



EAA602 Log Book

Adirondack Chapter Newsletter

May 2007

Page 1



From The Presidents Desk

by Tim Cowper

Ok, winter is officially over, I think...

Think about it. We are a lucky minority. We are part of the few who understand and appreciate the joy and privilege of flying one's own airplane over the beautiful landscape of this great country. And there is no better place to do it than right here in upstate NY! Folks...it's time to fly. I know that several of you are working on your projects, as I am, getting them ready for the good weather. Work hard. As you can see by the schedule of aviation events, there is a lot going on this year, not only with us, but also with the surrounding area clubs. In order to be successful, we'll need the support from every one of you, not just a core group of workers. I'm hoping that all the members of 602 will be willing to get involved and help out. You'll be glad you did. The club will be better for it, and our local aviation community will be stronger. This month's meeting will take place on April 30th @ 7PM, at Murphy's hangar located on Midline Road in Perth



(same location as the September fly-in last year). At the meeting we'll discuss our plans and strategies for our 2nd Annual Poker Run on June 2nd. After the meeting, we'll have a brief talk by Larry about his experience getting his Sport Pilot license. Then, Mark will give a narrated presentation of his recent P-51 flying adventure,

including a video! After all that, whomever wants to hang around the hangar, can help hang the prop on Marks T-6. I think that the prop probably weighs more than my Zodiac, so we'll need all the help we can get!

I think a lot more people would get involved in aviation if they only knew the real story of recreational flying: It's relatively inexpensive, and it's all fun! Who cares if gas goes to \$4/gallon this summer? If it does...we'll fly anyway, but, maybe, hangar-fly a bit more. It doesn't matter because the best part about being in this club is the people you meet. Come to the meeting. Voice your opinion. Attend the events and be a worker. Fly...and have fun. The 2007 flying season has begun! Let's enjoy it!

Tim

From Our VP's Desk

by Tony Rizzio

I would like to start by telling you some of us have been talking for quite a while about the need to have a permanent home for the club. Don't get me wrong, I think the runway at edenberg is great. But it is not our's. It is up for sale. And will be sold some day. The other problem I see is since it is at the north end of our area. The chance of the club growing as it should is limited. If we were

able to find a home in a more central location (Johnstown - Amsterdam) I feel we could draw members from outside and grow much quicker.

This month I would like anyone with some ideas to come and share them. Or help us look. I feel we need a committee to search different locations and see what we can find. Hopefully a place we can have a club house or lounge, a place we could hold meetings at, a permanent home. If you would like to join us come Monday night.

Tony



Member Profile

Tom Kravis

It's hard to squash nearly 50 years and 21,000+ hours of aviation in to something short, but Tim asked, so here goes:

I've always had an interest in engines and things mechanical. No one in my family flew, but I had some pilot friends.

My first flight was in 1959 with Ken Young and the Civil Air Patrol at Fort Johnson, NY in Champ N1488E. (Which Art is currently rebuilding.) I soloed in it when I was 16. I continued flying Cubs and Champs at Fort Johnson and Johnstown, getting my private license in 1960.

After leaving high school, I obtained my commercial and instrument ratings at Glens Falls. After getting my multi engine rating in a Piper Apache I was hired by Gilly Airways in Syracuse, to fly airmail routes in a Beech 18. This was the fall of 1961.

Nobody told me single pilot IFR was difficult, so I went ahead and flew the route from Syracuse to Lebanon, Portland, Albany, Newark and back to Syracuse, five nights a week through the winter. The highlight was flipping the twin Beech on it's back, landing at Albany with only one gear down, due to ice. Never lost a letter. I got my fill of flying in north east snow and ice, so in March 62 I joined the Marine Corps.

They trained me as a helicopter mechanic and I deployed to Okinawa. While there I took the test for aviation cadet. I passed and was selected for primary flight training at Pensacola, switching from the Marines to the Navy. Primary training was in the Beechcraft T34 with advanced flight

and weapons training in the T28. (At that stage, I had approximately three times as many flight hours as any of my instructors.) My carrier qualification was in the T28 on USS Lexington. I was then commissioned Lieutenant JG and sent to multi engine flight training at Corpus Christi, TX. More twin beech and C47 flying. Because I graduated Pensacola second in my class, I was given a choice of duty stations. So after Texas I went to Barbers Point, Hawaii. I figured Hawaii would be better than Vietnam. I was right. My job was flying the Admiral commanding the Pacific Fleet to every golf course in the Pacific.

