to know personally, and fly with on several occasions, a very capable and good Marine pilot from my days flying the A-6 Intruder. Naval Aviation is celebrating 100 years this year and is just as vibrant and lethal today in projecting US foreign power as it has been for most of its existence. Naval power as a projection of sea power ashore is, and will be, vital in the war on terror. Providing close air support for combat operations in Afghanistan, for Iraqi Freedom as well, and now providing essential support for combat operations in Libya.

Operations at sea are a challenge under normal circumstances. Night adds an additional layer of challenges and most certainly heavy seas and blue water operations¹ present their unique challenges to Naval Aviation. Naval Aviators, which includes Marines, are assigned to Carrier Strike Groups that forward deploy aboard one of the US Navy's aircraft carriers. Naval Aviators, which includes Naval Flight Officers, are arguably some of the best trained aviators in the world. This is not to slight my Air Force and Army Aviator brethren. Naturally, they will have issues with who might be the best, but those services do not have the unique challenges of operating at sea. The battle groups deploy to project US power at the direction of US foreign policy as directed by the Commander In Chief with Congressional oversight. I am reviewing a particular incident that occurred aboard the USS Ranger, of which I have personal knowledge of the incident and crew. There are many other "sea stories" that have occurred and will continue to occur on a regular basis...and usually not with the same outcome. There are lessons to be learned and carried with those of us in General Aviation to enhance our own operations to reduce insurance claims, and gain a better understanding of the human factors that can dramatically effect air operations in any arena, be it Naval Aviation or General Aviation.

The USS Ranger was operating in the Pacific, West of Hawaii. Forward deployed operating under sea state 7² which suffice it to mean heavy seas, 20+ foot swells, pitching deck blue water operations at night. Some might say, "But we got that going for us." Many of these stories start under similar cloak of, "There I was out of airspeed and out of ideas." This case was not too terribly different. One might ask: Why is the US Navy operating under such circumstances? The answer is, in short, "because we can."

On this particular night, an A6 Intruder with my fellow Marines on board, NATO call signs "Atlas" and "Tank," were approaching the ship for what turned out to be a not so routine night recovery. When on short final as the jet came down, the ship went up. The two hit hard, and in a shower of sparks, the right main mount was sheared off causing a

simultaneous bolter³. The Intruder was airborne again in short order, only this time with only a nose wheel, left main and a peg. The jet had hit so hard that the right main wheel sheared off the right main mount. After separating from the jet, the wheel bounced with a vigorous wobble down the angle deck, and unceremoniously plunged into the sea. Our aviators, with their crippled jet, try as they might, could NOT find the emergency procedure for a sheared main mount wheel in their NATOPS⁴ PCL (Pocket Check List). Imagine that! Like most emergencies, this one was not text book either. Their first thought was: We have a hydraulic leak. We know because the wheel breaks are hydraulic, and a hydraulic line is attached to said wheel, which was on its way to Davy Jones locker.

The Intruder was a great machine and was very capable, as well as a (relatively...I use the term relatively loosely in this context), easy jet to bring aboard ship. The A6 Intruder served in the US Navy and US Marine Corps for over 34 years, saw combat action starting in Viet Nam in '66 through the first gulf war in '91. It was subsequently retired from service in '97, making its last cruise in 1996. Its approach speed was relatively slow, around 126 kts. It was quite stable, with big negative dihedral wing, 53 foot wing span, wing tip speed breaks, and wing loading of 117 lbs/ft² at gross weight. A6 squadrons generally had good boarding rates. Not the least of its characteristics was it was built by Grumman Aerospace. The Intruder was affectionately, called by those who flew Grumman built products, "Grumman Iron Works" for good reason.

