Duke FLYERS ASSOCIATION NEWS

Number 09-1 **April 2009**

2009 FLY-IN

TRUCKEE, CA (TRK) Lake Tahoe

September 17th - 20th

PRESIDENT
Earle Olson
P-352

VICE PRESIDENT
Ralph Cohen
P-412

NEWSLETTER
Jim Gorman
P-596

SPARE PARTS FOR YOUR DUKE

(2) Generators
(2) Starters
(2) Flap Motors
(1) Tach Generator
(2) Magnetos
(2) Landing Gear Motors

Above are located at Aircraft Systems, 5187 Falcon Road, Rockford, IL 61109. They will ship item to you by UPS or Federal Express. You return your part (same day) to them. They will overhaul, charging your credit card for work done, and then item becomes Association emergency part. Phone 815-399-0225.

Cowl Flap Actuator
Electric Boost Pump
Exhaust Transition Pipe
Lycoming Exhaust Pipe #77429
Prop Brush 3E1206-2
Recognition Bulbs DN25-5
A/C Door Actuator
Overhauled Turbo
Oil Cooler (new)
Engine Cylinder Assembly
Prop Spinner (Less Back Plate)

Above - contact Earle Olson @ P. O. Box 1043, Medina, OH 44258
Phone 330-723-3210 (O) 330-723-9977 (FAX)

Windshields - Contact Gary Bongard @ 612-281-5158 (cell)

Air Conditioner and Generator Belts

AC belt is Gates XL9380
Generator belt is Gates XL 7440 (Always replace in pairs. Do not mix old and new.)

WELCOME NEW MEMBERS

Fred Starling
Sarasota, FL

Randy Crook
Midland, TX

Mark Calhoun
Dallas, TX

John Pew P-249
Coolidge, AZ

Todd Van Natta P-262
Seymour, IN

Mark Wyant P-128
Dallas, TX

Greg Smith
Richlands, VA

Alfred Bell
Miami, FL

COMMENTS FROM EARLE OLSON, *PRESIDENT*

It won't be long and spring will be here with all its glory and promise of great weather flying to come. I say this from our balmy Florida condo.

Take time to remember how lucky we are to be flying the best looking, high performance pressurized twin ever built. Fuel prices have retreated, so get out there and enjoy flying our wonderful planes. Take someone for a ride so we can show them the joys of our flying experience.

We need to make sure the politicians and press get awakened to the positive aspects of business flying. Our Auto Makers buckled and now the press and others think of business flying as a luxury not an important business tool. It is time to tell our story and get more people on our side on this important issue.

Make plans now to attend our upcoming fly-in at Lake Tahoe. Greg Jellineck will be telling you more about it . If you have never been there, I'm sure you will want to make the effort; and if you have, this is your chance to experience it again. The high light may be the chance to take in the Reno Air Races with other Duke owners.

Icing can kill you. If you are not familiar with how it affects the Duke, please get in touch with Bob Hoffman or someone else that can show you. Just because our planes are placarded for known icing, don't fool yourself into thinking it can handle anything that is out there. It can't! NEVER LET YOUR SPEED GET UNDER 140 KNOT IN A CLIMB. There is more to it than that and I recommend you find out what it is. If there is enough interest, we could have a presentation on it at Tahoe.

Enjoy our birds and share with others.

Earle

MARK YOUR CALENDARS

Just a reminder about the 2009 DFA Meeting at Truckee, California, in the Northern Sierra Nevada (Lake Tahoe) area. Meeting dates are Thursday, September 17th through Sunday the 20th. The host resort will be Northstar-at-Tahoe (www.truckeetahoeairport.com) which is a full service alpine resort. Resort amenities include championship golf, tennis, swimming, hiking and mountain (real mountain) biking. Excellent restaurants, saloons and high end shopping are on site as well. (Sorry, no skiing in September.) If there is enough interest, we can run a bus over to Nevada for an afternoon of gaming.

The Truckee Tahoe Airport (TRK) (www.truckeetahoeariport.com) is about 6 miles down the road from the resort and boasts a 7,000 x 100 foot main runway and a 4,650 x 75 foot cross wind runway. Airport elevation is 5,900 ft. MSL. There are a couple of FBOs on site as well as a Hertz franchise. The scenery from the ground, or from the lake, or more importantly from your airplane will "blow your minds"! September Wx is 95% assured to be VFR.