But the Navy caught up with me in the fall of 1964 and assigned me to the USS Midway. We went to Yankee Station off the coast of South Vietnam. I flew the Grumman C1A, the support aircraft for the carrier. Being the Cod (Carrier onboard delivery) pilot I had a unique situation, in that I landed ashore most flights. I usually flew to the Air Force and Navy bases in the Philippines, or South Vietnam. Transferring personnel, medivac, high priority freight and the all

important mail. I had some interesting passengers too, not just military, but entertainers such as Bob Hope. I flew often, sometimes 6 or 7 hours a day.

My second tour was on USS Coral Sea, again flying the C1A. It was pretty much a repeat of the cruise on Midway, except the air war in Vietnam was heating up and we were busier. At the end of the Coral Sea cruise I was given orders to report for jet transition training at NAS (Naval Air Station) Meridian, MS, where I flew the T2A Buckeye. We were to be replacement pilots. The attrition rate over North Vietnam was high. After



Continued Next Page ➡ ➡



From Previous Page

initial jet training I reported to Lemoore NAS in Fresno, CA. I transitioned to the Douglas A4E Skyhawk - which we called the Scooter, because it's highly maneuverable and carried it's weight in ordinance. After weapons training at NAS Fallon, NV, (which was fun, because we got to blow things up), I reported to VA 23 (Attack Squadron) at Lemoore. We trained on USS Saratoga for carrier qualifications in the A4E, which was kind of neat. Down final at 150 knots and landing on a 700ft deck.

In November 1967 VA 23 deployed on Saratoga for my third cruise to Vietnam. This time I was doing air strikes on the North. We mostly targeted roads and bridges. It was very frustrating hitting low value targets while enroot at 35,000 feet we could see Russian ships unloading supplies at Haipong Port. But we were not allowed to bomb anywhere near the Russians or Chinese.

Six weeks in to the cruise things changed. On December 22, 1967 I had just returned from a bombing sortie. After debriefing, I was hailed by a friend who flew the ship's rescue helicopter. He asked if I would like to go on a search and rescue mission. Being I had all my gear on, I went along. 15 minutes later we were attempting to pick up a

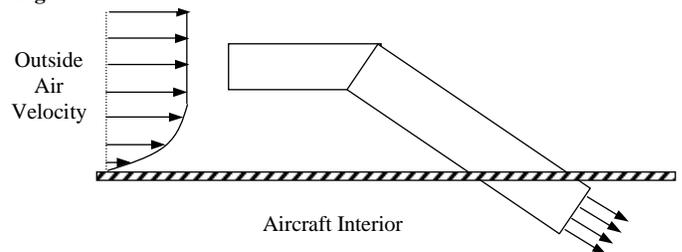
F4 Phantom crew, who were downed by a missile. When we got over the pilot, we were hit by anti aircraft fire. All I remember is an explosion and I woke up in a field hospital at La Trang Army base. I was in pretty bad shape when I came to, on the operating table. My left arm was partially severed and I had multiple shrapnel wounds. But I was lucky. Two others in the helicopter were killed and my friend the pilot, was badly injured. The next day I was medivaced courtesy of the Air Force, to Japan where I they operated to reattach my arm. Good job - it still works for the most part. From Japan I went to the Oakland Naval Hospital in San Francisco, where I was deemed unfit for service and medically discharged. My six week career as a jet attack pilot was over. During that cruise for my squadron of 12 aircraft, 12 planes were shot down, 2 pilots killed and 2 captured and held prisoner for six and a half years. Looking back, the helicopter crash probably saved my life, but it dramatically changed my plans. I was prepared for a 30 year navy career. The week before we sailed on the USS Saratoga I had just been promoted to Lieutenant and got married. Now I was looking at regaining the use of my arm and finding a job. Little did I know, but in less than a year I'd be back in Vietnam, flying for Air America.

NACA Ducts by Larry Saupe

Bringing outside air into a moving vehicle is a common desire. The application typically involves cooling (such as cooling an engine compartment, brake assemblies or to provide fresh air into a cockpit). With fast moving vehicles such as cars, boats and airplanes, the design of the inlet (air scoop) is critical to ensure an ample supply of cool air is obtained for the application.

To harness the fastest moving air, it would seem that all we needed to do was to place some sort of scoop out into the free stream, just beyond the boundary layer (exploiting the air with the highest available kinetic energy level). Figure 1 is a 2-D depiction of a scoop, which would provide an effective supply of fresh air to a vehicle.

Figure 1



Many early aircraft and automobiles employed a scheme very similar to this with excellent results. One major drawback to this design, however, is a drag penalty. This drag, though not severe at low speeds (say less than 50 MPH), can become quite significant at higher operating speeds. This type of parasitic drag tends to increase with the square of velocity (I.e. doubling the speed will result in four times the drag etc.).

