

CANARD PUSHER

JULY 1999

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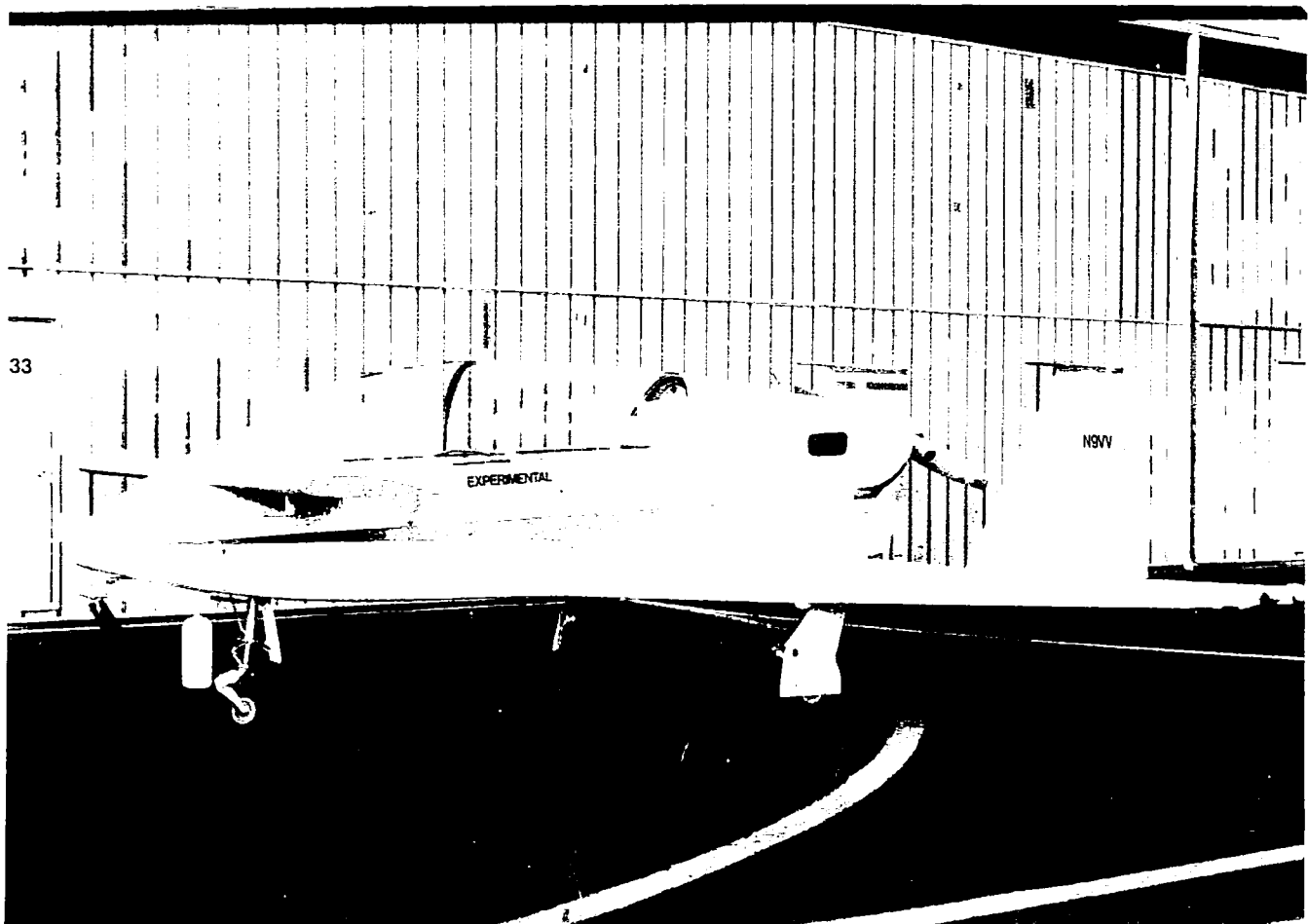
VariViggen Owner donates Aircraft to Museum

When I heard that John Martin donated Variviggen N9VV to a museum I asked him to write an article about the process. What follows is John's excellent explanation of the steps he took to properly donate the airplane to the Aviation Museum of Texas.

by John Martin

In April 1991 I was grounded by the occurrence of a chronic heart arrhythmia called "supra ventricular atrial tachycardia", which is controllable for ordinary life activities by daily medication but disqualifying for a pilot medical certificate unless the medication is shown (by wearing a recording device) to prevent any recurrence in a four month period. After three years of hoping to attain this objective, I concluded that it wasn't going to happen. Upon reading a story in the local newspaper about a new museum being established in Uvalde, Texas, I decided to inquire about possibly donating N9VV to this museum.

Continued on page 3



On the Web

According to a recent report, the web-based Cyberhangar's membership roster now stands at 246 members, including 188 EAA members. Their most experienced member is a bit over 78 years old and their youngest is just over 20. The average age of the group is about 46 and a half.

They have members from UK, New Zealand, Norway, Czech Republic, Canada, Australia, and USA. From the US, 43 of the 50 states are represented. Quite an impressive and diverse membership!

You can find Cyberhangar at <http://www.cyberhangar.org> or contact John Stricker, secretary, Cyberhangar, EAA Chapter 1248 at jstricke@russellks.net

RAF HOURS: Rutan Aircraft is officially open every Wednesday. Please call between 10 am - 2 pm (661) 824-2645 and give your name, serial number and nature of the problem. If you are not in an emergency situation, we ask that you write to Mike.

Note — Sometimes you can catch Tonya at RAF Monday thru Friday. She is in and out. Try and try again.

When writing to RAF, send along a stamped, self addressed envelope, if you have builder's questions that need to be answered. Please put your name and address on the back of any photos you send.

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If you are building a
RAF design, you must
have the following
newsletters:

VariViggen (1st Ed)

CP 1 to current

VariViggen (2nd Ed)

CP 18 to current

VariEze (1st Ed)

CP 10 to current

VariEze (2nd Ed)

CP 16 to current

Long-EZ

CP 24 to current

Solitaire

CP 37 to current

Defiant

CP 41 to current

A current
subscription of the
Canard Pusher is
mandatory for
builders, as it is the
only formal means
to distribute
mandatory changes.

