July - August 2010

RECREATIONAL FLYER

Recreational Aircraft Association Canada www.raa.ca
The Voice of Canadian Amateur Aircraft Builders $6.95

Grampa's Toy

Bob Brunn's Flybaby

RAA
RECREATIONAL AIRCRAFT ASSOCIATION
RÉSEAU AÉRONEFS AMATEUR CANADA

From The President's Desk

Gary Wolf

RAY FISET AWARD

Canadian aviation lost a great man this summer when Ray Fiset passed away. Despite the propeller accident that put him into a wheelchair while still a young pilot, Ray persevered and built aircraft, taught welding at many RAA and EAA seminars, ran a machine shop, and was both the President of the Quebec City chapter and the RAA Regional Director for the Province of Quebec. I first met Ray at the 2002 AGM when he flew from Quebec City to Winnipeg and Marina had booked his room next to my own, thinking that Ray might need some help during the weekend. Nothing could have been further from the truth - Ray was active and completely independent. Until three years ago when his health began to fail, Ray attended every AGM, usually driving with his friend Henri Boisvert, and he was a strong supporter of RAA Canada in his province. We will certainly miss Ray.

RAA Canada is now setting up an award in the name of Ray Fiset to honour builders of Amateur aircraft in Quebec, and we are asking members of his chapter to contact us to determine how best to administer this. If you are a member of the Quebec City chapter please call 1-800-387-1028 or email to raa@raa.ca , and put Ray Fiset in the subject line.

RAA OFFICE IS MOVING

Our office secretary Marina is retiring at the end of September and at that time we will be vacating the Brampton office. For the next few months the office will be in my hangar while we decide which parts of the job may be subcontracted, and which will be done by a secretary. We would like to thank Marina for the many years that she has devoted to keeping members as part of the RAA family. Her pleasant manner and attention to members' queries will be missed.

The new address and contact information is:
Phone: 519-648-3030 or 1-800-387-1028
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email: raa@raa.ca

TRANSPORT SAFETY BOARD AND RAA

Transport Safety Board has responsibility to investigate accidents and to make recommendations to improve safety. For the non certified categories there has certainly been much less attention and rigour than is given to the certified category. Typically even a fatal accident in a non certified plane is investigated at Level 5, which is the lowest and least rigorous level, and and appears to exist to provide filler for the coroner's report. Only occasionally is the investigation of a non certified fatality done at Level 3, which is a very thorough investigation. The policy at head office in Gatineau has been explained that since they

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The Recreational Flyer is published bi-monthly by the Recreational Aircraft Association Publishing Company, Brampton Airport, Cheltenham, ON L0P 1C0. The Recreational Flyer is devoted to the aerospace sciences. The intention of the magazine is to promote education and safety through its members to the general public. Opinions expressed in articles and letters do not necessarily reflect those of the Recreational Aircraft Association Canada. Accuracy of the material presented is solely the responsibility of the author or contributor.

Features

Columns

On the Cover:
Bob Brunn's Flybaby "Grampa's Toy". Gary Wolf Photo.

George Gregory

Remembering Ray Fiset

Barbara Geisler

It is with very much personal regret and sadness that I learned of the passing of Raymond on August 2, 2010. It is not only the aviation world that has lost a great enthusiast, master and expert of this field, but for many of us he has been also an inspiration of courage and never to give up, regardless what life has in store for you.

And he certainly had his burden to endure, mentally and physically, but he always kept a positive attitude with a great sense of humour, despite the fact that he lost the use of his legs and more because he saved the life of a father of 8, who was going to run into a propeller. Instead he did himself, at the age of 20.

I don't think I have to list all his accomplishments in building and inspecting aircraft, being a president of his RAA chapter, his welding business, working with and creating frosted glass, restoring of antique furniture, steel tubing and air frames, sandblasting cars, spending his time at Sun and Fun, as well as manning the information booth at Oshkosh, and so much more.

I was personally privileged to make his acquaintance in 1996 when working for the RAA National at the Brampton airport, and we met off and on at RAA AGMs. We always kept in touch over the years, and when I was in Quebec City on my tours, we always talked at least on the phone.

Last December 19, when I called to congratulate him on his 72th birthday, he was somewhat depressed, since he had to go into the hospital again in January for special treatments for 2 weeks. I will not go into details regarding that. Trying to cheer him up I invited him to visit me at my cottage on Keats Island, BC, much against the advice of family and friends, considering his condition, his limitations, and being away from immediate medical help. Well, he did not care, and neither did I.

I picked him up at the Vancouver airport for the lengthy trip with train, bus and ferries to Keats. And thanks to the crews on the ferries and some very good friends there who helped to get him in his wheelchair up the ramp onto my golf cart – at low tide, of course! - and at his departure back to the dock – we enjoyed some wonderful days together. His wheelchair, too, is a special construction of

his. When trying to get him onto my golf cart myself to drive him around the island, I was really stuck how to do it, but another good neighbour happened to come along with a long rope, which we slung over the roof of the cart, and Ray could lift himself up. The strength in his arms always amazed me! Getting him off again later was another challenge, since I was by myself, but with using and holding my ironing board (!), he managed to slide off onto the seat of his wheelchair. All these trying times, and there were a few more, since my cottage certainly was not wheelchair equipped, he never complained, just always tried to figure out things how to manage. And we did.

And to top it all, there were two and a half days and nights of power failure on Keats Island, but I have a wood stove there and had lots of candles. We survived on soups heated on the stove and sandwiches, and during those days Raymond told me a few things about his life, that I would like to share with you (*see sidebar, page 6*). He agreed to have them published in the Keats Newsletter. People there really took to him, and considered him a very special guest. Who wouldn't!

When he was leaving again, there were some really sentimental and sad moments for the two of us. The airline personnel sensed this, and I managed to get him upgraded to business class. Although he wanted me to come to Sun and Fun, the timing interfered with my tours, and I only had time when in Quebec City for a phone call to him. Nevertheless, we agreed that he might come to Toronto when I am in my new place. But now I wished I had gone to Florida!

