

CANARD PUSHER

OCTOBER 1999

RUTAN AIRCRAFT FACTORY

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Mike Awarded Trophies for Flight Test

by Tonya Rutan

The Society of Experimental Pilots (SETP) honored Michael Melvill with two prestigious and well-deserved trophies in 1999 — the Spirit of Flight Award and the Iven C. Kincheloe Award.

Mike, who was unaware of his nomination for the Kincheloe award until it was announced at the September SETP banquet in Beverly Hills, now joins rank with a commanding line-up of aircraft and spacecraft heroes. Neil Armstrong and his fellow Apollo 11 astronauts, "Buzz" Aldrin and Michael Collins as well as the first crew of The Enterprise have received the Kincheloe Award. Dick Rutan won the trophy for the flight of the Voyager, and Doug Rane won the award for test flight of the V-Jet II and VisionAire Vantage.

The Kincheloe trophy, sponsored by the Lockheed Martin Corp., recognizes exceptional contributions to an aerospace program as a test pilot. It was established by SETP in 1958 to honor Captain Iven Kincheloe who was the original US Air Force project pilot for the X-15. Kincheloe piloted the X-2 rocket plane to a record altitude of 126,200 feet in 1956, becoming famous as the "America's first spaceman."

Tom Wolfe, in *The Right Stuff*, described Kincheloe as "a test pilot from out of a dream, handsome, powerful, bright, supremely ambitious and yet popular with all who worked with him, including other pilots."

Mike was selected for his leadership of the Proteus test program; for his first flight of the Proteus on July 26, 1998; and for the 44 flights and 150 hours flight test of the Proteus.

However, as many canard fliers know, Mike's accomplishments as pilot are much more far-reaching. Mike has over 6000 flight hours in 115 fixed wing and rotary wing aircraft, including 8 first flights of new prototypes. He and his wife Sally built and flew a VariViggen, which was soon followed by a prize-winning Long-EZ. A great adventurer, he flew around the world in his Long-EZ in 1997.

The Spirit of Flight Award was presented to Mike



at Oshkosh '99. The award honors the EAA member who best exemplifies the spirit of research, development or flight test.

"(Mike's) extensive work with homebuilders of Burt Rutan's designs has had a significant positive impact on flight safety," wrote G.P. "Buzz" Lynch of SETP. "Also your flight test work at Scaled Composites, and in particular the first flight and all subsequent flight tests of the Proteus aircraft, reflects your contribution to sport aviation safety and air safety by presenting pilot's opinion; strengthen the influence of the test pilot on aeronautical progress; continuously evaluate the adequacy of flight equipment; exchange information for the development of improved testing techniques; discuss newly experienced phenomena in the realm of flight." ●

BRIEFS

Our friend *Phil Chase* of Rancho Cordova, CA counted 40 Long-EZs, 17 VariEzes and 2 Defiants at AirVenture Oshkosh '99

Dick Rutan — I found a Alt failure light that I put in my Cessna-150 that is real neat. Has a push-to-test twist to dim and comes on when buss voltage drops below 13V. It's all self-contained and EZ to hook up. I could have saved me twice if I had it. Alt failed and we ran until the battery was dead at night.

The B&C regulator has its own, but those who don't have Bill's stuff could sure use this.

AIRCRAFT SPRUCE Catalog page 321
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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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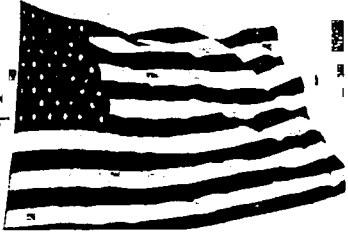
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AirVenture Oshkosh '99



(R) Pop Rutan says hello to the Grizzly, on display at AirVenture '99.



(L) Burt and Mike discuss the cross-country flight of the Proteus minutes after Mike and co-pilot Peter Siebold landed at Oshkosh.

Tell Your Story

Time is short, but you still have time to share your favorite Oshkosh story and photographs with Jill Rutan-Hoffman. Dick's enterprising daughter and her husband Major Lars Hoffman are composing a collection of stories for a book about the greatest Air Show on earth, and they want to hear from you. **THE DEADLINE IS JANUARY 2000.**

Jill and husband Major Lars Hoffman are the parents of two children. Lars has recently completed a tour flying U2s for the Air Force.

"I have been attending EAA Conventions at Oshkosh for most of my life, and feel very much a part of the EAA family," Jill told Sport Aviation in a recent interview. "I view Oshkosh as a family reunion where I'm entertained and inspired as the 'family members' recount their favorite Oshkosh memories. I'm composing a collection of these stories and pictures into a book to share with current and future EAA members and I would love to include one of your favorite Oshkosh stories and/or photos. I need stories and/or photos from homebuilders, restorers and inventors about their Oshkosh-related experiences.

I need stories from the flyers and back seaters. I'm looking for any funny or meaningful Oshkosh experiences. Use e-mail or snail mail — just send your stories and/or photos."

Jill plans to donate a significant portion of the proceeds from the book to EAA's Young Eagles program. The book is scheduled for introduction at EAA AirVenture 2000.