On Sunday the 20th, we are throwing everybody onto a couple of buses and heading down to Stead Airport in Reno as a group for the whole day to spend the day at the final day (championship heats) of the 2009 Reno National Championship Air Races (www.airrace.org). As they say in the business, *"Fly Low, Go Fast, Turn Left!"* If you have never attended NARA, this too will blow your mind. Its one hell of an air show (Blue Angels scheduled this year) punctuated with both jet and unlimited will remember the sounds of the Air Races for the rest of your life. As aviators, spending a lot of time in the pits is a must.

Come early and stay late to enjoy the area. More to follow as we get closer.

Greg Jellinek
Member 83 P-425

Ice Awareness for Duke Pilots

It's when things are going just right that you'd better be suspicious. There you are, fat as can be. The whole world is yours and you're the answer to the Wright brothers' prayers. You say to yourself, nothing can go wrong ... all my trespasses are forgiven. Best you not believe it.

— Ernest K. Gann, advice from the 'old pelican

With flight in icing conditions and ice contaminated tail plane stalls (ICTS) a hot topic in the media and among Duke Flyers, and because a Duke was lost to severe icing earlier this winter, this ‘old pelican would like to facilitate an ice awareness self review.

Before we begin, let me say that flight in icing conditions, in my opinion, is an art form rather than a science. Certainly we must know the POM limitations, ice equipment function checks and operating procedures; but one must never trust a forecast, always be judiciously suspicious, have a plan B and C and never get too comfortable when in icing. In a way, it is a bad idea to think of the Duke as certified for flight in known icing conditions. Rather, I prefer to think of the airplane as certified to exit known icing conditions. Since our airplane is limited to no less than 140 knots indicated airspeed for sustained flight in icing conditions, there is simply too little margin at most altitudes to fly for more than short periods, in more than light ice. The key to flying the Duke in winter is to do your best to stay out of the ice, keep a minimum of 140 knots and if you find ice, do whatever it takes to get out of it without delay.

An inclusive ice awareness review will include reading the following documents, and for extra credit, view the NASA ice videos. When the review is complete, read the probable cause of the Rock River Wyoming accident at NTSB.gov (report WPR09CA051).

- Your Pilot Operating Manual contains three documents related to icing that every Duke pilot should be intimately familiar; FAA FLIGHT MANUAL SUPPLEMENT FOR FLIGHT IN ICING CONDITIONS (P/N 60-590001-17), revised September, 1998; CONTINUOUS PRESSURE OPERATED SURFACE DEICE SYSTEM (P/N 60-590001-11), revised August, 1973; and GOODRICH ELCTROTHERMAL PROPELLER DEICE SYSTEM (P/N 60-590001-13), revised June, 1981. These documents are required to be in the POM.
- Go to the FAA website and download FAA Advisory Circular AC 9174A, A Pilots Guide to Flight in Icing Conditions (www.faa.gov). This document, published in late 2007, is the most up to date, and definitive source on the subject of flight in icing conditions and includes an in depth discussion on ice contaminated tail plane stalls.
- Locate, download and view two NASA videos: “On tail Plain Icing” and “Icing for Regional & Corporate Pilots”.
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I have not discussed the Rock River accident with the accident captain; but if this ‘old pelican could pass out air medals, this aviator would get one.

At the Dayton Fly-In I described to the members attending, my experience in July of 2007 when I entered a cumulonimbus build up (CB) over Orlando. Jim Gorman asked me to put the experience down on paper so that it could be presented in the newsletter. You can also view the NTSB narrative at:

http://www.ntsb.gov/ntsb/brief.asp?ev_id=20070903X01299&key=1

I want to begin with the events leading up to the accident because I think that my thought process leading up to the accident is of equal importance as my actions during the descent through the CB.