Our aviators immediately knew they had some issues to deal with and deal with them quickly. First off, the jet had a hydraulic leak. Anyone that flew the machine knew it was a complex hydraulic airplane. It had 4 hydraulic systems, a flight hydraulic, a combined hydraulic, a backup hydraulic system and an auxiliary hydraulic system. When the jet was clean after the flaps and leading edge slats were retracted, (around 250 kts), the combined hydraulic system was isolated by a switch to provide all hydraulic pump power to the flight control system. The other hydraulically driven systems were not needed until getting ready to land; landing gear control, flaps and slats, arresting hook, wheel breaks, etc. Isolating the secondary combined hydraulic systems also aided in combat to protect other hydraulic systems in the jet should it become subject to hostile fire. The two main hydraulic systems, flight and combined primary and combined secondary, were separated to allow for a hydraulic leak on one side that would not affect the other side. That was how it was supposed to work. It traditionally didn't always work that way, as many

1 Blue Water Operations means that there are no divert fields. The only place to land is the ship.

2 World Meteorological Organization sea state codes: Sea state 7, wave height 6 to 9 meters characteristics: high.

3 Bolter is when an aircraft attempting to land on the flight deck of an aircraft carrier touches down, but fails to catch an arresting cable and come to a stop.

4 NATOPS: Naval Aviation Training and Operations Procedures Standardization. The US Navy and US Marine Corps standardization doctrine.

(Continued from Page 36)

of us found out over the years of operating the jet. The backup hydraulic system was merely designed to get you out of the combat area where you could recover on a runway somewhere. You were NOT going to bring it aboard ship on the backup hydraulic system and most certainly not at sea state 6 or 7. It was hard enough getting aboard under sea state 7 with all systems functioning normally, much less a crippled jet with a hydraulic leak.

What does all this mean? With a hydraulic leak due to the severed right main, which really was a wheel break line, that leak was going to affect the combined secondary hydraulic system and eventually the flight primary hydraulic system. It was only a matter of time. This meant our young aviators were going to be ejecting sometime soon unless they could get the jet aboard quickly. Diverting was not an option; hence the statement “blue water.”

The thought between our two aviators was they didn't want to bring the gear up or the flaps and slats up because they were afraid that they would not get them back down again; they are hydraulically actuated. The speed breaks were in as a reflex on the bolter. The standard procedure on touchdown at the ship was MRT, BOARDS IN (Maximum Rated Thrust, Speed Breaks IN). Maximum rated thrust meant you pretty much slammed the throttles to the stops and took what power the engines gave you until you either came to a stop from the arresting cable or you bolstered...or airborne again to get another look at the back of the ship.

The ship from which there is no end of supervision and assistance, first directed a solution. The US Navy and the US Marine Corps for that matter didn't lack for forward leaning Type A personalities. There were those of us convinced the ship really wanted to kill us, or at least make our lives miserable in the process. “Fly alongside and eject. The plane guard will pick you up out of the water,” was the immediate solution provided by the powers at be on the ship. The problem was they were on the ship. Not in the crippled jet looking forward to sliders and bug juice (burgers and Kool-Aid) in the comfort of the dirty shirt wardroom. Giving that quick consideration and given the sea state, our guys responded rather emphatically. “NO, we're not doing that,” not really knowing what to do other than ejecting didn't sound too promising. Ejecting at night was not a comforting solution, let alone in heavy seas. Imagine how that response coming from two Marine Captains responding NO to a solution recommended by the quickly convened

senior leadership, and how the NO response was likely received, and the military dynamic involved. Here you have relatively inexperienced Marines no less, guys that don't go to sea that often,

responding to a group of very senior experience Naval Officers, that no doubt had at an experience level to draw on many times that of the young Marines now wrestling the crippled jet...at night...in heavy seas.

This is the type of circumstance that often takes gut instinct to recognize and resolve quickly as to not endanger the lives of those involved. Keep in mind the dynamic involved here. A crippled Marine Intruder, deployed with a Navy Carrier Air Wing, with a non-text book problem where nearly any option has a low probability of a favorable outcome. So once our Marines declined the, “eject alongside” option, it pretty much relegated them to a barricade⁵ arrestment. You have to realize that the barricade arrestment is a dicey proposition at best much less at sea state 7. There were many things that could go wrong, and there was no precedent for the effect of the “peg” without the wheel, and its consequences upon landing.