En priere silent pour ton ame, et avec amour speciale, mon cher ami,

Toujours, Barbara

P.S: Special thanks are going to Michele Meskas, John Dobie and his son, Joe Rees of Keats Island, and the crews of the "Stormaway III" ferry for their assistance, as well as Sharon Romanovich, who took the time to come by to chat with Raymond despite her own problems looking after her husband with his health problems.

Aviation lost a great man when Ray Fiset passed away. Most pilots knew Ray as the fellow in the wheelchair who represented RAA in Quebec, but he was much more than that. In 1957 Ray was hit by a propeller when he dove to save someone who was unknowingly walking into it. Although that act of bravery put him into a wheelchair for life it did not slow Ray down. He built airplanes, operated an aviation machine shop, and attended Oshkosh for over fifty years where he set up and manned the information booth. No one has been a stronger supporter of aviation than Ray Fiset.

As a young man Ray attended Oshkosh and gained notice for patrolling the event in his wheel chair helping to keep the grounds picked up.

I first met Ray Fiset when I attended my first RAA CANADA [it was EAAC then] AGM at one of the hotels along in the Pearson Airport strip in Toronto in the early 1980s. When I joined the meeting I was seriously impressed. Here were people that I had admired as leaders in Canadian amateur aircraft building. Lawrence Shaw was president, I forget who the other members of the executive were but regional directors include Gogi Goguillot who had drawn the plans for the SE5A that Gus has and Ray Fiset from Quebec.

Ray was in a wheelchair and had a terrible indentation in the top on his skull. I would meet Ray at RAA AGMs over the years. At the Quebec City one Jack Greenlaw who was president arranged for Ray to receive a plaque from the local senator who had frown down from Ottawa in a Challenger.

When the AGM was in London in 1991 Ray phoned the Museum d'Air in Paris to make sure the Yak 3 was still in the collection. It was. In '95 when I stopped at Quebec City on my way down to the Maritimes I called on Ray, we had dinner and Ray and his friend gave me tour of Quebec City. I had tied down at the "Eagles Nest', the Quebec City RAA Chapter building on the airport. It is an attractive building with the rooms partitioned by glass panels. I was told the Ray had sand blasted the patterns on the glass at his shop.

Ray came with Marquette to Alternative Engines to translate for Marquette as he showed his gear reduction units. [Marquette's English was fine actually.} That is when the picture of which I am very proud was taking.

And we always stopped by to check in with Ray at Oshkosh as he manned the lost and found booth.

With Ray's passing I have lost an acquaintance who was a great person as he overcame his awful handicap and I am proud to have known him.

-Bill Weir

Above: Ray Fiset and Bill Weir at 2000 Alternative Engines

Old Subarus

Bill Weir

THERE IS A STAND ALONE AUTO SERVICE garage across from the St Marys Rental Store where I seem to patronize more and more. Renting a hammer drill to put a hole in the foundation wall is so much easier than using a star drill and declining brute force.

The garage had a nineteen eighties something Subaru station wagon kind of off to the side and it didn't move for quite a while. To engineheads, the Subaru EA81 is *the* hundred horsepower engine for conversion for aircraft use. Finally, I just had to enquire about it. It soon came out that the shop owner did not own the car. It seemed that the car had been brought in for a safety inspection but the first look established that there was so little metal below the doors that trying to bring it up to even the most minimum standards was beyond all reason.

I was well aware of what we were talking about. My first Subaru was a station wagon and when I lifted it by a chain hooked behind the front bumper, the roof had wrinkled. This car was obviously my kind of Subaru and when something about its owner having paid two hundred dollars for it was said it made it more attractive yet. Our conversation ended with my having a name and phone number and the information that said Subaru owner lived above one of the pizza stores in downtown St. Marys.

When I returned to my pickup I tried to phone using my cell phone but discovered what others have confirmed: cell phones do not work in the business district of St. Marys. Coin of the realm eventually changed hands and I left with ownership of the car.

This car was obviously my kind of Subaru and when something about its owner having paid two hundred dollars for it was said it made it more attractive yet.

Cable guy son came over Saturday to help with bring home my new car. We loaded the pickup with tools, radiator water, gasoline tow rope and all the good stuff and back to the shop in St. Marys. Just for luck, we gave it a try and the amazing happened. My new car started. We said so long to the garage owner and son driving the Sub' and I behind in the pickup, headed down the street, right at the corner and right again onto a less traveled gravel road where guardians of the peace are rare and the missing of license plates would not be the opener for rather one-sided discussions.

Old memories of similar expeditions came back. There was the time we towed a school bus into Fanshaw Community College for students to undertake the learning experience of a brake job. I was towing with a Japanese pickup and son had the bus behind on the end of a chain with the engine running "to make the power steering work". It must have been Boxing Day or something like that, because there was almost no traffic. I had pretty well mastered keeping the chain tight when passing us appeared an OPP cruiser. We both saw the officer look at the bus, the chain, and the little pickup, and we both knew he must have seen the exhaust from the bus. Our hearts fell, and then we saw the officer - good fellow that he was - say to himself, "I don't want to put this one in the book the day after Christmas" speed up, and disappear ahead of us. Pro that he was, he looked at neither bus nor pick-up driver.

We did have to jog along #7 highway and that's where the Subaru quit. We ran down the battery learning that it was out of gas. Fuel and a jump start and we were on our way again. There was a time when old cars such as this one seemed to deliver all sorts of good stuff but not any more. The airplane will have a CD player so even the tape deck holds no interest. I did take out the window motors - this had been a top of the line once - but I really don't know why they are an attraction to me. I towed the engineless car to the local auto recycler with my tractor with a slow moving vehicle sign tied on the back and he took it without charging. I think I know where there is another one. As an aside, these old Subarus really have very little value in this salt besmirched country but farther south as in the US Southwest they seem to keep their value indefinitely.