Send your stories and photos to:

Jill Rutan-Hoffman
PO Box 411121
Melbourne, FL 32941-1121

E-mail: larsjill@unidial.com



Jill with husband Major Lars Hoffman and their lil' helpers Noelle, 6, and Haley, 1.



Terry Yake's Prairie Pusher on EZ Row

Accident Report

Note from Bill Allen bill@billyallen.com — Some months ago there was a thread on the internet on the risks and effects of lightning strikes to composite airframes. There was also some comment about a glider in the UK being destroyed by lightning. An article has just appeared in Sailplane & Gliding; if anyone wants it I can email it in Word format.

NTSB MIA99LA122 — On April 11, 1999, about 1414 central daylight time, a Vari-Eze, N250GH, registered to an individual, crashed while attempting a forced landing following loss of engine power, near Eufaula, Alabama, while on a Title 14 CFR Part 91 personal flight. Visual meteorological conditions prevailed at the time and no flight plan was filed.

The aircraft was destroyed and the private-rated pilot received serious injuries. The passenger received minor injuries. The flight originated from Covington, Tennessee, the same day, about 1230.

The pilot stated that while in descent for landing at the Eufaula Airport, the engine lost power. He was able to maintain some engine power by moving the throttle control back and forth. He could not make the airport and decided to land while he still had some engine power. While attempting a forced landing on a road, they encountered a truck. They attempted to climb over the truck, at which time the right wing collided with power lines and the winglet separated. The aircraft then crashed back on the road, went off the road, and collided with trees,

continued on pg 7

SAM Kreidel in Big Sky Country — In year 1989 I installed an UMA 1-1/4 inch mini-fuel pressure gauge in my LIMO EZ. I have an injected IO-360 LYC in that bird and fuel pressures run around 25 psi. To date I have replaced that gauge 2 times due to needle jitter/fatigue as well as in one unit-diaphragm fatigue and fuel seepage. I am on my third one now and since they cost about \$100 each I got mad as hell about it and decided to find out why I am so lucky.

In the beginning I had simply hooked it all up and all seemed fine. Maybe a couple of years later I watched the needle develop a case of jitters particularly at idle and low rpm settings. Another year or so and the gauge started to leak a little.

Enter gauge No 2. After several years I noticed the same scenario develop — and squawked to Mfgr about it. He sent a replacement but gave no insight as to what was going on.

Maybe another year goes by and I decided to insert an orifice in the pressure line going to the gauge. I did that and looking back now I recall having lost some fuel out of the line when inserting the orifice. I recall thinking it wasn't very much so I didn't take the time to replenish the fuel into the pressure line. When I started the engine, I saw

improvement and thought I was pretty smart for inserting that orifice (remember this orifice blurb as you read on and hear the real solution).

Couple more years go by and we are at the Here and Now Again, but having replaced the engine driven fuel pump it seemed as if it was getting worse.

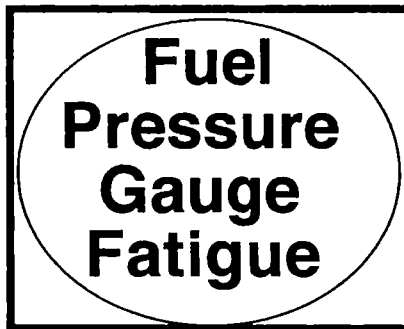
I decided I was going to get to the bottom of it. But first I went out and made sure the pressure line was filled by running my pump and opening the nut at the gauge. Then I tried it again but it seemed to be no better.

That's when I started checking around to see if anyone had a solution. I wasn't getting very far and had even put a message in the Canard Pusher with no takers. I decided to ask Mahlon Russel of Mattituck Aviation if he had experienced this. Mahlon had given me some earlier solutions so I told him of my problem.

Guess What! Mahlon immediately said

his experience on this problem was that the fuel line had fuel in it, and THAT was what was transmitting the pump pulses and making the needle sick. He said to purge all gas out of the pressure line and get as much AIR into the line as possible!

I began to feel a little dumb as I feared he may be right. Today I did what he said to do and it WORKED! I have never seen such a docile pressure gauge needle as I now have. Thanks Mahlon!



Accident Report

where the right wing separated and the aircraft came to rest. At the time of the accident he estimated he had more than 10 gallons of fuel remaining.

After the accident the carburetor was removed from the engine and taken to a overhaul facility by an FAA inspector. The inlet strainer screen was found to be partially blocked with a foreign substance. No evidence of precrash mechanical failure of the carburetor was noted.

Examination of the carburetor inlet strainer screen and the foreign substance in it was performed by the NTSB Materials Laboratory, Washington, D.C. About 1/2 of the inlet screen was blocked by a white deposit. The deposit consisted of a mixture of very fine white particles and long translucent fibers. The fibers had characteristic peaks for silicon, calcium, aluminum, and oxygen, consistent with glass fibers. Several clumps of fibers were found embedded in the white material consistent with a fiberglass composite.