The barricade is like a big net, rigged across the landing area just forward of the crossdeck pendants, (the arresting 4 cables), that is designed to catch an airplane that had a damaged hook or separated hook point. I doubt when the barricade was designed was not designed for this type of pending arrested landing. A barricade arrestment would be similar to an off-field landing; there is going to be some damage and personal injury is likely. Once the decision to take the barricade was made all efforts went into accomplishing this task given the current sea state, night and blue water operations. An entire Carrier Strike Group, which included an Admiral and Staff, embarked aboard the Carrier. They were now focused on obtaining a successful outcome subject to the refusal by two Marine Captains of course of action #1.

The ships airborne tanker provided all available fuel and recovered uneventfully. The spare tanker was launched to provide its total fuel to set up for the one shot at the barricade arrestment. After our young Marines drained the second tanker, the KA-6 was an organic asset to the carrier air wing which was, and still would be a terrific tanking asset due to the excessive amount of fuel the jet could carry, and the speed the jet could fly if necessary. When I spoke to “Atlas”, the pilot of the crippled Intruder along with his Bombardier “Tank”, he relayed to me when he was tanking, he and “Tank” thought they should keep the landing gear down as well as the flaps and slats down; it took so much power to keep the plane flying while tanking, they were burning fuel as fast as they were getting it. After draining two tankers, and having the tankers recover, (because once you took the barricade arrestment the deck was going to be fowled for who knows how long), it was time to rig the barricade. And the barricade was a one shot deal. There were no second chances. On touch down with a barricade arrestment, the pilot closes the throttle, which is completely different to normal. In this case, all the cross deck pendants were removed to alleviate unintended entanglement with the peg. The default solution leads back to the “eject alongside” option...still not a good one.

⁵ The barricade is an emergency recovery system, used only when a normal (pendant) arrestment cannot be made. The barricade is normally in a stowed condition and rigged only when required.



(Continued on Page 40)

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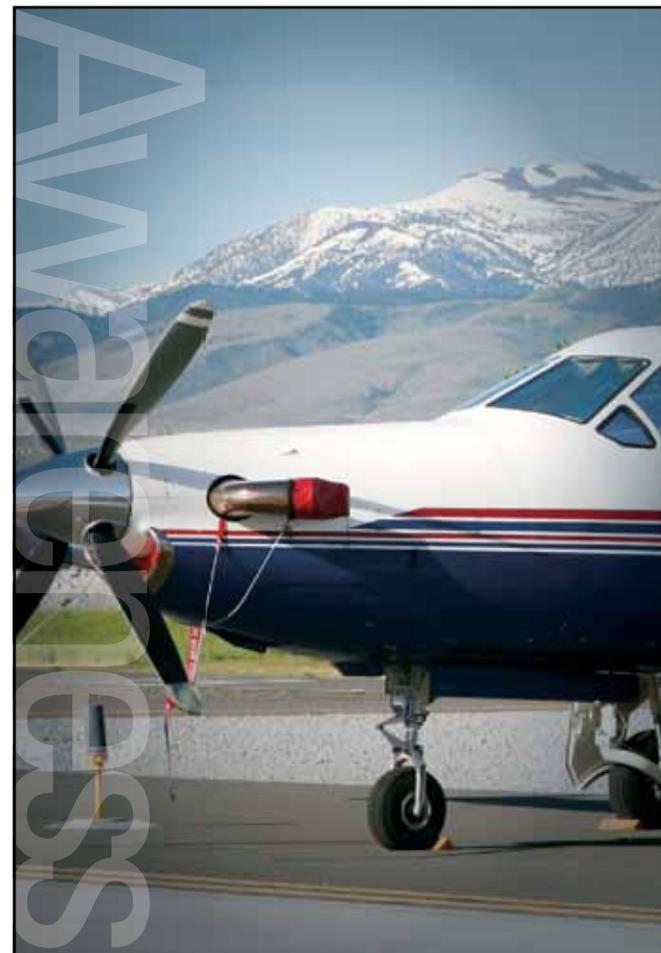