RAA Weigh Scales

Weigh scales are available to members who are needing to complete their weight and balance calculations prior to that all-important first flight of their new baby. For more information contact your regional representative or call the RAA office at 1-800-387-1028.

Homeward Bound

Bob McDonald's Zenith 750 / By Bob McDonald

June 28th 2010 at 1:30 pm my CH750 kit built aircraft took first flight at the Kitchener-Waterloo International Airport. I had built it at the Canadian Zenith Aircraft dealer (Can-Zac's) Hangar #41 over this past winter. Under the patient tutoring of Mark Townsend I built my CH750 in a very intense building regiment of 10 – 12hr working days when I was in town. I live 500 km away in the small hamlet of Haley Station, Ontario, Canada. On my days off between shifts I would drive to Can-Zac and build my CH750.

After the first test flight, the cowls are removed and everything is once again inspected and adjusted as needed. Once checked over more test flights are conducted, landings and take-offs, the slower flight handling is checked out. After every hour, and then every couple hour's cowls are removed and the aircraft is inspected for any signs of problems. After several days of flight testing, usually early morning and into the evening sunset C-IKIM had accumulated 8 hrs of trouble free operation with only a hose clamp to tighten on the Rotax 912 ULS radiator.

As an Advanced Ultra Light Aircraft (AULA) C-IKIM is not bound to flying the first 25 hrs within the 25-mile radius of the airport at which the first flight took place. I had been watching the weather and knew there was a 2-day window of cool clear "CAVU" weather moving into Ontario from the West. I planned to take advantage of the favorable weather and fly C-IKIM home from Kitchener.

The next morning found me flying a couple more hours of circuits at 7 AM. Again the cowls were removed and the aircraft closely inspected, this time for the 240-mile flight home across Northern Ontario's wilderness country. My CH750 AULA carries a 121.5 style ELT and a SPOT GPS locator. In "Tracking" mode it transmits my GPS position every 10 minutes and my flight can be followed in live time via Google Maps. Other SPOT features allow me to request mechanical assistance or by pressing the "911" button transmit a help request direct to Trenton Search & Rescue alerting them to an aircraft in distress and my GPS location. Carrying a small survival kit provides creature comforts while a pilot awaits helicopter extraction in the event of a forced landing.

At 5:30 pm C-IKIM lifted off from Kitchener-Waterloo and headed

North toward home. Climbing to 3000-ft with 35+ miles visibility I could see Toronto and the CN tower off my right wing, and the "Windmill Forest" of Huron Wind Power Generation off my left wing. With a power setting of 5300-rpm the Rotax 912 100-hp hummed right along and the airspeed settled in at 95 mph, while the Bendix/King AV80R GPS indicated a solid 105 mph ground speed. Tailwinds are always good and this one was pushing C-IKIM closer to home. As Lake Simcoe passed under the nose of C-IKIM the terrain below took on a more hostile profile. Gone were the patchwork field of agricultural Southern Ontario, as were the roads and villages where a forced approach would be a none event. Ahead for the next 1.5-hrs was Algonquin Park and a typical Northern Ontario bush. This is an area of trees, lakes, and huge rock formations, swamps, Bears, Moose, Wolves and swarms of hungry bugs…"Not even a decent place to crash". I thought while I admired the view from my cockpit. The large bubble window doors, windshield wrapping around the dash and the greenhouse roof offered an unsurpassed view of the wilderness that surrounded me. The air was cool and smooth, at 4000-ft C-IKIM seemed to hang suspended in the blue sky over the dark green forests below. The Bendix/King GPS reassured me of my steady progress, drawing a magenta line to show direction and the ETE counting down to arrival at home.

With the building part behind me I have to settle for the thrill of flying my CH750.

It had been 10 years since I flew this part of Ontario, and it looked even more hostile than I remembered. Several times I lifted my headset to listen closer to the Rotax 912 ULS as it purred along oblivious to the danger below. Its funny how a part of me is awe struck by the rugged Northern Ontario wilderness visible only in this perspective by pilots is balanced with the sobering knowledge that aircraft have gone missing here only to be found many years later. I checked the SPOT several times…the double blinking lights assuring me it was leaving a trail of position markers. Again I removed my headset to listen to the Rotax.

Then almost as quickly as the knot in my stomach formed I recognized the Bancroft Airport hidden in the mountain valley below. I was once again over familiar countryside that I had flown for years. It is still tough country for a wheel gear aircraft but I had roads and villages mixed in with the trees and rocks! Soon I could see the huge pulp mill "highlighted" by the sun setting behind me. The mill sits on the Quebec side of the Ottawa River, across from Haley Station, Ontario. I lowered the nose of C-IKIM and trimmed for a long cruise decent bleeding altitude for airspeed as I headed for the Cobden Airfield. I dialed in the Cobden frequency and announced my intentions to join the circuit for runway 300. The Cobden Airfield is a 2000-ft main grass runway with the luxury of a 1500-ft grass X-cross runway. This airfield has the POH textbook 50-ft Pine Tree obstacles on the ends of the runway that instructor refer to when they teach short field departures. As I banked onto final approach I could see my wife Kim waiting for me. I don't remember the landing but my wife said, "I greased it"

As I taxied in to hangar row Kim gave C-IKIM the thumbs up! Mark Townsend, my friend Ray Nash, and my wife Kim all followed my flight to home. The SPOT worked so well Mark commented "He could tell I was in a high speed cruise decent from 4000

feet to the Cobden Airfield because my SPOT position markers were getting spaced wider as the airspeed increased".