VariViggen Donation

From the reporter who wrote the story I learned the identity and telephone number of a trustee of the museum, called him, and made an appointment to meet him in Uvalde to discuss a possible donation to the museum. To show him what I was considering donating, I took along a copy of the April 1990 issue of Sport Aviation which had a picture of N9VV in flight on the cover and contained a feature article about it with more pictures. I told him that I was willing to donate the aircraft to the museum if the museum would execute an agreement that would protect me and my heirs from any possible liability associated with the aircraft or its future use. He said he was certain that the museum would like to have the aircraft and thought my condition was reasonable. We agreed that I would prepare and send to him a draft of such an agreement.

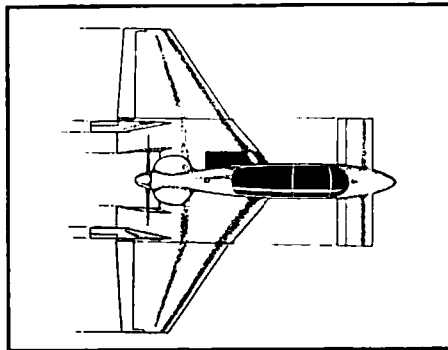
Over the years, in several EAA chapters and at Oshkosh, I had attended discussions about liability problems that have resulted from sale of homebuilt aircraft. From my recollections and documents I had kept on the subject, I drafted a "Donation, Acknowledgement, and Indemnification Agreement" that I thought would provide the protection I wanted. Then I took it to a lawyer in the local office of a large legal firm, explained what I wanted, and asked him to review it for legal competence. He recommended some changes and added important content and emphasis.

I sent the result to the museum trustees. They decided to accept it, and authorized the trustee with whom I had dealt to execute the Agreement for the Museum (as they had not yet elected officers of the museum).

A year later when the museum applied for transfer of the FAA registration from me to the museum, they got a form letter back indicating that they should send a copy of the bill of sale. When I was informed of this reply I called the Aircraft Registration Branch at Oklahoma City and talked with a legal instruments examiner. I emphasized the following points: (1). A Bill of Sale was not appropriate because the aircraft was not in fact sold; it was donated. (2). The third paragraph of the first page of the FAA's AC Form 8050-2 package title "Aircraft Bill of Sale Information"

recognizes that some transfers of ownership do not involve a sale, and states in its third paragraph: "If the aircraft was not purchased from the last registered owner, conveyances must be submitted completing the chain of ownership from the last registered owner, through all intervening owners, to the applicant." (3). The first numbered paragraph of the "Donation, Acknowledgment, and Indemnification Agreement" clearly shows that document to be the instrument of conveyance of ownership from the original builder/owner to the museum.

The examiner agreed and said that the museum should submit the original of the Agreement plus a copy with this statement written in any available place and signed in good reproducible ink: "I hereby certify this to be a true copy of the original document." They will compare the original with the copy and then return the original. Upon resubmission of the museum's application, the FAA accepted the Agreement and the instrument of transfer of ownership and registered the museum as the new owner.



The decision to part with N9VV prompted me to review the records that a new owner would get with the aircraft. I had purchased a "VariViggen Owner's Manual" from RAF, and had made changes in it to reflect differences in N9VV construction, operation, allowable g, allowable reflex, and flight tested limits and performance. In reviewing the modified Manual from the imagined viewpoint of some pilot intending to fly N9VV reading the manual as the primary source of operational information about this aircraft, I felt that the manual would serve such a pilot better if it included certain information up front. So I wrote a "Preface" page, as the *first* page in the manual after the Contents, and this prompted me to write another new page "Some N9VV Operating Characteristics," inserted between pages 8 and 9 of the manual.

The IRS requires a formal appraisal of a donated aircraft, by a credible appraiser, in compliance with some specific requirements. I looked through an issue of Trade-a-Plane and found an ad by the National Aircraft Appraiser's Association seeking new candidates for aircraft appraisal work. I called them and asked for the name and telephone number of any of their members who live within a hundred miles or so of my home. They gave me one who lives about 50 miles away and another who lives 80. I called the nearest one and he took the job and did it well, producing an appraisal fully compliant with the IRS requirements. •

Accident Report

NTSB Identification: NYC99LA134
Accident occurred JUN-02-99
FRIENDLY, MD
Aircraft: Saliba LONG EZ,
registration: N555L
Injuries: 1 Serious.

On June 2, 1999, at 0937 Eastern Daylight Time, a homebuilt LongEZ, N555L, was substantially damaged during an approach to Potomac Airfield (VKX), Friendly, Maryland. The certificated private pilot was seriously injured. Visual meteorological conditions prevailed at the time of the accident. No flight plan was filed for the flight between Washington Executive/Hyde Field (W32), Clinton, Maryland, and Middle Georgia Regional Airport (MCN), Macon, Georgia. The personal flight was conducted under 14 CFR Part 91. According to witnesses, the airplane departed Clinton about 0830, and was later seen north of Potomac Airfield, "flying low."

Another pilot in the traffic pattern at Potomac saw the accident airplane, and requested the pilot's intentions. There was no response, but the accident airplane appeared to enter a right base for Runway 24. The airplane overshot the runway, then turned back, and entered a left base for the same runway. It overshot the final approach course, but corrected with a steep turn, and "continued making 'S' turns down final approach. [It] started getting very close to the trees; I could see [the] shadow almost touch the plane. [The airplane] pitched up...and mushed down into trees about 200 yards short of 24. It appeared the prop was windmilling a few seconds before [the airplane] hit the trees."

According to a Federal Aviation Administration (FAA) Inspector, cut trees were found near the wreckage, and fuel was found onboard the airplane. The airplane's canopy was not found in the vicinity of the accident site. However, a canopy was found about 2 miles away, in the Potomac River. On the canopy, was written the words, "Experimental," "Lil," and "Nick." The inspector spoke with another owner of a Long EZ, whose description of a Long EZ canopy matched the one found. The owner stated that a Long EZ would be difficult to control without a canopy.

Accident occurred MAY-20-99
ENTERPRISE, AL
Aircraft: VariEze, registration: N80SH
Injuries: 1 Uninjured.