After the accident the engine was installed on a engine test stand in the presence of an FAA inspector. Another carburetor was installed and the engine was operated using an electric fuel boost pump. No evidence of mechanical failure or malfunction was noted. The engine was operated a second time with only gravity fuel feed. The engine again operated normally. The mechanic who conducted the engine run for FAA also examined the fuel strainer bowl from the aircraft at the request of NTSB. A very small amount of fiberglass debris was found in the strainer.

Under NTSB supervision, the carburetor installed on the engine at the time of the accident was reassembled using another top portion to replace the top portion damaged in the accident, and an unobstructed fuel inlet screen. This carburetor was installed on the engine along with a wooden propeller from a Long-Eze aircraft. The engine was started and operated to 2,500 rpm, using a gravity feed fuel system, with no evidence of failure or malfunction. A fuel inlet screen with a 50 percent blockage was installed in the carburetor. The engine was again started and operated to 2,500 rpm, using the gravity feed fuel system, with no evidence of failure or malfunction. Examination of the aircraft's fuel system by NTSB showed no fuel pickup, fuel line, or fuel vent line obstructions.

NTSB ATL99LA096 — On May 20, 1999, at 1935 central daylight time, a Vari-Eze 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 1930.

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.

No mechanical problems with the airplane were reported by the pilot.

NTSB Identification: CHI99LA181 : Accident occurred JUN-10-99 at ODESSA, MO: Injuries: 1 Minor.

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.

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On June 10, 1999, at 1000 central daylight time, an experimental Varieze, N83HR, was substantially damaged during landing. The commercial pilot reported the landing gear collapsed when the airplane "dropped in" during landing. The pilot received minor injuries. The 14 CFR Part 91 flight had departed Lamar, Missouri, and landed at a private airstrip (MU20) near Odessa, Missouri. Visual meteorological conditions prevailed and no flight plan was filed.

Accident occurred JUN-02-99 at FRIENDLY, MD : registration: N555L
Injuries: 1 Serious.

This is preliminary information, subject to change, and may contain errors. Any errors in this report will be corrected when the final report has

continued on pg 8

Accident Report

been completed.

On June 2, 1999, at 0937 Eastern Daylight Time, a homebuilt Long EZ, 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.

Report by NTSB — Accident occurred JUL-11-98 at ARLINGTON, WA: Injuries: 3 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 July 11, 1998, approximately 1430 Pacific daylight time, a homebuilt Vari Eze, N29NS, built, owned and being flown by a private pilot, sustained substantial damage when the landing gear and a wing separated during landing roll in a field approximately one nautical mile north of the threshold of runway 16 at the Arlington Municipal airport, Arlington, Washington. A loss of power and forced landing preceded ground roll event. The pilot and his two passengers were uninjured.

Visual meteorological conditions existed, and no flight plan had been filed. The flight, which was personal, was to have been operated under 14CFR91, originating from the Arlington Municipal airport (AWO) about 1400. The pilot reported that while on approach from the north for runway 16, and approximately 1,800 feet altitude, he experienced a sudden loss of all power. He then initiated an emergency descent touching down in an open field. During the landing rollout all three landing gear separated as well as the forward canard and right wing. FAA personnel on site found at least 14 gallons of fuel in the attached left wing.

Report by NTSB — Accident occurred JUL-18-99 at BUENA VISTA, CO: Injuries: 1 Serious.

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 July 18, 1999, approximately 1545 mountain daylight time, a Long EZ, N6577C, owned and operated by the pilot, was substantially damaged when it collided with terrain while landing at Buena Vista, Colorado. The private pilot, the sole occupant aboard, was seriously injured.

Visual meteorological conditions prevailed, and no flight plan had been filed for the personal flight being conducted under Title 14 CFR Part 91. The flight originated at Buena Vista at an undetermined time. According to information supplied by the Chaffee County Sheriff, this was the pilot's first solo flight in the Long EZ. The pilot said he "overcontrolled" the takeoff.

The airplane climbed about 10 feet, then landed hard and bounced once on the runway. It then touched down in soft dirt and nosed over.

email from Dave Driscoll — My name is Dave Driscoll and since 6/13/99 I have been the proud owner of N3XK the Fred Keller's plans prototype Defiant. I logged over a 100 hours of flight time in the first two months (flew the perimeter of the country and

WEB SITES

National Transportation Safety Board Accident Reports

<http://www.nts.gov/aviation/Accident.htm>

Canard fliers website

<http://www.ez.org/>

continued on pg 9

Accident Report

down to the Bahamas) and have to say that it is without a doubt the most incredible aircraft that I have ever flown (fast, comfortable, fun, and hauls lots of toys).

Fortunately or unfortunately (depending on your point of view), I have also been witness to the incredible safety of the design. I'm sorry to say N3XY failed its rear engine during takeoff on the 30th of July at Timmerman field in Milwaukee, WI and was damaged quite badly in the aborted takeoff. The aircraft rolled through a fence at about 25 mph and ultimately came to rest in the median of a 4 lane road. I'm very happy to report that there were no injuries (the canard plowed the way for the rest of the plane, zero damage to the fuselage and strake Area). Damage includes a folded nose gear, crushed front cowling, main strut trauma, one steel fence post divot on the leading edge of every flying surface, trashed rudder and wheel pants, sheared the top 2 feet of the left winglet and about a 5 inch wire cut to the root of the right one, about 2 sq feet of scratches to the canopy, and one severely dented ego. Needless to say, I feel like I dropped the Hope diamond in a rock crusher.