Now that both C-IKIM and I are home it is time to reflect on an amazing journey. I opened the "Big Wooden Box" November 26th, 2009 and started to build my CH750. I had signed up for the Can-Zac's 2 week Power build which had my STOL 750 on it's wheels with engine mounted and all flying surfaces built. When I started this adventure I had planned on just the Power Build program and then I was going to take my plane home to finish it, after the first week I knew that the plane was going to stay at Hanger 41 until finished.

With the abilities of Mark and his staff I was able to confidently choose an upgraded panel and many other options that if I were working on my own I would not have attempted to tackle. I took Christmas, New Years and the month of February off from building. I still work a full time shift job. On my days off I drove to Can-Zac to work on the CH750. By the end of March the aircraft was finished, and finished to a point that really is done professionally, sometimes it is the small things that make such a big difference. Electrical systems in an Aircraft are almost magic and I handed these off to Can-Zac to install for me, the routing of the wires, extra wire loom to ensure that the instruments can be serviced while sitting in the seats and not upside down reaching under the panel, the heat shrink on wire ends and area's that I would not have paid as much attention to all come together as a whole to make C-IKIM look more like a production aircraft than one I built with my own hands.

The paperwork to register C-IKIM as the first AULA in Canada with Transport Canada took an additional 8 weeks.

I could not have completed the project of building and flying my own aircraft without the support of my wife Kim, and technical support of Mark Townsend's Can-Zac facility. The folks at Zenith Aircraft make a CH750 kit that is an absolute joy to build.

One statement that I have repeated several times over the course of building my plane at Hanger 41 is I have never seen an UGLY plane come out of this shop, it is true I have seen 6 planes built to finish during my time at the Can-Zac hanger and all have been an absolute tribute to the designer Chris Heintz.

With the building part behind me I have to settle for the thrill of flying my CH750.

Airventure for the First Time

By Jay Curtis

I'M A CHAMP FLYER of only the last 15 months. I got my private pilot's license about 20 years ago and didn't fly since, till the Champ showed up that is. I'm based out of Fairlea Field (Tom Martin's) near St.Thomas. In these last 15 months my life has been changed markedly by this "flying bug", running near 250 hrs time mainly surveying every nook and cranny of Elgin County. Being a farmer, there is no better way to do this than in a Champ.

Now never having been to Oshkosh Airventure before, my wife and I borrowed a truck-camper from her parents. Driving was a must as my flying range of comfort ends at about fifty miles from my base. We departed on a Saturday taking the northern route around the top of Lake Michigan, thus avoiding Chicago and we overnighted in GreenBay Wis. A short hop Sunday morning and we were in Oshkosh after a lot of reading that Oshkosh is now Sloshkosk, and worried whether we would even get allowed in due to mud...These worries subsided as we only waited about an hour in line at the gate and were whisked into our camping spot in Scholler and set up camp...We saw the show for three days and I confess it was so wonderful in many ways. The people were great.We made new friends with camping neighbors, many with incredible stories of their lives. The

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volunteers are amazing and I read their numbers are as high as 5000. Supplies are aplenty right on the grounds. The West Camp store and Red Barn had everything needed to enjoy a few days in this camp. Restroom facilities were very convenient and very clean and at no time did we witness a waiting line.The shower buildings are setup to handle the massive numbers of people also. There is a lot of walking, and we quickly learned the bus and tram routes.

As for the show itself. It was as I hoped and more, with every possible gadget, part, service etc all there, including of course aircraft. So many aircraft of all shapes and sizes, many of which I've never seen before. Another thing is the information forums that run all the time.These feature every conceivable topic to do with aviation.We took in a "small continental engine forum"and another by an Aeronca expert, Bill Pancake, who covered many things Champ specific. Every day there is an afternoon airshow. This was good to sit and watch and also rest from the long distances covered walking about the show. Some examples of what I found extra interesting were a Australian Radial engine vendor who offered a 7 cylinder 110 HP or 9 cylinder 150 HP version. Another example of wonder was a Mosquito helicopter that seats one person and was powered by an very tiny turbine engine in the neighborhood of 100 shaft horse power. I had a dream that night of any one of these on my Champ if the A65 goes on strike. Being a Canadian I was awestruck as a Buffalo Airways DC 3 taxied in and out popped my TV heroes Buffalo Joe and side-kick son Mikey from a TV show called "Ice Pilots" that I enjoy watching. Cameras near us were rolling as they shot film for another episode about their adventure to Airventure. Later we met up with Tom Martin and his race friends, Wayne and Mark for supper one night at the Red Barn and enjoyed some very funny happenings. As each daily show ended we retreated to the camp-site .This was always a great time as we hit it off very well with our neighbors, relaxing and talking about many topics into the wee hours each night.

We departed early Thursday and drove the long haul home again, arriving near midnight. Next year we will likely simplify our camping. A good tent is really all thats needed and much better fuel milage will be enjoyed combined with a bit more flexibility to drive around the local area once there. I'm sure most who read this have attended Airventure before but if you have not, I really encourage you to see it !

Up at 6:30AM Friday for a trip around the neighborhood in the Champ, and all was once again back to as it should be.

On August 21, 2010 I hosted the first ever Great Canadian Air Rally. This was operated under the rules of the Sport Aircraft Racing League (http://sportairrace.org/index.html), which is in its fifth year of operation. We had a great turnout that day with 23 total aircraft competing in 10 different classes, ranging from F1 rockets as the fastest to a Murphy Rebel on floats on the other end of the scale. We had seven participants from the US join us as well as 12 brand new "rally" participants.

by Tom Martin

THE GREAT CANA

The Rally started at the St.Thomas Airport with a pilot briefing. This briefing covered the course, and safety issues such as launch order and landing procedures for the event. Aircraft departed St.Thomas in an estimated fastest-first order, every 30 seconds. The participants then flew over the start line that was located at Fairlea Field, which is about two miles north of the municipal airport.

Three "timers" were located at the start line and the average start time was noted for each aircraft. The course was 147 statute miles long and followed a zig zag pattern west and south around St.Thomas, with a final turn at the Aylmer VOR to end with a flying finish at Fairlea Field. Aircraft then joined the standard entry pattern to land at CYQS for lunch and the results.