This is preliminary information, subject to change, and may contain errors. Any errors in this report will be corrected when the final report has been completed. On May 20, 1999, at 2030 central daylight time, a VariEze, homebuilt airplane, N80SH, collided with the ground, and nosed over shortly after takeoff from the Enterprise Airport, in Enterprise, Alabama. The airplane was operated by the commercial pilot under the provisions of Title 14 CFR Part 91, and visual flight rules. Visual meteorological conditions prevailed and no flight plan was filed for the local flight. The pilot was not injured and the airplane sustained substantial damage. The flight departed Enterprise, Alabama, at 2029. According to the pilot, he had forgotten to remove the fuel vent cover during his preflight inspection. Shortly after takeoff the engine lost power and the airplane collided with the ground during a forced landing. Damage consisted of the nose gear, propeller and vertical stabilizer.

The following report was emailed to RAF from canardfinder@att.net on 4 June 99.

Hi Canardians,

Some of you wanted to hear more of the accident with the Long-EZ. The Long was built in the Netherlands, but was registered in the USA as N17VN. It was flown by a Dutchman, and the accident took place in France in September 1996. So to say an international affair.

The pilot was on his way from Ibiza to the Netherlands, flying IMC in clouds at 9000 ft. There were heavy CB's all around. The French accident report say that lightning strike impact was via the aileron rods. Several balljoints were found melted, which made the plane uncontrollable.

Although I said that the pilot was electrocuted, that is probably not the case because the rubber stick grip had an isolating function. Anyhow he was killed on impact.

See Accident Report pg 5

Singapore Report

by Burt Rutan

My week in Singapore (July 3-9, 1999) was very interesting. Tonya and I were treated as if we were "Visiting Dignitaries" with constant personal attention.

The agenda in Singapore consisted of:

- (1). Courtesy calls: Chief of Defense Force, Secretary (Defense Development), Minister of State (Defense), & Minister for Defense.
- (2). Tours: Pulau Naval Base (incl landing-craft jaunt to St John's Island eco-research area), Tuas Naval Base, Defense Science Organization National Labs, UAV Squadron, Tengah Airbase (F-16s, F5s & A4s), National University of Singapore, National Science and Technology Board, Sembawang Airbase Tower (a helo field with Super Pumas, Hueys and A-Stars), Singapore Technologies Aerospace Company, Nanyang Tech University, & Singapore Armed Forces Training Institute.
- (3). Various Dinners and Luncheons hosted by folks from the above tours.
- (4). Social events, including: Golf at 3 different Private Resorts, a Night Safari (like the wild animal park, but jungle-like and designed so you do not see the protective moats), and several separate things for Tonya (like riding horses) while I was busy.
- (5). In addition to my standard Voyager talk, I gave two lectures: one titled "A Designers Forecast for Aerospace" and another titled "Future Defense Tech - Driven by Today's Enablers" Both used the themes of how to implement an environment for creativity.

The Singapore UAV squadron had 26 operational Israeli-built Searchers. About 10 years ago Scaled Composites developed the wing structure for the searcher. It was great to see a Scaled-developed military product actually being used in daily service. They demo'ed a great simulator for training the searcher pilots to do the 'RC model-like' takeoff and landing tasks.

Accident Report

I received this information from Cyril Sars, the builder of the Long. The man who was flying was the financier of the Long. Cyril will comment on this incident in due time. I will inform you by then.

Several experiments have been done to prevent the consequences of lightning strike. Martin Hamm and Patrick Juren mention both a Glassair which is lightning proof.

From this accident and your reactions we can conclude the following:

- Stay away from CB's, they are very dangerous
- Be well informed about the route to be flown especially the weather. •

**To report
accidents
and incidents**



Call RAF
(661) 824-2645

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Mojave, Ca 93501

Email RAF
raf@hughes.net

SOUTH ATLANTIC FLIGHT 1998

A Diary by Hans Georg Schmid

Part II

READY

By November 4 1998 the aircraft was packed, and a thorough 100-hour inspection had been completed shortly before. I was ready.

Of course my family did not take it lightly. We had discussed the flight many times before and

years ago I had decided to wait with such

adventures until my two sons Alexander and Jean-Daniel were young men. I had the full support of

my family at all times for which I am truly grateful. My wife Sibylle helped me not only before

whenever I was in need but also while I was on my

way. Alexander and Jean-Daniel were especially helpful in all computer problems (and there were

some) and Alexander created my homepage for the flight and provided updates during the trip on a

regular basis.

Twenty thousand miles in front of me including two Atlantic crossings was something I did not take

lightly either. Often I dreamed of possible weather scenarios or technical problems but never of any

sort of accident. The loss of 14 colleagues in the terrible accident in Halifax touched me deeply.

There were also all the ("good") people trying to be helpful in highlighting all the dangers of my

adventure when, in fact, they had little idea of what they were talking about.

Especially for Sibylle it sometimes became quite a problem when she was asked again and again

whether she was not afraid, and that the flight was going so far away and lasting so long.

Together and with the help of a great many friends we overcame those mental problems as well and

then it was the last night at home for six weeks.

FROM SWITZERLAND to DAKAR/SENEGAL

DAY 1, Thursday 05NOV98

Grenchen/Switzerland - Toulouse/France (03:25)

(H)

After a good night sleep we drove early to

Grenchen airfield. The weather was fine but it was freezing cold.

When I wanted to start the engine, the battery turned out to be low because of the cold

temperatures even though it had been replaced just a

Continued on page 8

aircraft worked flawlessly.

was cold outside, but my heart was warm as the aircraft worked flawlessly.