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Nose Gear, Left Main and a Peg... (Continued from Page 37)

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The approach was a normal straight in approach to the carrier. Similar to a night ILS only to a pitching carrier deck that was pitching not less than 20+ feet as the crippled jet approached. It is normal for the Bombardier to do all of the communication in the Intruder community, at 3/4 of a mile behind the ship you “call the ball” with your fuel state. Normally, it is a call to the LSO, (Landing Signal Officer); “Intruder Ball 6.0”. Atlas



reflected that just as Tank was getting ready to key the radio to make the ball call, the ship appeared to go vertical in the water. All they saw was an apparent wall of steel less than a mile in front of them in the dark luminescence of the ship.

Tank, the ever aggressive physical specimen, picture poster Marine, former running back for Georgia Tech, intimidated by nothing,



keyed the mike to make the radio call and nothing came out! For once in his career, Tank was speechless! Both of them went slack jawed at the daunting sight right in front of them with an apparent less than favorable outcome of this attempt at an arrested landing. With fuel running low, both tankers recovered this was no time to second guess the timing of this approach to the ship.

To make a short story long, the pitching deck stopped and held steady for a short period of time to enable a relatively unceremonious barricade arrestment. The only damage to the jet, besides the sheered main mount, was the speed break which scraped the deck on landing. The speed break was replaced, a new main mount put on the jet. It was flown within days of the incident... once again a



credit to the Grumman Iron Works product. I have included the YouTube link of the barricade arrestment. It starts at 5:00 minutes into the segment.

This particular sea story incorporates a series of factors that dramatically demonstrates the interactions of many aspects that lead to the development of the situation and the resolution of a subsequent complex situation. Human factors involves the study of all aspects of the way humans relate to the world around them, with the aim of improving operational performance, safety, through life costs and/or adoption through improvement in the experience of the end user. In this case, improvement in the existence of the end user most certainly was the most favorable outcome to a difficult situation. The human factor dynamic is also demonstrated by the dynamic of the command structure in the US Naval service, and how rank is not always the overbearing argument in the solution to a problem. The best idea is the best idea... no matter where it comes from. Senior leadership is not the characteristic bumbling dolts Hollywood would have you believe. Removing the cross deck pendants is not the normal procedure; however someone noted the potential conflict, and contrary to written procedure, made the call to deviate to fit the circumstance and removed the cables. It was the right call.

Granted Naval Aviation has developed to a finely tuned operation, punctuated by specifically developed and qualify training to place individuals in circumstances where complex tasks are demanded. Amateurs do it till they get it right; professionals do it till they don't get it wrong. Not too terribly unlike General Aviation. As the accident record shows, many do place themselves in harm's way either unnecessarily or inadvertently without the requisite skill sets to match the task at hand. Those same accident statistics likely have not recognized the hazard they are exposing themselves to. They are also not likely to be keen on developing their own skill sets with regular quality training to meet the task at hand.

Author's Note: My good friend Atlas was killed in an A6 crash in April of '94, and the LSO "Bug" Roach was killed in an A4 crash in October, '91. He was a legend in Naval Aviation circles. Tank is a retired Marine Lt. Col.

Dave Garvey is CEO of ATM LLC, an in-aircraft pilot training company. Dave holds CFI, CFI-I, MEI, AGI, IGI, ATP ratings, type rated in the Beech 1900, King Air 350; 2200 hours tactical jet time, 1600 in the A6 Intruder, with 40 arrested landings, 2000 hrs dual instruction given in complex aircraft, currently qualified Part 135 PIC in the PC12 and is a retired Naval Officer.

<http://www.youtube.com/watch?v=GgTypOA5R7s&feature=related> The arrestment starts at the 5:00 minutes into the segment.

News, Announcements, Notes...