All six turns in the rally were based on gps waypoints that pilots had access to prior to the day's activities. Practicing was encouraged but even that was not enough to keep some pilots from missing points along the way. The fastest planes do not always win these events; navigational skills play a big part in how well individuals do. In an earlier race this year, at Chesapeake Bay I got really turned around, and the error added 20 miles to my total. This was a humbling and humorous mistake that I have not been allowed to forget!

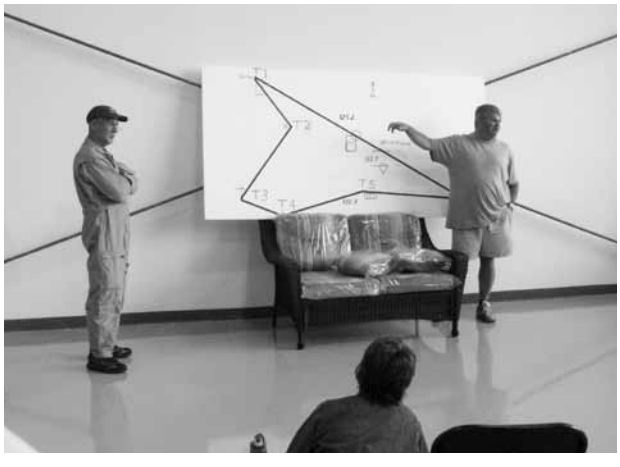
After the head timer, Ed Perl, had tabulated his results I found that I had won my class, this time with

Opposite: Angus McKenzie in his amphibious Murphy Rebel - about as Canadian as you can get.
Right: pilots are briefed on the course.
Right: Ed Perl and Tom Intven, two of the three timers

CANADIAN AIR RALLY

the best overall time of 33:58 minutes for an average speed of 261.54 mph. The Murphy Rebel on floats pulled up the rear with a total time of 1:25:38 hours and an average speed of 103.53mph. As the only entrant in this class, Angus McKenzie ended up with a first place ribbon.

Each participant in the race was given a set of four mugs that were generously sponsored by Gary Wilcox. Gary was also in charge of the course creation and he provided a fun and challenging rally. Mark Hindley, with help from the local flying club provided lunch. After lunch the crowd moved to Fairlea Field for the afternoon with an evening pork roast followed by entertainment from the Sierra Swing Band. It is estimated that 150 to 200 people braved heavy rains to join for the evening social time. RAA



Above: Tom Martin, left, and Gary Wilcox, right, showing a map of the course. Gary had designed the course and it was both challenging and well thought out. Part of the southern most leg was along the coast of Lake Erie. The total course length was 147 statute miles long.
Left: what's an Air Rally without the eats? Wayne Hadath and family enjoying the evening meal.

The overcast weather did little to dampen enthusiasm for the event. Clockwise from top left: Anne Elise Bennett from Dallas, Texas competed in her C-182; Ed Perl and Gary Wilcox briefing pilots; George Fisher after finding out that he DID NOT beat Wayne in the race. Bottom left, Peter Meszaros' Q-2 flashes by.

A True Emergency

Barry Meek

A CRITICAL SITUATION is only an emergency to a person who thinks it is! An engine failure in an airplane flying at 5000' above the ground would be an emergency to a non flyer. The pilot however, would be scanning the ground below, looking for a safe place to land. And with 5000 feet of altitude below him, he has something like 7 or 8 minutes to put an act together. Not an immediate emergency at all.

In my 25 years as an ambulance paramedic, I've responded to countless "emergencies". When a caller who dials 911 thinks he has an emergency, an ambulance crew is dispatched with lights and sirens, speeding through the streets. When the crew arrives, 90 percent of the time they find no emergency, but someone who just thinks he is in serious trouble. This 90 percent can be verified by counting the number of responses with lights and sirens, and comparing them with the number of times the patient can be transported to the hospital without using the emergency equipment. Anecdotally, I would say it is nine times out of ten.

Of course I've seen my share of real emergencies, and an engine failure is not what I consider one of them. My engine failure happened on a sunny, mild spring day while flying in the open cockpit of my Renegade. I'd been sightseeing in the mountains near Harrison Lake, over the Hemlock Valley ski area to be exact. After spending some time at 5,000 feet, I was in a gentle descent on the return trip to the Langley airport. The power was pulled back a bit, and the Rotax 503 seemed to like the lower RPM. Things were smooth as I entered downwind into the circuit and was cleared number two for landing on 1-9, behind a Cherokee.

That's when it happened. It wasn't a complete failure, rather a stumbling, and loss of RPM. I switched tanks first (no carb heat control on the 2-stroke), and then worked the throttle in and out. The sputtering continued, the engine unable to "catch" and produce that smooth power I was comfortable with just seconds earlier.

My reaction was not what they put on television shows. No fear, no panic, for this to me was not an emergency. Without a conscious thought, somewhere in my brain was the comfortable knowledge that there was an airport practically right below. That nanosecond reminder was certainly reassuring and allowed the mind to work elsewhere. Like on how to get the power back.

Since my incident, more than ever, I make it a point to remain vigilant about landing spots

If not fear, then what? Anger! That's what. I was mad at that little airplane. After all the time, effort, money and labor I put into it, all I could think of was the damn thing had let me down! It up and quit on me!

Many hours of flying Cessna L-19 Bird dog tow planes for a glider operation had honed my skills at dead stick landings. Our procedures were get them up, then get back down a.s.a.p. for the next tow. Glider pilots aren't as patient as most of us. So it was always full flaps, power off descent and landings, one after the other. Dozens in a single day. I wasn't concerned about getting down in one piece.

I calmly informed the controller I would need priority landing. Just as calmly, he cleared me to land on 1-9. Since I was about midfield downwind, I informed him I would require priority on the grass crosswind strip as I'd lost power. Again he was calm, and said, "OK, cleared to land on the grass".