I have been in contact with a number of people in the Defiant community and the consensus is that this is a very repairable ship.

Good news, bad news from Charles Sims — September 18 — After fifteen years of work and effort, today was the day, I had the first flight of 18 minutes and it was great. The Defiant flew straight and with little pressure on the rudder until the speed increased and I had to hold a lot of right rudder. The fourth flight I retracted the nose gear and it went much better. The nose gear blocks the prop wash on the rudder. Once the nose gear was retracted, the ball stayed close to center in flight.

I am still having a little trouble with the front engine running rough. I could not keep the electronic ignition working so I went back to the magneto on the front engine only. The rear engine performed really good with the electronic ignition and I will feel more comfortable when the front engine is running better.

I will give you a report later when I have more time in flight.

September 27 — Well bad news, I landed the Defiant with the nose gear up. Back to the drawing board. The real damage is to my pride. Marilyn, tells me get over it. I will begin repair at once. The cowls, prop and a little of the nose gear box was damaged. The Defiant is a really good flying airplane. I was up to 40 gallons of gas on weight and up to 180 knots for speed and no problems. A short one mile distance in one direction and a then turn and go 180 degrees for one mile yields 159 knots speed at 1500 ft with 2250 RPM on rear engine and 2150 RPM on front engine. I had ram air on the front engine with 21.7 inches of manifold pressure and 17.6 on the rear with no ram air just from inside the cowl. The rear oil temperature was up to 195 degrees and front about 170 degrees. The cylinder head temperature on rear about 330 degrees and the front 380 degrees. Only about 2 hours total time.

NTSB Identification: DEN00FA007 — Accident occurred OCT-18-99 at QUEMADO, NM: Injuries: 1 Fatal.

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 October 18, 1999, approximately 1010 mountain daylight time, a VariEze experimental homebuilt, N13WM, was destroyed when it nosed over during a forced landing following a loss of engine power while in cruise flight 20 miles southwest of Quemado, New Mexico. The private certificated instrument rated pilot was fatally injured.

Visual meteorological conditions prevailed, and no flight plan was filed for the personal cross-country flight being conducted under Title 14 CFR Part 91. The flight originated from St. Johns, Arizona, at an unknown time, with a final destination of McKinney, Texas. According to preliminary information, the pilot had recently purchased the aircraft in California, and was ferrying it back to his home town of McKinney, Texas. At 1001, the pilot contacted Albuquerque Air Route Traffic Control Center (ARTCC). He advised them that he was level at 13,500 feet mean sea level (msl) and that his aircraft was experiencing a rough running engine.

The pilot was asked what his exact location was, but he failed to acknowledge. He requested vectors to the closest airport. He was provided a discreet transponder code, but was never identified on radar. The last transmission ARTCC received from the pilot was at 1008.

A search of surrounding airports was initiated but unsuccessful. An ALNOT (alert notice) was issued at 1312, and the aircraft was located by a local rancher at 1400. The aircraft landed in a field heading on a southerly direction parallel to a forest road, then nosed over. According to a deputy with the Catron County Sheriff's Department, the weather conditions at the time were light winds and unlimited visibility. ●

A Long-EZ and Hurricane Irene

by Al Hodges, Miami, FL

My Long-EZ was on the ramp at Tamiami (TMB) in Miami during Hurricane Irene. My practice since the disaster of Hurricane Andrew has been to fly away when a Hurricane threatens. This did not seem much of a threat to Miami, until it changed course. Then it was too late to run, and nowhere to go.

The following points may be of interest to owners who have not had this experience. Guesstimates are that winds reached 60-75 miles per hour at TMB, which was very close to the eye.

- 1) The EZ is a lot cleaner than it was.
- 2) Those small tie down rings built into the winglets are very strong!
- 3) Side pressure from many hours of gale force (50 mph+) winds did not move the EZ very much. The wind was from the east; the nose was pointing north.
- 4) Strong wind from behind the plane did move it a bit. As the eye passed, the wind switched quickly from the east to SE to S to SW and W and then more slowly, to the NW. During this period, the wind was at its strongest. The plane moved forward (to the north) about two feet. The nylon tie down ropes were very, very tight. The tie down rings held! I had no chocks around the wheels.
- 5) Tractor aircraft on the ramp did move some due to the force on the vertical stabilizers. A few tail and wing tiedown ropes broke. Many pilots did not fly out for this storm. Some nose gears did collapse due to side pressure on the vertical stabilizers.
- 6) Here and there on the EZ, paint chipped from being hit by whatever, requiring some cosmetic repair.

There was very little damage to the aircraft on the field compared to 400 aircraft destroyed during Hurricane Andrew. The extra 40-60 mph of Andrew did make a big difference.