WELCOME NEW BOARD MEMBER... JACK LONG



An entrepreneur by profession and a pilot by passion, Jack has started two software businesses and one transportation business. In 2003, he became part of the founding faculty of the Acton School of Business where he teaches entrepreneurship. Having soloed in a

Piper Cherokee 140 in 1977, Jack has moved-up the aviation food chain as time and budget have allowed including a Mooney 201, a Cirrus SR-22, and culminating in the purchase of N575PC (S/N 575) in 2008. He has flown the PC-12 all over the US, on multiple trips to Haiti after the 2009 earthquake, and on several trips to Central America. Jack lives in Austin, Texas with frequent summer-time visits to Jackson Hole, Wyoming.

GREENWICH AEROGROUP NAMES VICE PRESIDENT

Wichita, Kan., March 31, 2011 – Greenwich AeroGroup, Inc. announced today the appointment of Phil Winters as Vice President of Aircraft Sales and Charter Management. “Phil has been instrumental in building a first class sales and charter management organization at West-



ern Aircraft,” said President and CEO of Greenwich AeroGroup Jim Ziegler. “We are excited to have him join us at the corporate level and to utilize his expertise to lead our tactical aircraft sales approach.” In addition to his current responsibilities at Western Aircraft, Winters will now also oversee all aircraft sales at Atlantic Aero in Greensboro, NC. Winters joined Western Aircraft in 1997 as a sales representative. In 2004, he was promoted to Vice President of Aircraft Sales and Charter. He is a certified flight instructor, possesses an ATP rated pilot license and an Airframe & Powerplant license.

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#1227 - N227WA

#1236 - N236NX

Nigel Beek & John Ralston - Kingston, St. Andrew, Jamaica

George McMahon - College Station, TX

Stetson Oats & David Burrage, Atoka, OK

Walt Glazer - Statesville, NC

Chip Crunk & John Crunk - Nashville, TN

Noah Duncan & John Jewell - Durham, NC

Stuart Barr - Eugene, OR

Bob Ross - Napa, CA

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Mark Anthony - Dallas, TX

SPRING 2011 Q & A!

Question #1

For the NG owners...are we allowed to fly in icing conditions with a generator inoperative?

Answer #1

Although the emergency procedures say at pilots discretion, continue flight without the services of the load shed systems, the limitations state flight in icing is only approved with generators serviceable.

Question #2

Can the NG be operated as a paperless cockpit?

Answer #2

Limitations state that Apex Charts do not replace approved paper or electronic systems for aeronautical charts, which must remain available as backup. Note: It is the responsibility of the operator to apply for operational approval at the local authority for the use of external electronic charts.

Question #3

Will the autopilot remain engaged when the pilots AHARS is changed?

Answer #3

Changing AHARS on the pilot side will disconnect the autopilot, the co-pilots AHARS will not.

Question #4

Will activation of the rudder trim disconnect the autopilot?

Answer #4

For the legacy PC-12's activation of the rudder trim will not disconnect the autopilot, but in the PC-12 NG, it will.

SUMMER 2011 QUESTIONS

Question #1

Are we allowed to use the TA Traffic Display to initiate evasive maneuvers?

Question #2

Can we get heading information on the ESIS?

Question #3

What is the procedure for an EIS chip light, or ODM CAS message?

Question #4

When must the autopilot be disconnected on approaches?



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FOR IMMEDIATE RELEASE
June 29, 2011

PILATUS BUSINESS AIRCRAFT LTD. APPOINTS EXECUTIVE TEAM MEMBERS

Broomfield, CO., June 28, 2011 – Thomas Bosshard, President and CEO of Pilatus Business Aircraft Ltd. announced today the appointment of two senior business aviation leaders to the company's executive staff. Mike Rector has been tapped to be Vice President of Production, and Tom Aniello has been named Vice President of Marketing. Both Rector and Aniello return to Pilatus Business Aircraft after stints with other industry firms.

Rector, a six-year veteran of Pilatus, spent the past three years working for EMTEQ, Inc. and ACC Integrated Services managing engineering and operations. In his new role at Pilatus, Rector will be responsible for all engineering, fabrication, and installation of interiors, avionics, and maintenance for the company's operations in North and South America.