I began the day by flying down to Fort Lauderdale International to pick up my daughter who was visiting with a friend. A friend of mine (also a pilot) was riding along. It turned out to be more of a ride than he bargained for, but we're still good friends and have flown together several times since the accident. In the descent to KFLL, the enunciator for the left engine fuel filter lit up. The enunciator indicates that there is a differential pressure greater than 1.4 psi across the fuel filter. When we landed at KFLL, I called Rocket Engineering to inquire about possibly flying back and having the work done at Selinsgrove. They responded that I should have it cleaned prior to departing and while we were at it I might as well have the right filter cleaned as well. I wasn't planning on hanging out in Fort Lauderdale all day because thunder storms were forecast for the afternoon. Both filters were very dirty (a problem that's been resolved by Rocket Engineering) and it took all afternoon to clean and reinstall them in to the Duke. I got a briefing, filed and we departed KFLL at approximately 5:30 pm. We had over 900 NM to cover from KFLL to KRDG where I was dropping my daughter off and then proceeding on to KSEG. The Turbine Duke has tremendous performance characteristics one of them being that it will climb in excess of 3000 fpm early on in the climb. However, ATC didn't seem to appreciate this (I now put a comment in my flight plans that essentially requests Turbo Prop handling which seems to help). We were burning a lot of fuel unnecessarily as we climbed step wise in 1000 increments to FL270. The Shadin was indicating that we would have about 10 gals at our destination if we didn't start moving in a more northeasterly direction. I was falling prey to the "gotta get there mentality", not good;. I was aware of the two large cells over Orlando and as we got closer there was a very safe path between them direct CRG. ATC denied the request. Looking westerly, more cells were building in their typical chain like pattern and heading toward ORL. The CB we finally flew into "looked" harmless with respect to the on board radar and it was south west of the other two cells previously mentioned. The top was approximately FL270. Light to moderate precipitation was being painted. The on board NEXRAD had not updated for over 45 minutes; so we weren't getting any information on the GNS530. The distance between the CB and the two large cells appeared to be over 10 NM; so in order to avoid stopping in Norfolk for fuel, I discussed the situation with my friend and we both came to the conclusion that there was plenty of space between the CB and the other two cells and if we had to clip the north east side of the CB it shouldn't be a problem. In fact, the week prior I had done virtually the same thing in IMC with the help of ATC at the same altitude. As it turned out, it was not a plan. We failed to realize that with tops at FL270 and bases at 5000, there was a tremendous amount of energy in this thing. By the time we flew through the gap between the cells and subsequently "clipped" the CB, the CB had grown to FL290. We were struck by lightning early in the decent and there was some small hail but they were the least of my worries. The following is an excerpt from the NTSB report.

"...The altimeter began to unwind rapidly and I tried to correct the altitude change with up elevator pressure, as well as additional power. This corrected the situation momentarily, but the downdraft continued and I feared that I would compromise the elevators if I continued to apply the pressure necessary to maintain altitude. I relaxed the pressure and pulled the torque on both engines to idle, to try [to] introduce drag to slow the descent. At this point in time, we were losing approximately 4 to 5 thousand feet-a-minute and the

aircraft began to roll left. My memory from that moment forward is blurred; but I am certain that the aircraft entered a downward spiral to the left with an attitude greater than 100 degrees left, and a near vertical descent. The artificial horizon (AH) tumbled at that point, I thought that we would not recover. The AH righted itself briefly and tumbled again. The AH righted itself one more time and I reacted immediately with right aileron and rudder and the aircraft rolled level. As it began to roll level, I began to apply up elevator and power in an attempt to arrest the decent. The airspeed began to drop and the aircraft remained level..."

The data retrieved from the Shadin revealed that there were 2 recorded airframe exceedances. The first was 268 kts indicated for 26 seconds. The second was 300 kts indicated for 13 seconds. The stall horn and the airframe exceedance alarm were going off simultaneously throughout the decent; so, we were basically being pushed downward by the extreme down draft in the cell. We were clocked by ATC at one point in the decent at 12,000 ft/min. The whole "ride" took about 1 minute 20 seconds. to descend from FL270 to FL140.

The airframe sustained severe structural damage to both of the wings upper skins, the right elevator/stabilizer was bent 2/3rds from the root, the outboard hinge had broken free and all the covers for the bathtub fittings had been blown off; but because of the structural integrity built in by Beechcraft, we survived. The A/P's at American Aviation stated that in their opinion, had we been in any aircraft other than a Beech we would not have survived. American Aviation did an excellent job with the repair work and US Specialty Insurance covered the cost less the $5000.00 deductable. My premiums remain the same as they were when I first insured for the Turbine Duke. The FAA and NTSB were very supportive; and after the debriefing teleconference with the NTSB and Southern Florida ATC, I feel that even though ultimately it was my decision to enter the CB, the NTSB felt strongly that the controller should have warned us that we were entering a VIP level 6 echo. If I had been aware of the severity of the conditions within the cell, I obviously would have opted for the minor inconvenience of landing in Norfolk to fuel. This accident was a result of something I swore I would never fall prey to. The simple rule of waiting a few hours or even overnight, if conditions don't look or feel right, can make all the difference for a flight. **So.....now I wait!**

Rick Perfect
Member 847 P-583

Member Larry Moskoff found Duke Commercial tapes. If there is enough interest, we could have more made for you to purchase your own copy. Please email (mng19sl@aol.com) if you are interested and I can let you know the cost.