That rather annoyed me a bit more. No one else seemed to think I had an emergency. No trace of concern in his voice at all. Like this was an everyday occurrence. My moment of glory, I was about to survive an engine-out, and nobody cared.

I went ahead and landed on the grass strip, which was being used by the cadets practicing their soaring for the day. They were aware of my situation from the radio calls, but seemed just as nonchalant as several approached to offer assistance pushing me out of their way.

That done, they left, and I was alone beside the runway with my sick airplane. The non emergency was over. There were no fire trucks, no controller calling to see if I was all right. It was actually just... quiet.

But I was still mad at that Renegade. There was no adrenaline rush to cope with, no shaky knees, no deep breathing. I just needed to find out what went wrong. Float bowls were clean and the carbs seemed to function properly. Not much else to check really. After about 10 minutes, the 503 started and ran perfectly. I taxied back to my tie-down spot and left it for the day.

Although I suspect carb ice, I've never found what caused the problem.

So when is an engine failure a true emergency? Someone once said that an airplane is as safe as the ground it's flying over. Naturally, being over the mountains out of gliding distance to something flat and obstacle free, would create a very serious situation when that engine quits. Since my incident, more than ever, I make it a point to remain vigilant about landing spots. It's good practice to make mental notes of such places as you fly your route. These days, I've come to rely on my Cessna with the Continental engine, but will not completely trust anything mechanical to the point of thinking there will never be a true emergency in the air.

Alberta Aviation Museum "Spirit of Edmonton" BCATP Tour 2010

Latest updates:

This summer has not been very co operative in letting us complete the BCATP Tour mission with the "Spirit of Edmonton" Bi Plane. An extremely hectic Museum schedule of Special events, weather issues, flight crew issues and of course the inevitable financial issues have all taken a toll and lead to a series of delays. The good news is the BCATP Tour is scheduled to launch September 1-2, 2010 (weather dependant) in a modified form.

The Tour will now be done in (2) parts:

2010

Launching September 1-2 will be the "BCATP Alberta" Tour, visiting all of the sites of the BCATP program in Alberta (schedule attached).

Along the way we will be asking veterans of the BCATP program (Civilian or Military) to sign the wings of the "Spirit of Edmonton" Bi Plane to honour their contribution to this important part of Canada's history.

Those that wish to follow the flight will be able to through live "real time" GPS tracking on the map at HYPERLINK "http://www.spirit.aviation.ca" www.spirit.aviation.ca and catch the daily reports from the flight and ground crews.

We will also be taking still photographs and video footage through this flight to create a permanent record of the Tour.

2011

The second stage is the Saskatchewan/Manitoba portion of the BCATP Tour and it is scheduled to take place Spring early Summer of 2011.

Please note that once again along the way we will be asking veterans of the BCATP program (Civilian or Military) to sign the wings of the "Spirit of Edmonton" Bi Plane to honour their contribution to this important part of Canada's history.

Once more those that wish to follow the flight will be able to through live "real time" GPS tracking on the map at spirit.aviation.ca and catch the daily reports from the flight and ground crews.

We will again be taking Still photographs and Video footage through this flight to create a permanent record of the second part of the BCATP Tour.

Below is the schedule for the BCATP Alberta Tour:

The Route:

Day One

1) Edmonton - Spruce Grove
2)Lacombe, refuel 170km
3)Innisfail, OF, refuel..... 80km
4)Bowden, OF
5)Airdrie, OF
6)Calgary, Springbank, refuel..... 135km
7)De Winton, OF
8)High River, L
9)Vulcan, refuel and overnight.175km
Day Two
Vulcan
10)Claresholm, L
11)Fort MacLeod, L
12)Pearce, OF
13)Lethbridge, refuel ..... .180km
14)Medicine Hat, refuel and overnight 170km
Day Three
Medicine Hat
15)Brooks, refuel 110km
16)Hanna, refuel 135km
17)Penhold, refuel and overnight 190km
Day Four
Penhold
18)Ponoka, refuel 75km
19)Cooking Lake, refuel..... 135km
Edmonton..... 30km

Refuel stops will be approx 1hr in duration. Come join us!

Transport Canada's inspectors have been finding that some owners of Amateur Built aircraft have inadvertently been stepping outside the regulations when doing repairs and modifications to their planes, so they have asked that we print 549.23 as a reminder of the requirements.

549.23 Design Changes and Repairs
[Design changes and repairs affecting structural integrity, geometry, performance (e.g. change of c.g. limits) and maximum permissible take-off mass will require an inspection by a DOT representative, and may invalidate the Special Certificate of Airworthiness for amateur-built aircraft. Following a design change or repair:]
(a) A new Weight and Balance Report and Climb Test Report may be required,
[(b) Changes or repairs shall be annotated in the Aircraft Technical Records, including the Journey Log book; and]
[(c)] The Minister may request a new Special C of A application or inspections.
[Information Note:
[(a) Changes which will invalidate the Special C of A for amateur-built aircraft, and require a new Weight and Balance Report and Climb Test include:
[(1) A change in the type or model of the engine. This does not include engine changes within the same series.
[(2) A change resulting in a mass (weight) exceeding the maximum permissible stated on the special C of A for amateur-built aircraft.
[(3) An initial change in landing gear from wheels/skis to floats or floats to wheels/skis.
[(b) A change from wheels to skis or skis to wheels will only require an amendment to the Weight and Balance report.
[(c) Changes which will require an inspection by a DOT representative include:
[(1) Any change or major repair affecting structural integrity; and
[(2) For aerobatic aeroplanes, changes to control surfaces.]
(Change 549-1 (93-06-30))
(Amendment 549-2 (96-04-01))