Aniello returns to Pilatus bringing over twenty-four years of experience within the aerospace industry. Most recently, he spent the past five years leading the global marketing efforts for Cessna Aircraft Company. At Pilatus, Aniello will have responsibility for development and implementation of marketing strategies, branding initiatives and promotional activities supporting Pilatus products and services in North and South America.

"We are very pleased to have both Mike and Tom rejoin our leadership team at Pilatus," stated Bosshard. "They bring a wealth of business aviation experience to the company, and have proven themselves effective leaders in the Pilatus organization. In their new roles, they will be a key part of continuing the growth of the General Aviation division of Pilatus Aircraft through a strategy of superior quality aircraft, outstanding customer service, and innovative new products."

Pilatus Trade Show Dates

July 1-2	Air Power (Zeltweg, Austria)
July 15-17	Royal Int'l Air Tattoo (Fairford, UK)
July 20-23	ALEA (New Orleans, LA)
July 25-31	EAA Airventure (Oshkosh, WI)
Aug 11-13	LABACE (Sao Paulo, Brazil)
August 16-21	MAKS (Moscow, Russia)
August 27-28	RMMA Fly-In (Broomfield, CO)
September 14-18	Reno Air Races (Reno, NV)
September 16-18	Breitling Sion Air Show (Sion, Switzerland)
September 22-24	AOPA (Hartford, CT)
October 10-12	NBAA (Las Vegas, NV)
October 22-26	IACP (Chicago, IL)
November 13-17	Dubai AirShow (Dubai, UAE)

Media Release

Stans, April 12, 2011

THE BEST YEAR IN THE HISTORY OF PILATUS

2010 proved to be another year of new records for Pilatus Aircraft Ltd, with the company generating its highest ever sales revenue and operating income. Pilatus also delivered its 1000th PC-12 mid-year - an event that will go down in the Pilatus history books.

2010 saw Pilatus achieve two new records: the highest sales result yet (CHF 688 million), and the best operating income of all times (CHF 88 million). Both figures are up by more than eleven percent on 2009. Pilatus also invested CHF 49 million in research and development. In contrast, both incoming orders and orders in hand have fallen substantially over the past two years. Orders received totalled CHF 355 million by the end of 2010, and orders in hand amounted to CHF 689 million.

Follow-up order from the Swiss Air Force

The growth in sales was driven by an exceptionally large order placed by the United Arab Emirates Air Force & Air Defence. Signed on 22 November 2009, this was the biggest order ever accepted in the history of Pilatus. The official maiden flight of the PC-21 took place exactly one year later to the day. Deliveries will go ahead in 2011.

The Swiss Air Force, which already operates six PC-21s with great success, signed a follow-up order for two further PC-21s and associated training systems. The first Swiss Air Force military pilots have already completed the training which takes them direct from the PC-21 to the F/A-18 Hornet, proving the efficacy of the revolutionary PC-21 training concept.

Delivery of the 1000th PC-12

The past year has been very difficult for the business aviation sector. The economy has not yet recovered fully in the USA, which is the main market for the PC-12 NG. In spite of all, Pilatus delivered seventy-nine PC-12s, and crossed the magical boundary of 1000 PC-12 deliveries in June 2010. Two of our very first PC-12 customers bought new PC-12 NGs in 2010. The Royal Flying

Doctor Service of Australia took delivery of its 33rd PC-12 during the year under review and the Royal Canadian Mounted Police added three new PC-12s to its fleet.

The workforce grows

Employees again received the maximum individual profit-sharing bonus of approximately 150 percent of monthly salary. The number of full-time equivalents rose by just under five percent during the past year, to 1395. Further workforce growth is planned during the current year to meet the development requirements for a new aircraft to be launched in the general aviation sector, the PC-24. More information about this aircraft will be revealed to the public in 2012.

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Non-Profit 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. 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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