During Andrew, I was in a hangar. The east facing steel doors blew off, and every aircraft was blown to the rear of the hangar. A dozen planes occupied the floor space of four (1/3 of the floor space). My EZ is the only plane flying today, but it took me several months to repair the damage and repaint. A Cessna 172 wing was crushed to six feet long against the bottom of the EZ wing. The crushed indent was less than the tenth of an inch requiring repair.

SOUTH ATLANTIC FLIGHT 1998

A Diary by Hans Georg Schmid

Part III

Day 7, Wednesday, 11NOV98

Recife/Brazil

After eleven hours of desperately needed sleep I had my breakfast Brazilian style (which means too much of everything) served on the veranda of Consul Fehr's large apartment overlooking the South Atlantic and the beach just below. Maria, his maid, only spoke Portuguese but was happy I understood that much to pinpoint how liked my eggs.

After breakfast a TV crew arrived to record an interview and soon an hour was gone although they only just wanted to ask two, maybe three questions.

For the remainder of the morning and well into the afternoon I used my time to write and to send my first report for the home page as well as a number of pictures to Alexander, which I was unable to do before. To my dismay I had found out how difficult it was to get into the internet. I had tried it in every hotel but because of old phone systems, missing com-ports or the inability to reach CompuServe it had proved impossible till now to even receive email.

Day 8, Thursday, 12NOV98

Recife/Brazil — Rio de Janeiro/Brazil (08:21 H)

At 0400 I was already up again as I had a very busy day before me. At the airport I was glad to have the help and professional support of Amaury Duarte from Swissport. The time it took INFRAERO, the Brazilian state-owned company which manages all airports, to fill out forms was nerve-wracking. After having spent some two hours in their offices they presented the bill for the landing fee: US\$ 91!

Two days before, it had been very important to mention their company name in front of the press whenever possible and to get into the picture with their logo behind when TV was present. Without asking they even put stickers on my Long-Ez. I was

very cooperative and for all of this I had at least expected to be dealt with unbureaucratically and speedily. On the contrary: the time consuming, complicated (and very expensive) procedures were worse than what I had seen in the whole of Africa. Even Egypt was faster and less expensive, and this country is not known to work efficiently at all.

It was 07.31, I was airborne at long last and the next two hours compensated for everything that had gone before. I followed the endless sandy beaches at 1000 ft (300 m) to the south, on my left the light blue of the South Atlantic, on my right sugar cane fields and palm plantations. Every once in a while I crossed red rocky cliffs, then wide lagoons with rivers coming from inland. I encountered a moderate tailwind and the ground speed on the GPS showed between 140 and 150 kt which, for the heavy weight and the reduced power setting, was very helpful.

Without the lifejacket it was a pleasure to fly. The further south I came the poorer the villages and small towns looked. Often only the main road was covered with asphalt and the houses looked quite shabby.

Yesterday **Gérard Moss** had called from Rio giving me some advice for the flight. He mentioned bad weather enroute but hoped I could follow the coast. The Met office in Recife did not give me any useful information as to what exactly to expect. Two hours after take-off and just south of Salvador it turned hazy and the wind started to change. Soon I was flying below an overcast layer which rapidly sunk lower and lower.

The next six hours I battled against rain, low clouds, bad visibility, headwinds and turbulence. You name it – I had it. The only way to progress towards the south was along the coast as the clouds were sometimes almost down to sea level.

Continued on pg 10

S. ATLANTIC FLIGHT

Following the beach was relatively easy although it needed a lot of concentration when, at times, I had to fly as low as 50 ft (15 m) in heavy rain with visibility often around or less than a mile. Luckily the cold air from the south came in waves which meant better visibility and higher ceilings every once in a while. The good thing was, in case of an engine failure I could have landed almost everywhere just straight ahead – the bad thing was, that cliffs and small islands with steep hills were often not depicted on the maps I had.

And I was not alone... I always expected some other traffic and had my landing light switched on. During those six hours of bad weather I saw only one other aircraft – exactly opposite at the same 50 ft I was flying but with his landing light off. I doubt that the other pilot ever saw me.

Even if I had wanted to divert to an airfield inland, most of the time it would have been very difficult if not impossible. Only those airports near the ocean and at sea level were practical alternates but every time I crossed such an airport the weather seemed to improve. One hour before Rio I was in radio contact with Maceo and asked for the latest weather in Rio. The answer was: 'Rio is IFR and closed for VFR traffic' and the controller invited me to land at his place. As I still had ample fuel reserves and sunset was three hours away I decided to continue and to look and see.

Now, always in radio contact and later under radar control, I still followed the coast, avoiding military areas and the increasing number of hilly islands to the Sugarloaf, where I could enter the harbour of Rio. I waited to the last moment until I had Santos Dumont clearly in sight, then I called the tower, which, to my surprise, let me in without any problems as number one.