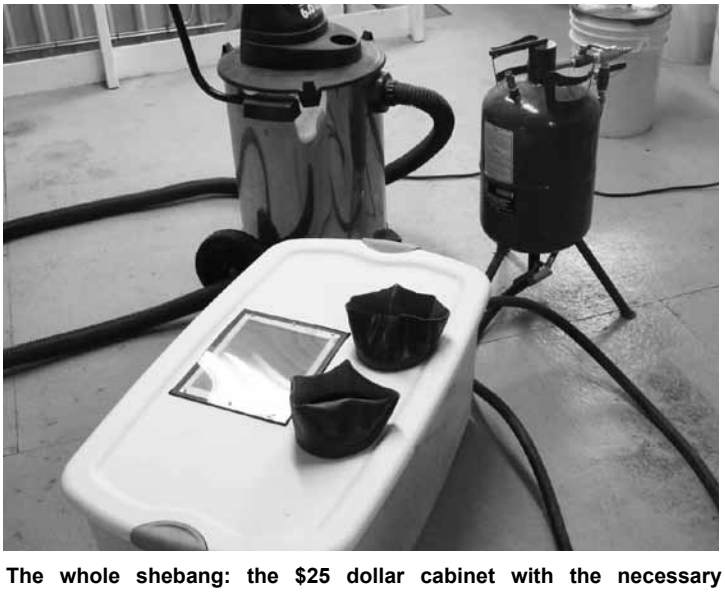
Simple (read: cheap) Blasting Cabinet

The $25 wonder / by Terry Jantzi

SEVERAL YEARS AGO I had some aircraft engine parts glass bead blasted at an overhaul shop. I was so impressed with the results that I have used the process whenever I needed to remove paint or corrosion on critical parts. I have been fortunate to have access to a friends blasting cabinet.

I decided to build my own cabinet after acquiring an old motorcycle that I want to restore. I would rather not contaminate a borrowed cabinet with years of grease and rust from very dirty parts. The setup I ended up with was inexpensive to build, works well, and is easy enough to scale up to a larger size.

The enclosure is a large storage container sourced from a discount chain for $8. The sandblasting gloves ($12) and glass bead media ($38/50lbs) were picked up at Princess Auto.



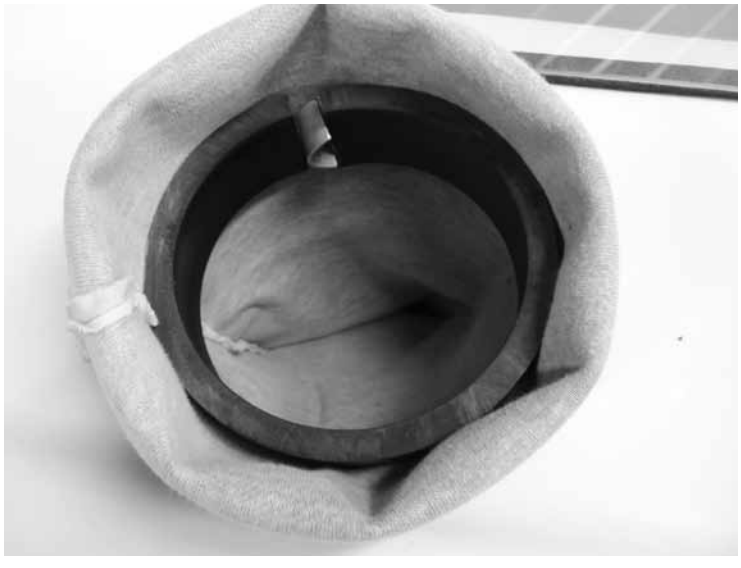
The whole shebang: the $25 dollar cabinet with the necessary appendages: a shop vac and some compressed air.

I needed an easy method of fixing the gloves to the lid of the container. I purchased a 4" ABS pipe coupler ($4) that fits nicely inside the gloves. I set up a table saw with the blade protruding 1/8" and the fence set at approximately one inch from the blade. I carefully a slot all the way around the circumference of the coupler then flipped the coupler to do a second cut. It was easier to handle with the coupler in one piece. Careful attention is required to ensure the coupler stays square and snug against the saw fence, to avoid jamming and sending it past your soft parts at 200mph! And of course the idea is to avoid a 1/8" slot in your fingers. After the slots were cut, the coupler was separated into two rings. The last step was to split each ring so that it can be expanded into the 5" hole previously cut into the lid of the box. I used my "circle cutter of death", with no injury to my person, for the holes in the lid.

For assembly, the rings are inserted into the gloves until most of the slack has been taken up. The gloves are dropped into the hole and the rings are expanded so the gloves are captured between the lid and the ring slot. A bent piece of aluminum is jammed into the split of the ring to keep everything in place.

I had a scrap piece of acrylic sheet lying around to make a viewing port. Glass would probably last longer before hazing over, but the acrylic was available and so far has stayed clear. The acrylic sheet was screwed to a couple of strips of wood on the underside of the lid. I used some weather stripping between the lid and the acrylic but found that it wasn't necessary.

To keep dust levels down I cut a hole in the side of the container and inserted my shop vacuum hose. The media blaster hose goes through a separate h[illegible]e. The sandblaster was a



I am pleased with the results so far and will glass bead blast everything I get my hands on

sale item several years ago from Princess Auto for approximately $50. They are still available for around $70. Any type of sandblaster could be used but a hand held portable unit would need a deeper container to give the operator more room to work.

With the shop vacuum running there is no dust created. The vacuum is capable of maintaining a negative pressure in the box. The one downside to this setup is that the media is not cycled through the system so periodically the glass beads must be removed from the box. The sandblaster I use is a pressure type and must be recharged with glass beads from time to time anyway, This is a limitation peculiar to my setup.

I am pleased with the results so far and will glass bead blast everything I get my hands on. I have tried recycled ground glass but found it too aggressive for the parts I was cleaning.