I then headed on course to Toulouse thrifting departing planes.

generator when I turned to take a picture of the days. Most probably I had tripped the CB of the

had been extremely wet and cold the last few accumulated inside of the voltage regulator, as it

came to the conclusion that moisture had Muten and when everything remained stable I

I circled for some ten minutes over Lake and all indications were in the green.

stayed in its usual range of 13.7 to 14.1 volts, normal. The generator was loading, the voltage

After the CB was reset everything returned to had never encountered in the past ten years.

behavior of the voltage regulator, something I picture of the departing planes or because of the

I turned in the narrow cockpit to take a last it was because I had inadvertently tripped it when

the generator had tripped. I could not tell whether reason was quickly found: the circuit breaker of

and the sudden drop to zero? The why the erratic behavior of the voltage regulator

Flying was still safe, no doubt about it. But good beginning after all.

controller I might soon be without radio — not a asked for a straight-in approach and told the

to Grenchen. I advised the tower of my return, immediately I turned around to fly directly back

to zero and the voltage began to fall. turned around, when the load suddenly dropped

not until I was over Lake Geneva, after they had no idea as to why this could have been. It was

talked to my friends in the other aircraft who had that the voltage regulator was sometimes erratic. I

During the first half hour of my flight I noticed pass abeam Grenchen tower to say farewell.

followed me to Lake Geneva after I did a low the airport to say goodbye. Three aircraft

my family and lots of friends behind who were at I took off exactly at 12:00 as planned, leaving

the engine was running after the first crank. batteries which just are not 100% even out of the

factory? We bridged to the battery of my car and few months before. Did I get one of those

Burt, Mike & Dick's **'99 Oshkosh Schedule**

29 July:	10:30 am — KidVenture Appearance — Aviation Hero Stage — Dick Rutan
29 July	1:30 - 2:30 pm — Museum Appearance at Voyager Exhibit — Dick Rutan
30 July	9-9:30 am — Kidventure — Presentation to 1000 Teachers — Dick Rutan
30 July	10:00 am — Tent V— Proteus & Other News— Burt Rutan & Mike Melvill
30 July	11:30 -12:45 pm — Lecture — Varilux Pavilion — Dick Rutan
30 July	1:30 -2:30 pm — Museum Appearance at Voyager Exhibit — Dick Rutan
31 July	10:00 - 11:15 am — Tent V — Tent Talk Show Burt Rutan & John Roncz
31 July	1:00 - 2:15 pm — Control-Line Model Training for Kids — S. Pioneer Airfield — Burt
31 July	2:00-3:00 pm — KidVenture Appearance — Aviation Hero Stage — Dick Rutan
31 July	8:15 pm — Theater in the Woods — Spirit of Flight Award honoring Mike Melvill
1 August	10:00 am — Tent V — Life After Airliners — Burt Rutan & Dr. Bruce Holmes, NASA
1 August	12:00- 1:00 pm — KidVenture Appearance — Aviation Hero Stage — Dick Rutan
1 August	1:30 - 2:30 pm — Museum Appearance at Voyager Exhibit — Dick Rutan
2 August	10:00 - 11:00 am — KidVenture Appearance — Aviation Hero Stage — Dick Rutan
2 August	1:30 - 2:30 pm — Museum Appearance at Voyager Exhibit — Dick Rutan

All date & times are subject to change. Be sure to check your EAA AirVenture program

Proteus to Fly at AirVenture Oshkosh '99

For the first time in twenty -odd years of flying his own airplane to Oshkosh, Mike Melvill will leave the Long-EZ at home in its hangar. Instead, he and Doug Shane will be flying high in Scaled Composites' experimental Proteus, a twin turboprop designed to carry payloads of up to 2000 lbs to altitudes of 60,000 feet and remain on station up to 14 hours. Mike and Doug are expected to fly Proteus nonstop from its home base in Mojave, California to Oshkosh, Wisconsin for the air show.

Spirit of Flight Award

Mike Melvill will receive long-overdue kudos at AirVenture Oshkosh when he is presented with the 1999 Spirit of Flight Award on July 31. The Spirit of Flight Award, sponsored by the Society of Experimental Test Pilots, is presented annually to an EAA member who best exemplifies the spirit of research, development or flight test. The winner is nominated by EAA and is selected by SETP's Board of Directors.

Jill Rutan-Hoffman

If you are attending AirVenture Oshkosh '99 be sure to look up Jill Rutan-Hoffman, Dick's enterprising daughter. Jill is writing a book about the splendid adventure of flight, and she plans to include stories of EAA pilots and enthusiasts. In other words, she wants to hear from you! Jill will be on hand at Oshkosh to collect written and taped versions of aviation tales. More about Jill and her book proposal will appear in the next Canard Pusher.

S. ATLANTIC FLIGHT

I had to fly on top after Lyon but there were always holes in the thin cloud layer below. I had promised to be in Toulouse by 1430 and I finally landed in a hazy sunshine one hour late. I received a very warm welcome by the Swiss Honorary Consul **Alain Tissot**, two television crews, many newspaper reporters, the local "Chambre de Commerce" as well as dignitaries from Toulouse Airport and the French Aero Club.

In the evening I was invited to an official dinner in the honor of the South Atlantic Commemoration Flight offered by industrialist **Michel Leclecq** of Toulouse for about twenty guests. It was an evening with many topics, good food and interesting discussions.

On the long table next to us a number of officials of the NTSB as well as from the Canadian TSB dined as guests of Airbus Industries and soon the Halifax accident was a theme again.

I was happy when I arrived back at the historic hotel Mermoz to catch up with some sleep as the time lag from Tokyo was still evident.

DAY 2, Friday 06NOV98

Toulouse/France — Almeria/Spain (04:01 H)

It was foggy outside and so I had ample time to talk to Roger Christen about the electrical problems I had yesterday. He came to the same conclusion about the voltage regulator. The possibility of condensation could not be ruled out and he gave me this green light to continue if everything were to work today as it should. We however decided to order a new regulator from B&C in the US immediately, which would be sent to Buenos Aires as a spare, if it arrived on time.

Alain Tissot was on time at the hotel to take me to the airport. There everybody was helpful and friendly but nobody was able to do anything against the persistent fog. It was almost one p.m. when I finally left Toulouse in special VFR. The voltage regulator worked perfectly but the battery was again low when I wanted to start the engine. It would definitely have to be replaced upon return even as it was practically new. Obviously it never reached 100% capacity but it was impossible at short notice to get a new battery of the special size I use in my Long-EZ in Toulouse.

At FL 105 (3200 m) I crossed the Pyrenees in splendid sunshine and soon the dry valley of the Ebro was passing beneath. The outside temperature was below freezing but the heating helped me to stay comfortable. Once more my LASAR electronic ignition system proved its worth, looking at the very

low consumption figures I achieved in cruise. To the left the blue Mediterranean came into view while in front the first clouds of a new weather system appeared. The landscape with mountains, and valleys and fields on terraces was fascinating. Once established in my cockpit I felt quite at home although the room to move was somewhat limited.