Eight hours and twenty-one minutes after I left Recife I was safely on ground in Rio. I knew I could expect some sort of reception but only

noticed some vans with fogged up windows a short distance away when I stopped at my parking position. The moment I cut my engine the vans moved forward, the doors opened and several camera teams, lots of reporters and officials appeared. I was greeted with a kiss from Miss Rio, followed by the same from a very pretty Miss Consulado. What a warm reception organized jointly by Swiss Consul **Conrad Marty**, Swissair's **Maria Christina Bass** and my friends **Gérard and Margi Moss!**

This wasn't to be all...

After entering the arrival hall of Santos Dumont I was greeted by the Police Music Band of Rio which intoned the Swiss and the Brazilian national anthems, on the south side of the terminal some one hundred children of the Swiss School in Rio waving Swiss and Brazilian flags. Then came the most difficult part of the day: two beautiful almost naked Mulattas took Consul Marty and me by the hand to dance the Samba to the rhythms of the excellent Police Band. This was, of course, in front of all the official guests, the many reporters, the filming camera crews and probably several hundred spectators. We finally ended up in the VIP room where I gave more interviews, always with young Miss Rio close by who also had her mother always within easy reach.

It was almost dark when I finally managed to go back to the aircraft to refuel and offload with the help of Gérard. A pleasant and excellent meal at the house of Margi and Gérard Moss with consul Marty and his wife as guests concluded a most interesting and demanding day, whereby I asked myself, whether six hours of bad weather or the dance with the Mulatta in front of all those cameras was the greater challenge. I still don't know...

DAY 09, FR 13NOV98: Rio de Janeiro/Brazil

After ten hours of deep sleep, Consul Marty's driver expected me at 09.30 for a drive to Santa Teresa to the Swiss School. Yesterday I had agreed to pay a visit as I was invited by **Ellen da**

Continued on pg 11

Silva, a former flight attendant of Swissair with whom I remembered having flown some years back. She had organized the part of the Swiss School in yesterday's reception and I took it as an honour to be invited to the school with its 500 pupils.

I first talked to the teachers about my flight before I went from classroom to classroom where the children of each class had 15 minutes to ask questions. It was amazing how acute the interest was and I had to answer a thousand questions and gave dozens of autographs.

Thereafter I paid a courtesy visit to the Swiss Consulate and had lunch with some of the staff who helped to organize yesterday's event. It was past three when I was back at Gérard and Margi's apartment and I used the remainder of the afternoon to prepare the flight for tomorrow and to download pictures to my computer.

At seven we were invited to a cocktail party at the residence of Consul Marty in honour of my flight. Sixty guests ranging from a full admiral of the Brazilian Navy in gala uniform with his attractive female adjutant to representatives of Swissair, Swissport, the FAI, the Brazilian Aero Club to the City of Rio were present. Flanked by Consul and Mrs. Marty and Miss Rio (with her mother in the rear) I made a short speech outlining the goal and the course of my flight and talking about the historic roots of aviation in South America and especially in Brazil where Santos Dumont had played a very important role. Gérard Moss translated the speech, which was very well received, into Portuguese. It was a very pleasant evening with lots of new and interesting contacts.

Together with Gérard I had a last shot of Glenmorangie, one of my favorite single malts, on his terrace with a direct view to the Sugarloaf under a full moon. What a trip!

**DAY 10, SA 14NOV98: Rio de Janeiro/Brazil
– Foz do Iguaçu/Brazil (05:04 H)**

Sometimes it was very difficult to relax: At

Santos Dumont I filled out my flight plan as usual. I had to make additions and additions, change this and that, forms had to be filled out, the flight plan was finally accepted but had first to be written again. Only after lengthy and complicated discussions I got it stamped and I was happy that everything was over, when the girl told me five minutes later I had a VFR departure slot, which would not be until one hour from now. The good thing was, Gérard found a paragraph in the complicated Brazilian regulations, which said I was exempted from landing fees as I was flying an experimental aircraft doing a long range experience flight... In Rio with his help it was possible to lower the landing fee from US\$ 90 to US\$ 15 but elsewhere – well, that's another story...

Finally I was driven to the aircraft, made everything ready to meet my departure slot and when I was about to leave a TV crew arrived for one more interview. I was told I had to depart on the minute or otherwise my slot would be cancelled and so Gérard and Margi did the talking while I had two minutes for the reporter before I definitely had to leave.

As I knew **Aldo Ferretti**, the head of Swissport Brazil, was waiting for me in Iguaçu to celebrate an anniversary in nearby Paraguay I flew with my maximum speed and made some shortcuts in order to arrive on time at the famous falls. At first it was overcast before the weather slowly improved. Again it was a most interesting flight across the green, slightly hilly interior of Brazil after having left the coast near Santos. Following the Iguaçu river over tropical jungle I easily obtained a clearance to overfly the famous Iguaçu Falls. Although the river carried relatively little water, it was impressive to look at this unique spectacle of nature. I finally landed at the Brazilian airport of Cataratas Intl. half an hour later than the time which I had given a month ago; not too bad after the distance I had flown.