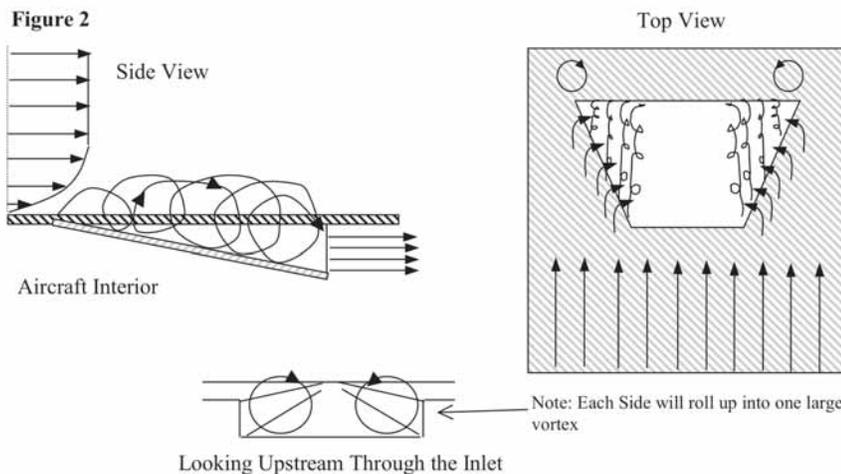
Continued Next Page  



From Previous Page

As aircraft speeds began to drastically increase during the 40's and 50's, a more efficient (low drag) air induction system was needed. NACA, the National Advisory Committee for Aeronautics (now NASA) began a large development program in the early 40's to design and optimize such an inlet. To decrease the parasitic drag they had to find a way to not have the duct extend into the free stream, but at the same time capture the high energy air outside of the boundary layer. Not an easy task to say the least.

The answer lay in the dynamics associated with fluid vortices. Think back to the March 2007 Logbook discussion on vortex generators. With a vortex generator, the spinning vortex actually reaches up and grabs high-speed (high energy) flow and pulls it down to the surface where it is needed. One downfall of a traditional vortex generator, however, is a drag penalty. But... the fluid really only needs an edge to flow over in order to generate a vortex. What if we dropped a cavity from the free surface and gave it a sharp edge, and then allowed the fluid flow over that? It turns out that this method also provides an excellent way to generate vortices. Figure 2 is a depiction of the process (recall also Figure 2 from the March 2007 Logbook).



The air falling into this V shaped cavity sets up a pair of very strong counter rotating vortices that scrub the floor of the cavity (removing the low momentum air) and replacing it with high energy air that it grabs from the free stream (just like the V shaped vortex generators often seen on aircraft wings). Early NACA designs looked very much like

Figure 2. Further research revealed that adding slight bends (semi-arcs) to the V edges resulted in even stronger and more effective vortices in this application. The resultant duct shape was so successful that it now bears the name NACA Duct. These ducts have since seen wide application in the aviation and automotive industries. A few examples are provided in the following images:



Proper application of this duct, however, does take careful consideration. Knowledge of the flow patterns and boundary layers in the region of interest will be of high importance.

Several design guides do exist to aid in the application of this technology. One such resource is an article entitled



NACA

Ducts, by David Reilly in the March 1970 issue of Road and Track magazine.

Many of the original research papers are still available and are a fabulous resource for the homebuilder wishing to apply NACA ducts to their aircraft.

NACA ACR 5120; An Experimental Investigation of NACA Submerged-Duct Entrances, Frick, Davis, Randall and Mossman, 1945.

NACA RM 7130; An Experimental Investigation of the Design Variables for NACA Submerged

Duct Entrances, Mossman and Randall, 1948.

37th Wilbur Wright Lecture; The Aeronautical Research Scene – Goals Methods and Accomplishments, Pages 651-655 Subsonic Inlets, Dryden, 1949.

NACA technical Note 2323; Theoretical Investigation of Submerged Inlets at Low Speeds, Sacks and Spreitter, 1951



WOW!! Lots going on this summer. Hope to see you all at the meeting Monday.

May 2: 2007, 7P to 9P, *Say it Right! Radio Comm in Today's Airspace*, Latham, NY

May 19: EAA 1070 Pancake Breakfast, Cooperstown-Westville

(K23) Cooperstown, NY

May 19: ESAM Pancake Breakfast 8:00-10:30 am. Schenectady County

(SCH) Glenville, NY

June 2: EAA 602 Poker Run & Pancake Breakfast Murphys Landing Strip

(0NY7) Perth, NY

June 10: EAA 294 Pancake Breakfast, at Frankfort Highland Airport

(6B4) Frankfort, NY

June 16: EAA 1070 Pancake Breakfast, Cooperstown-Westville

(K23) Cooperstown, NY

June 16: 8:30 am - 1:00 pm (Rain Date: Sun June 17). Spring Fly-In Breakfast, Pancakes, eggs, sausage, OJ, & coffee, all for \$5. EAA Chapter 146 <http://www.eaa146.org>