Shortly before Valencia I decided to turn to the coast and to descend to low level as I moved closer to the frontal system ahead. I then had to follow the coast as it was impossible to continue inland. Soon it started to rain, the visibility dropped to 3 NM (5 km) and the dark, gray cloud base was around 1000 ft above the sea. At one time it became a little uncomfortable as the turbulence along the steep coast rocked my small bird before I finally passed the front just before Almeria.

Almeria is a small, Modern Spanish airport close to Malaga which is ideal for general aviation. Everything works, the services are readily available and they have little traffic. I found a hotel close to the airport and after a delicious dinner and some good red Rioja wine I was in bed shortly after ten.

Day 3, Saturday 07NOV98

Almeria/Spain — Agadir/Morocco (05:05 H)

Today I would leave Europe for Africa! And it started as a good day too. The forecast from last night called for low overcast, strong winds and rain. But as so often the weather people got it somewhat wrong: the sun was shining, the wind blew only moderately with 20 knots from the east and the temperature had already risen to a comfortable 18° C (65° F). The engine started immediately and soon I was airborne, following the coast at 1000 ft towards the west.

Shortly before Malaga I obtained a clearance which led me to the middle of the Strait of Gibraltar while the weather turned bad again. I stayed at 1000 ft over the choppy sea and crossed the intense traffic on the sea lanes below. Circumnavigating the prohibited area around Gibraltar I proceeded directly overhead Tanger. I was back in Africa and this time it was easy to navigate in Morocco. This North African country only accepts controlled VFR flights which means I had to follow predetermined VFR routes with numerous checkpoints which are only marked on Moroccan VFR-charts. These, however, were impossible to get in Switzerland. In Toulouse I was very lucky as somebody had given me a

Continued on pg 9

S. ATLANTIC FLIGHT

whole set of Moroccan VFR maps as a gift.

After Tanger flying south the weather started to clear up. Following my route via Casablanca I soon fell out of range of air traffic control. I dropped down to 500 feet (150 m) and followed the coast and the long, empty beaches to the south. In the meantime I had entered the desert zone and after Casablanca there was no other traffic. Soon I was all alone. It turned hazy and warm but, with the help of the GPS, even overhead the hilly, weathered desert, I knew at all times precisely where I was. Nevertheless, I always followed the progress of the flight on my paper maps to maintain a double check.

Passing Safi the outside temperature had already risen to 30° C (86° F) and it really became warm in my winter flight suit. I climbed to FL 85 (2600 m) where it was cooler but where I also encountered 25 kt of headwind. Just over five hours after I left Almeria I passed overhead the runway of Agadir and turned to a left hand downwind. As soon as the tower had me in sight I was given my landing clearance, only to be reprimanded after landing as to why I had done so without a clearance. . .

I was definitely back in Africa.

Day 4, Sunday 08NOV98
Agadir/Morocco — Dakar/Senegal (08:26 H)

Wake up was at 0445 and I prepared myself for an early take-off. As I was hoping to establish a new world speed record over a recognized course I first had to seal the tanks and complete a mountain of paperwork. The Moroccan officials, however, were working efficiently and soon after sunrise I was ready for departure.

I had my clearance at once but while I turned on the active runway something felt wrong. Two seconds later I knew what it was and requested clearance to leave the runway and proceed into the holding bay. My front wheel had a flat tire. The fire brigade moved out and then helped me to tow the aircraft back to the tarmac far away.

As I had no spare tire nor tube with me (I had never had a problem in ten years) I just hoped the tire would still be usable. A mechanic from Royal Air Maroc helped me to take the wheel off and soon disappeared, talking about friends and somebody in town who perhaps could help.

Half an hour later he was already back with a repaired and fully inflated tire which was back where it belonged in just a few minutes. The friendly mechanic then showed me a rather large piece of metal

which had been on the taxiway before it caused the trouble.

However it was not until 0948 that I took off. The temperature had already risen to 30° C (86 F) and so the climb with the heavy aircraft was slow. My problem was to land in Dakar before sunset and according to my flight plan I could still just make it . . .

Below my aircraft a lonely desert with just a piste now and then passed with ever-changing colors, sand dunes and rock formations. After two hours flight time I overflew the Moroccan defense line against the former Polisario gueillas. It is a line with three consecutive earthen wall which have small fortifications every two miles or so. Every now and then there is a larger camp which is fortified as well. It was most interesting to see this from an altitude which was low enough to distinguish many details. It was not very long ago that this defense line was in use and I remember civil aircraft being downed in this region some years back.

Equally interesting were the mines of Zouerate; which are all black in the middle of a brown and yellow desert. Overhead Nouakchott/Mauritania I was, for the first time in hours, back in radio contact. Of course they had not received a flight plan but let me pass without further questions about my overflight permit, the number of which I had readily available. Fifteen minutes before sunset I landed at Dakar airport where I was immediately assisted by Swissair's Moustapha Diakhate who was most helpful and had already organized a hotel.

Dakar- Senegal to Recife- Brazil

Day 5, Monday 09NOV98
Dakar/Senegal

I stayed at the former famous Ngor Hotel which had changed quite dramatically in the last ten years. Maintenance is lacking everywhere and guests are obviously in short supply. Had the hotel not been reserved in advance, I would have changed.

During the morning I received the best weather briefing of my life by Miss Margrit Weber of MeteoSwiss. She called from Zurich and was very well prepared. She outlined the position and the intensity of the Inter Tropical Convergence Zone (ITCZ), talked about winds aloft and where I probably would run into problems. After twenty minutes it was clear, tomorrow would be the day to cross the South Atlantic.

Continued on pg 10

During the afternoon I checked my aeroplane, filed the flight plan and collected the latest weather forecasts. When I wanted to pay the landing fee I was shocked as I had to pay the outrageous sum of US\$ 183 for an aircraft which usually has to pay about ten dollars per landing. I was told it was because the airport would switch on the runway lights for only me.

I quickly ate two sandwiches before I took a taxi back to the hotel. It was hot and humid and unfortunately the air-conditioning failed to work in my bedroom. At 1900 I was in bed and tried to sleep as well as possible 'till midnight, to be ready and fit for the big jump early tomorrow.

far as I could the previous day, it proved nonetheless difficult to do the rest in the dim lights of the airport only with the help of my small flashlight. The tanks were sealed and stamped by an official from the "Bureau de Piste" as this would be an attempt to establish a new record for my class of aircraft with a weight of below one ton.