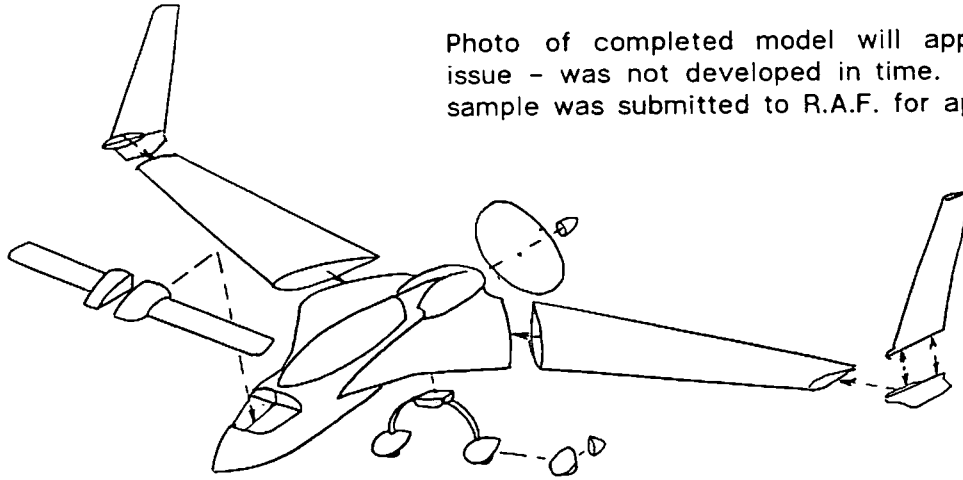
I disembarked but did not find Aldo Ferretti. I tried to call him on his cellular phone, had an

Continued on pg 16

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Photo of completed model will appear next issue - was not developed in time. Model kit sample was submitted to R.A.F. for approval.



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Oshkosh Forums on TAPE

All of Burt Rutan's and John Roncz's Oshkosh Forums are available on tape. Buzz Talbot shot the following 1999 Burt Rutan and John Roncz Oshkosh forums using a Canon Hi 8 mm stereo video camera on tripod. All forums were shot from the front row, center seat in the brand new Verilux forum building which has much better ambient sound quality. "The only way to get closer is to sit in Burt's lap and read his notes!" says Buzz.

The 1999 forums are:

"Proteus: The New High Flyer From Scaled." Burt Rutan. Burt shows video of the Proteus test flights that has never been shown in public before. A very interesting and informative forum. Includes video I shot of the Proteus doing fly-bys at Oshkosh '99 with Burt addressing the EAA show crowd, as well as a video ramp walk around shot at 6 AM to avoid the show crowds.

"Tent Talk Show" Burt Rutan and John Roncz. As usual, a full hour of questions from the crowd at EAA Oshkosh '99. Burt and John get into a debate over how the next generation personal aircraft will look. Shot in the brand new large Verilux forum building as opposed to the old circus-style tent.

"Life After Airliners" Burt Rutan and Bruce Holms, Ph.D., Burt and Dr. Holms continue their debate from last year regarding NASA's "AGAT" Advanced General Aviation Transport program which promises the engine, airframe and navigational gear to place personal aircraft in the hands of every one. Burt says NASA has it wrong and is not going far enough. A great forum!

"Gemini Technologies and the Explorer 360" John Roncz talks about the development and flight testing of the Aussie Explorer 360. The test pilot and concept designer also speak, (which gets a little dry), and run very long into the next forum. (May have to be edited for time to fit 2 forums on one tape).

"The X-Prize" Burt shares the mic with a panel presentation on progress being made toward the X-Prize. Half of the \$10 million prize money has been collected and video tape was shown of a new solid rocket motor that can be throttled.

"Around the World Again" Col. Dick Rutan with Burt Rutan. Burt answers questions about designing the Voyager in the first 10 minutes of the forum and sets the record straight regarding Jena Yeager's allegations. Dick then recounts the Voyager flight.

Let Buzz know which programs you want, and mail a check for \$15 for one or \$20 for two forums, (includes all shipping charges) to:

**Bruce Talbot, 222 Sunshine Drive, Bolingbrook, IL. 60490
(630) 759-1124 email Buzz112@aol.com**

S. ATLANTIC FLIGHT

email sent from Switzerland to his address, told the information booth of the airport about my whereabouts and waited for over two hours in the empty airport restaurant. As he failed to appear, I looked for a hotel close by where I finally had some time for myself which was somewhat overdue.

I still do not know what went wrong but most probably there was a mix-up in the date or the arrival airport, although I had clearly stated I would land at the Brazilian Cataratas airport to avoid the problems when leaving the country, as I intended to fly to Porto Alegre the next day.

DAY 11, SU 15NOV98: Foz do Iguacu/Brazil – Rio Grande do Sul/Brazil (03:50 H)

Rio Grande do Sul/Brazil – Porto Alegre/Brazil (00.20 H)

It was already hot early in the morning when I departed Cataratas to follow the Iguacu river over dense jungle to the east, strictly avoiding Argentinean airspace, as I had been warned to do.