(NY1)Kline Kill Airport

June 30: EAA 602 Kenny Schleich Memorial Fly-In Pancake Breakfast, Galway NY

(NY37) Galway, NY

July 21: EAA 1070 Pancake Breakfast, Cooperstown-Westville

(K23) Cooperstown, NY

Aug 10-12: EAA 602 & UL90 Young Eagles Fly-In Weekend at Plateau Sky Ranch

(1F2) Edinburg, NY

Aug 18: EAA 1070 Pancake Breakfast, Cooperstown-Westville

(K23) Cooperstown, NY

Sept 8: EAA 602 Murphy's Old Time Taildragger Fly-In, Murphy's Landing Strip

(0NY7) Perth, NY

Sept 15: 8:30 am - 1:00 pm (Rain Date: Sun. Sept 16). Fall Fly-In Breakfast, Sat, Pancakes, eggs, sausage, OJ, & coffee, all for \$5. EAA Chapter 146 <http://www.eaa146.org>

(NY1)Kline Kill Airport

Sept 19: 2007, *Regulations: What Every Pilot Should Know*, Schenectady, NY

Volunteers Needed!!!!

June is right around the corner. We are trying to finalize some of the plans for Young Eagle's Days. We will need pilots, people to walk the children to the planes, registration help, someone to cook hamburgers and hot dogs, and several people who would be willing to work specific stations for the children. The stations will be short, simple things for the children to do. We could use your ideas or I will have several things already set up. The success of the Young Eagle's Day will depend on you. To continue planning we will need to know who would be willing to help that day. We will have a list of jobs at the next meeting or you can contact me at 863-2409. Thanks!

Judy

The Meeting This Month Will Be At:

Mark Murphy's
Hanger
436 Midline Rd.
Amsterdam, NY
Bring A Chair

@ 7:00pm on

MON. APR. 30th

EAA602 Fly Market For Sale

Gauges & Other - All brand new left over Gauges for sale. Tach, Dual CHT, Dual EGT, Water Temperature (All Westach 2 1/4" with probes) Combo EGT-CHT, Turn Coordinator. Tapered air filters for 447-582. 5" Matco wheels & disc brakes. **All half price Call Doug 863-2409**

Remember; regular DUES ARE DUE IN JUNE.

Use this form to send any changes in your information. Thanks, Doug

Name _____ EAA Number _____ Exp Date _____

Address _____ City _____ State _____ Zip _____

Home Phone _____ Cell Phone _____ Work Phone _____

E-Mail _____ Ratings _____

Experience Years _____ Hours _____ Aircraft Owned _____

Mail To: Douglas Sterling ~ 819 North Shore Road ~ Hadley, NY 12835 ~ Phone 518-863-2409



If your not in the
EAA, Join Today!
www.eaa.org

Goins On

On Saturday July 14,2007 weather permitting I am organizing a fly out to Elmira Corning Regional Airport to visit the National Warplane Museum. EAA Chapter 533 which is located on the field has graciously invited us to visit their club facility and will be helping us obtain Mogas to refuel for the trip home. Anyone interested please let me know so that approximate fuel requirements can be calculated tdevine1@nycap.rr.com or 584-2045.

Further details about the trip will be announced as July approaches. Please let me know by email or at the next meeting if you are interested so I can coordinate logistics.

We have also been invited to EAA Chapter 146 Klinekill NY to their fly in on June 16,2007. Visit their website and check it out.

Tim Devine

EAA602

**819 North Shore Rd
Hadley, NY 12835**

President	Tim Cowper
VicePresident	Tony Rizzio
Treasurer	Rich Logerfo
Secretary	Walt Kostuk
Editor	Doug Sterling
Y.E. Coordinator	Judy Sterling

May 2007

EAA Chapter 602 Non-Profit Declaration and Legal Disclaimer

EAA Chapter 602 exists as a non-profit organization whose sole purpose is to promote the interests of its members. EAA 602 Chapter Officers, Directors & Leaders serve without compensation & have sworn to carry out the will of the membership by means of Democratic processes and rules of order set forth in the chapter's by-laws. No claim is made and no liability is assumed, expressed or implied as to the accuracy or safety of material presented in this publication. Viewpoints of those who contribute to this newsletter are not necessarily those of EAA Chapter 602, the EAA, or their board or members. You must be of good character, adhere to the chapter's by-laws, and respect the chapter's Mission & Value Statement to become a member of the chapter. Dues are \$12.00 per year payable to Chapter Treasurer. Chapter dues are payable in June. New members joining before or after the month of June are prorated at \$1.00 per month of the calendar year. Member correspondence & newsletter contributions are encouraged which can be submitted by mail to the address appearing on this page or e-mail to newsletter editor.