Shortly after 0200 I was finally ready to go.

The weather forecasts and wind charts called for a slight tailwind and the ITCZ was to be hit after around four to five hours of flight.

While backtracking on runway 36 the moisture condensed on my canopy the moment I closed it. Even though I saw almost nothing, I knew the



See more full scale color pictures of the South Atlantic Flight in the internet: <http://fly.to/sat98>

Day 6, Tuesday, 10NOV98
Dakar/Senegal-Recife/Brazil: 1720 NM
nonstop!
(13:48 H)

It was pitch dark outside when, at thirty minutes past midnight, I arrived at the airport in Dakar by taxi. The airport was still quite busy at that time of the night. It was warm and very humid which meant I first had to get rid of all the moisture, which had already formed on the wings and canard. That was fine with me as I also got rid of all the sand which had deposited on the aircraft.

Although I had prepared and loaded the plane as

condensation would be blown away while passing around 40 knots during take-off.

Setting take-off power in a plane almost 35% over (certified) gross weight at 0223 in the morning in absolute darkness, with the Atlantic in front and just one engine behind, is something quite special. It was not the first time I had done it, but nevertheless. Oskar Bider, a famous Swiss aviator once said, "Courage is to be afraid and to do it anyway." I wasn't afraid but certainly 100% aware of what I was doing and the risks involved. As I had worked for one and a half years for this moment and as I had checked and

Continued on pg 11

S. ATLANTIC FLIGHT

whole set of Moroccan VFR maps as a gift.

After Tanger flying south the weather started to clear up. Following my route via Casablanca I soon fell out of range of air traffic control. I dropped down to 500 feet (150 m) and followed the coast and the long, empty beaches to the south. In the meantime I had entered the desert zone and after Casablanca there was no other traffic. Soon I was all alone. It turned hazy and warm but, with the help of the GPS, even overhead the hilly, weathered desert, I knew at all times precisely where I was. Nevertheless, I always followed the progress of the flight on my paper maps to maintain a double check.

Passing Safi the outside temperature had already risen to 30° C (86° F) and it really became warm in my winter flight suit. I climbed to FL 85 (2600 m) where it was cooler but where I also encountered 25 kt of headwind. Just over five hours after I left Almeria I passed overhead the runway of Agadir and turned to a left hand downwind. As soon as the tower had me in sight I was given my landing clearance, only to be reprimanded after landing as to why I had done so without a clearance. . .

I was definitely back in Africa.

Day 4, Sunday 08NOV98
Agadir/Morocco — Dakar/Senegal (08:26 H)

Wake up was at 0445 and I prepared myself for an early take-off. As I was hoping to establish a new world speed record over a recognized course I first had to seal the tanks and complete a mountain of paperwork. The Moroccan officials, however, were working efficiently and soon after sunrise I was ready for departure.

I had my clearance at once but while I turned on the active runway something felt wrong. Two seconds later I knew what it was and requested clearance to leave the runway and proceed into the holding bay. My front wheel had a flat tire. The fire brigade moved out and then helped me to tow the aircraft back to the tarmac far away.

As I had no spare tire nor tube with me (I had never had a problem in ten years) I just hoped the tire would still be usable. A mechanic from Royal Air Maroc helped me to take the wheel off and soon disappeared, talking about friends and somebody in town who perhaps could help.

Half an hour later he was already back with a repaired and fully inflated tire which was back where it belonged in just a few minutes. The friendly mechanic then showed me a rather large piece of metal

which had been on the taxiway before it caused the trouble.

However it was not until 0948 that I took off. The temperature had already risen to 30° C (86 F) and so the climb with the heavy aircraft was slow. My problem was to land in Dakar before sunset and according to my flight plan I could still just make it . . .

Below my aircraft a lonely desert with just a piste now and then passed with ever-changing colors, sand dunes and rock formations. After two hours flight time I overflew the Moroccan defense line against the former Polisario guerrillas. It is a line with three consecutive earthen wall which have small fortifications every two miles or so. Every now and then there is a larger camp which is fortified as well. It was most interesting to see this from an altitude which was low enough to distinguish many details. It was not very long ago that this defense line was in use and I remember civil aircraft being downed in this region some years back.

Equally interesting were the mines of Zouerate, which are all black in the middle of a brown and yellow desert. Overhead Nouakchott/Mauritania I was, for the first time in hours, back in radio contact. Of course they had not received a flight plan but let me pass without further questions about my overflight permit, the number of which I had readily available. Fifteen minutes before sunset I landed at Dakar airport where I was immediately assisted by Swissair's Moustapha Diakhate who was most helpful and had already organized a hotel.

Dakar- Senegal to Recife- Brazil

Day 5, Monday 09NOV98
Dakar/Senegal

I stayed at the former famous Ngor Hotel which had changed quite dramatically in the last ten years. Maintenance is lacking everywhere and guests are obviously in short supply. Had the hotel not been reserved in advance, I would have changed.

During the morning I received the best weather briefing of my life by Miss Margrit Weber of **MeteoSwiss**. She called from Zurich and was very well prepared. She outlined the position and the intensity of the Inter Tropical Convergence Zone (ITCZ), talked about winds aloft and where I probably would run into problems. After twenty minutes it was clear, tomorrow would be the day to cross the South Atlantic.

Continued on pg 10

During the afternoon I checked my aeroplane, filed the flight plan and collected the latest weather forecasts. When I wanted to pay the landing fee I was shocked as I had to pay the outrageous sum of US\$ 183 for an aircraft which usually has to pay about ten dollars per landing. I was told it was because the airport would switch on the runway lights for only me.

I quickly ate two sandwiches before I took a taxi back to the hotel. It was hot and humid and unfortunately the air-conditioning failed to work in my bedroom. At 1900 I was in bed and tried to sleep as well as possible 'till midnight, to be ready and fit for the big jump early tomorrow.

far as I could the previous day, it proved nonetheless difficult to do the rest in the dim lights of the airport only with the help of my small flashlight. The tanks were sealed and stamped by an official from the "Bureau de Piste" as this would be an attempt to establish a new record for my class of aircraft with a weight of below one ton.

Shortly after 0200 I was finally ready to go.