The next three hours to the coast were again most interesting. First it remained hilly and wooded but as I came closer to the coast, the farmland increased, though farms were still wide apart. The green countryside looked very lush and I really had the feeling of space. I crossed many ponds and small lakes and slowly vegetables and fruit could be seen growing. It was the slow change in the landscape in perfect weather which was so fascinating, before I approached the rim of the plateau which, some 50 miles from the sea, dropped down suddenly to almost sea level from perhaps 3000 ft (1000 m). I circled for some minutes to watch traffic going up and down one of the few unpaved steep roads, where motorcycles were racing while the drivers of the heavy lorries tried to find the best way on the steep and winding road.

To be continued in the next CP

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Check out the TERF website at <http://www.terf.com/rutan.htm>

Spin-On Oil Filter Adapter for Lycomings

B & C Specialty Products' latest product is the neatest idea I have seen in a long time. It is a 90-degree, spin-on oil filter adapter for Lycoming engines. It is beautifully made by CNC milling out of a solid aluminum billet and bolts onto the accessory case in place of your oil screen housing or AC spin on filter adaptor. It fits perfectly, does not interfere with the magnetos, the vacuum pump or even the mechanical tachometer drive. It also has plenty of clearance on your engine mount and firewall, important considerations when you operate an EZ!

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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Contact Michael Dilley or Larry Lombard
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I have agreed, effective October 1, to take on the job of producing the nose gear ratchets that have been supplied by Dr. Curtis Smith. The job kind of overwhelmed him, and I am hoping that it does not do the same to us! I have orders for around 25 outstanding right now and am tooling up to do an initial run of 100. Price has, of course, gone up. The cost of materials and labor always does. I will be offering the units built exactly to his original specifications. I can't improve on a perfect design! I will, however, be offering the units in two finishes. The standard unit, part number 44807, and a chrome finished version, part number 44812. These are also the Sears part numbers for the two finishes of the 1/4 inch ratchet drives. Each ratchet includes installation hardware and instructions. Prices are as follows:

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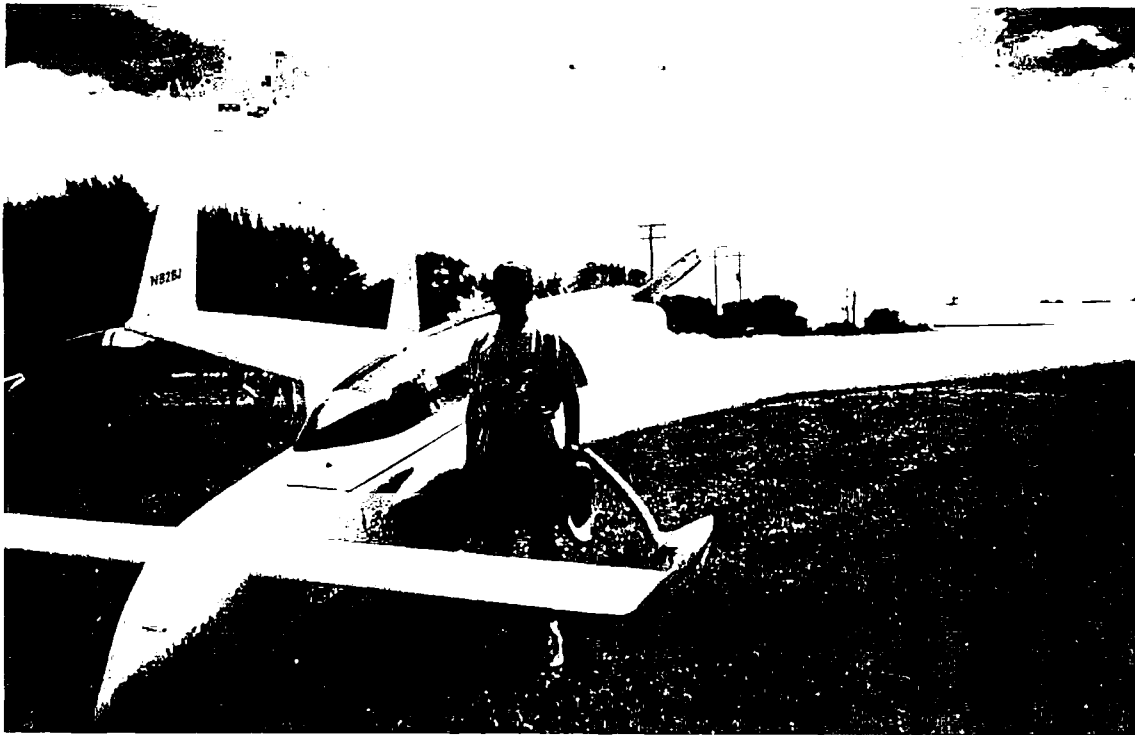
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Inside

| | |
|---------------------------------------|-------|
| Mike awarded trophies for flight test | Pg 1 |
| Oshkosh '99 | Pg 4 |
| Accident Report | Pg 6 |
| Fuel Pressure Gauge Fatigue | Pg 6 |
| A Long-EZ and Hurricane Irene | Pg 10 |
| S. Atlantic Flight Part III | Pg 11 |
| Oshkosh Forums on Tape | Pg 15 |

October '99
CP 98

If your label says **LAST ISSUE CP 98**, this is your last issue and you need to renew.