The weather forecasts and wind charts called for a slight tailwind and the ITCZ was to be hit after around four to five hours of flight.

While backtracking on runway 36 the moisture condensed on my canopy the moment I closed it. Even though I saw almost nothing, I knew the



See more full scale color pictures of the South Atlantic Flight in the internet: <http://fly.to/sat98>

Day 6, Tuesday, 10NOV98
Dakar/Senegal-Recife/Brazil: 1720 NM
nonstop!
(13:48 H)

It was pitch dark outside when, at thirty minutes past midnight, I arrived at the airport in Dakar by taxi. The airport was still quite busy at that time of the night. It was warm and very humid which meant I first had to get rid of all the moisture, which had already formed on the wings and canard. That was fine with me as I also got rid of all the sand which had deposited on the aircraft.

Although I had prepared and loaded the plane as

condensation would be blown away while passing around 40 knots during take-off.

Setting take-off power in a plane almost 35% over (certified) gross weight at 0223 in the morning in absolute darkness, with the Atlantic in front and just one engine behind, is something quite special. It was not the first time I had done it, but nevertheless. Oskar Bider, a famous Swiss aviator once said, "Courage is to be afraid and to do it anyway." I wasn't afraid but certainly 100% aware of what I was doing and the risks involved. As I had worked for one and a half years for this moment and as I had checked and

Continued on pg 11

double-checked everything, I was certain I had done as much as I could to make this trip as safe as ever possible.

After starting the take-off roll and seeing only the blurred runway edge lights, I accelerated slowly and then at 40 knots I suddenly had good visibility again. At 80 knots I lifted the nose wheel and passing 90 knots the aircraft started its slow climb into total blackness. I made a shallow left turn onto 224 degrees and the Long-EZ was on course for Brazil.

During initial climb out I was glad to have installed the STRONG electric pitch trim which, already on the way to Dakar, had proven its usefulness. It now was so easy to trim the heavy aircraft very precisely that I was sorry not to have installed the system earlier. As I climbed with 115 knots IAS, the oil, as well as the cylinder head temperatures, stayed well within limits despite the warm outside temperatures. It was a good idea to have put in the extra effort before to achieve the utmost in engine cooling.

The two GPS were programmed for the route. On the KLN-90, which was connected to the autopilot, I had the direct great circle route to Recife and on the Garnim-195 the different en route waypoints were inserted. After a slow climb I reached flight level 60 (6000 ft or roughly 2000 meters) which was to be my first flight altitude. I felt the heavy weight of the aircraft and the high outside temperatures which were almost 20° C above standard at this altitude. The slight tailwind materialized and I cruised with 130 knots IAS over the vast black sea below which I only sensed but could not see.

Hour after hour passed and a long time ago I had passed my estimates to Dakar. The communication on HF (short wave radio) proved difficult, but manageable. My cockpit was very narrow in the actual configuration: the pockets of my flight suit were not exactly empty and the life jacket I had just received before departure was, in real life, much (very much!) bulkier than when I tried it in the cockpit for a short while in Switzerland before the flight. On my knees rested the HF radio, attached to four different cables (power, antenna, antenna coupler, intercom system) as well as to a separate microphone. Additionally there were the charts, the commsheet, two bottles of water, the flight plan, some food, the dinghy on my back and, and ...

All this in a cockpit which is hardly known for its roominess.

Without the life jacket it would not have been a problem, with a normal life jacket it would have been a bit tight, but still okay. With this jacket

however, which had an emergency radio as well as a small emergency package incorporated, it was just this tiny bit too much . . .

Well, I was on my way and I couldn't do anything about it now, and that was that.

Thoughts of Saint Exupery's "Vol de Nuit" passed and I knew of the worries of my family and of many friends who had called my wife, something I highly appreciated. There was a half moon behind, the Orion above and the dim instrument lights in front of me. After four hours, the first light appeared to the east, a sign of the morning ahead. But ahead was also the ITCZ with all the thunderstorms stretching from Africa to South America, which I was about to cross. For about thirty minutes I first saw little cumulus clouds below, then cloud layers above and sometimes below, and in front and to the left the first lightning was visible. I knew there were thunderstorms ahead but without radar they could not be seen.

Continued on pg 12

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In the meantime I had climbed to FL80 (8000 feet roughly 2400 meters) when I suddenly hit moderate turbulence. When it did not cease after 30 seconds I turned around as I knew I had hit a larger cumulus which I had not seen as there was not enough light yet. The ITCZ was exactly where it had been predicted by Miss Weber. After a minute or so I had left the large cloud but not before having seen a lightening flash relatively close to the left.

On an easterly heading I flew on a reverse course towards the sun which now made it easy to circumnavigate the many medium to large thunderclouds around me. The first detour cost me some 20 minutes until I found a path between the clouds which was again more or less on course to Recife. Suddenly I was in the clear again and back below a cloudless sky. Fifteen minutes later the next large cell appeared in front and as I could not find a way through it, I decided to descend and to try to pass below. At 500 feet (150 meters) above the sea the large showers were clearly identifiable and I avoided them as well as the sometimes pitch dark cloud base above. After ten minutes or so I was in the clear again and started to climb to FL 100 (10,000 ft or 3048 meters).

Again after ten to fifteen minutes a new large line of thunderclouds appeared on the horizon stretching from left to right as far as I could see. I tried to find a way through more or less straight ahead, but I had to turn to the south after a short while as there was no way through. As I flew on a heading of 180 degrees I hit a headwind of 20 knots and every time I tried to find a hole on course I had to abandon the attempt and proceed still further south. I certainly lost an additional 20 minutes before I finally found a way through this large line of thunderstorms. If I had realized before how large it was, I would have descended to try to pass below.

When I hit the clear again I was finally through the ITCZ just south of the equator. Thereafter the picture remained the same till I reached the Brazilian coast. The sea below looked pleasant and calm, there were tiny white cumulus clouds beneath but absolutely no ships to be seen. I hit a slight headwind. I calculated and recalculated my fuel use but, even though I had lost at least 45 minutes in the ITCZ, there was still enough fuel to reach Recife with reserves to divert to an alternate airfield and more than one hour additional fuel even with headwinds. As I had the island of Fernando de Noronha with an airport in front of me which is more than two flight hours off the Brazilian coast, I had a good feeling of being still on the safe side fuel-wise.

The main problem was sleep. As I had not slept deeply before my flight (it was just too early, too humid and too warm) I had now been up for almost 36 hours which I felt. I had to concentrate on staying awake as there was absolutely nothing to attract my interest outside the aircraft. The tropical sun heated the cockpit as, due to the ferry tank being in the rear, the air outlet was blocked and the incoming air was unable to cool as much as it normally does.

Two hours before arrival I tried to switch tanks for one more time. To do this I had to take off my shoulder harness and to loosen the belly harness — all this because of the bulky life jacket which may pose no problem in a fighter but was a big headache here. When I moved forward I hit the canopy with my earphones which promptly fell off and down behind my back. Now I had a major problem on my hands. I almost could not move because of the life jacket and it proved to be very difficult to get the earphones out of the blocked position in my rear.

When I finally retrieved them I was really glad they still worked. As I moved them, my second water bottle took their place which could not be reached anymore. This meant some more comfort lost as it started to leak because of the pressure of my back . . . I finally found the one and a half liters of water had drained down to the bottom of the aircraft with everything which I had stored there thoroughly wet.

After almost 14 hours of flight the Brazilian coast came into sight and I landed after a flight time of 13:48 hours in a stiff crosswind and at a temperature of 34° C (93° F) at Recife Guararapes International.

The welcome organized by the Swiss Honorary Consul **Rudolf Fehr** was absolutely first class and very friendly in every respect. I first received flowers from Veronica, the attractive employee of Consul Fehr, then I met Colonel Silvio Viana, the Superintendent for all Brazilian airports in northeastern Brazil, the Commander of the Recife air base as well as numerous local dignitaries who gave me a very warm welcome indeed together with the representative of Swissport **Amaury Duarte**. There were the two largest newspapers present as well as two TV crews who conducted lengthy interviews. The aircraft was parked in the VIP hangar and cordoned off. The formalities were quickly done with and after still more interviews, I was finally relieved to leave the airport together with Consul Fehr who had invited me to be his guest while I stayed in Recife.

After an excellent Brazilian meal I called it a day and went to bed early, delighted to have made it.

TO BE CONTINUED in the next CP

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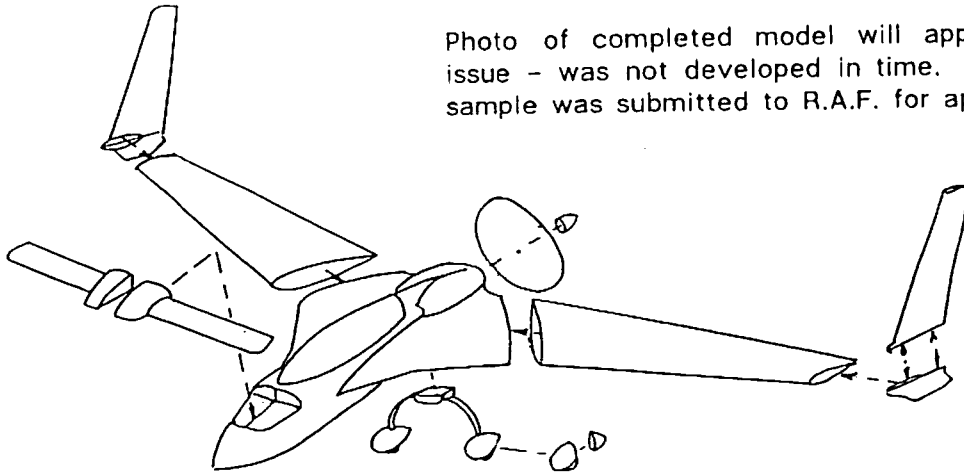


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I installed one on N26MS and now have a full flow, spin on champion oil filter, with no high pressure hoses to a remote mounted filter which could leak. It comes with everything you need to install it: a new gasket, new aluminum washer for the vernatherm, and new copper washer for the oil temperature sensor. They even send a small container of the proper sealant for the gaskets. Of course it comes with new Lycoming bolts to mount it.

It is fairly expensive at \$395 but is available to EZ flyers until the end of 1996 for \$350. I am extremely pleased with mine and I heartily recommend it for anyone running a Lycoming engine on an EZ. A fuel flow spin-on filter allows 50 hours between oil changes and prolongs the life of your engine.

Give B&C a call at (316) 283-8662 or fax (316) 283-8000. You'll be glad you did! *Mike*

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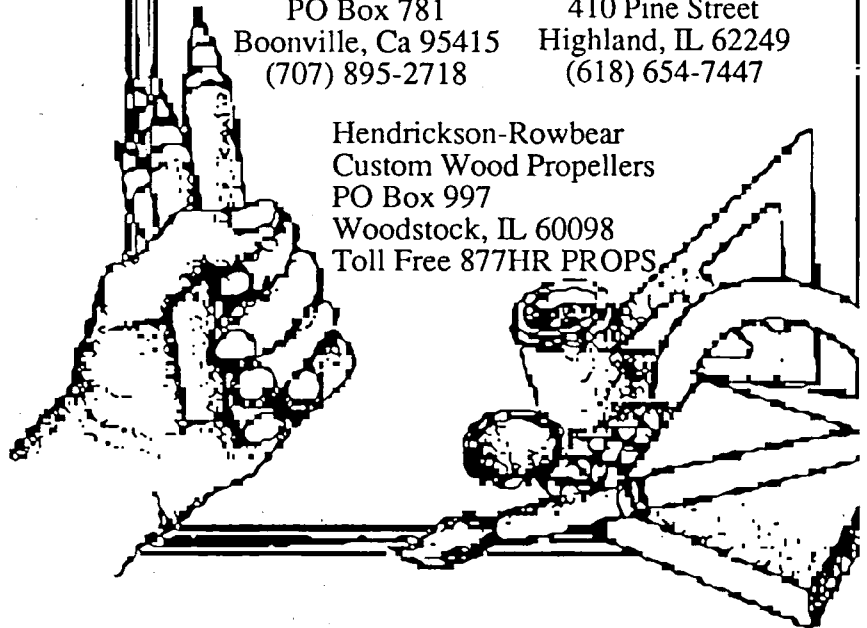
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JULY '99
CP 97