The total cost of the cabinet came in under $25, far less than the cost of the glass beads. RAA

Top: The shop vac hose goes in the side and is quite effective in controlling dust. Centre, rings are expanded so the gloves are captured between the lid and the ring slot. Above, a before and after example of what the cabinet can do.

Across Canada

RAA Chapters in Action

RAA Scarborough/Markham

We are grateful to Jeff and Lesley Page for speaking to us at our June meeting about the trials and tribulations of flying their C-172 to the Bahamas. They divided their presentation into several parts: planning (e.g. U.S Flight Guide, an airport and frequency manual, and the Caribbean Pilot's Guide); border crossing procedures (e.g. the eAPIS, electronic Advance Passenger Information System, mandatory flight plan, dealing with U.S. Customs, etc.); differences when flying in the U.S. and the Bahamas (e.g. the requirement to have an active flight plan); and fun in the Bahamas (island hopping). We thank Jeff and Lesley for presenting a lot of useful information in an interesting and informative manner.

We wish to thank Dave and Ann Austin for hosting two excellent BBQs at their home in July and August, again this year. The August BBQ was a designated "Peter James Appreciation Night" in recognition of all the work Peter has done for recreational flying down through many years. Fred Briggs went to a lot of trouble to produce pictures of the various aircraft Peter has owned and operated going back more than 60 years. Fred spoke about Peter's many exploits, and produced a truly fabulous cake besides! It was a memorable evening.

Bob Stobie

Thompson Valley Sport Aircraft Club

June 13 BBQ: The weather was great, with maybe a bit too much wind for me as you will see by the windsock in the photos, but it was a very good day. Thanks to Dick and Heather Suttie there was plenty of food available. Harry Winterhalder was in from his strip at Grindrod, south of Salmon Arm, as was Fred Gorensek and his Challenger ll. Bill Hansen also flew his Chinook from Harry's airstrip.

Vernon Fly-In, June 20: I left Blair Field shortly past 7am, with Bill Huxley in his Challenger and Gerald in the Kitfox with Dick Suttie not far behind. They passed me by Monte Lake. There was snow on the ground on the ridge east of Monte Lake and north of Westwold!

At 85, after a very short illness, Lief Berget has passed on. He was a good man, and will be missed at the sfternoon Food Court Meeting... Even though he was not a flyer, he joined our group a few years ago, and enjoyed the companionship.

Edmonton Homebuilt Aircraft Association

The EHAA website has been re-engineered using Content Management System (CMS) technology. Explore the site, any feedback (either positive or negative) is welcome! Send any comments to mailto:webmaster@ehaa.ca.

Dean's RV-4 took its maiden flight recently. It was uneventful (just the way it should be!)

Art Breier's ARV Griffen was irreparably damaged during a landing incident at Josephburg. Apparently, the nose wheel locked up and it veered off the runway. Due to runway maintenance currently underway at Josephburg, there is a steep drop-off at the

New Website Online

RAA's new website is online! We hope to add many features over the next while to enhance the value of your membership. The URL is the same at raa.ca.

Members are encouraged to send in news and chapter happenings for postings on the site. Get the word out, and check frequently for news on upcoming events.

We are hoping to eventually include a forum, online classifieds, and the ability to renew online.

Any suggestions and ideas for improvements are welcome and can be sent to George Gregory at gregdesign@telus.net. Stay Tuned for further developments!

RAA Office Move

RAA is on the Move! The office will be reocating during the week of Sept 27, so please bear with us. New contact information is: Phone 518-648-3030 or 1-800-387-1028. email raa@raa.ca

The new mailing address is: 22 - 4881 Fountain St North, Breslau On. N0B 1M0

side of the R/W and it caused the nose wheel to dig in, causing the plane to flip over on its back. The happy side of the story is that no one was hurt.

RAA Vancouver (Chapter 85)

July saw a number of chapter members make their way down to Arlington in Washington State for the annual fly-in and airshow. New this year were a temporary barn in the antiques section, replete with a Pietenpol Sky Scout fuselage, a single place version of the venerable Air Camper.

Several members of the chapter flew down to Van's Homecoming flyin in late August. 8 Canadian homebuilts were present. Chapter 85 contributed 4 members to the event: Rob Prior in his RV-6, Chris and Joan Cox in their RV-7 and Jose Lins. Member Shona Hirota came along with her Glasair as well.

Rob Prior reports: We arrived around 11am, to a nearly overflowing ramp full of RV's. I didn't do an exact count, but if I had to guess i'd say we had somewhere between 50 and 75 planes. There were some excellent examples of every type of RV made, and a lot of the day was spent talking to builders and pilots about the RV experience.

Top: The Cox RV-7 "Rosie" enroute to Van's. Above, Some of the Canadian Contingent at Van's Homecoming: Shona Hirota's Glasair, Chris and Joan Cox' RV-7, Rob Prior's RV-6, and Joe Schweer's RV-4

Sometimes we have to part with Ol' Paint. Here's a handy form to make sure it's done right.

AIRCRAFT BILL OF SALE

This is to certify that: (seller-please print).....

ADDRESS:.....

has this day sold, assigned, and transferred all rights, title and interest in the aircraft described as follows:

NATIONALITY AND REGISTRATION MARK.....AIRCRAFT MANUFACTURER.....

MANUFACTURER'S DESIGNATION OF AIRCRAFT (MODEL).....AIRCRAFT SERIAL NO.....

Unto: Purchaser (purchaser-please print)

ADDRESS:.....

for the sum of one dollar ($1.00) and other valuable consideration, receipt of which is hereby acknowledged. I/We covenant that I/we are the lawful owner(s) of the above described aircraft.

Dated this .....day of..... 20.....

Witness..... Signature of Seller(s).....

(If executed by co-owners, all must sign.) .....

Note: The use of this form is not mandatory. However, the above information is required on a Bill of Sale provided by the applicant. if you have your own need to state the amount of payment, you can add any other information, as below:

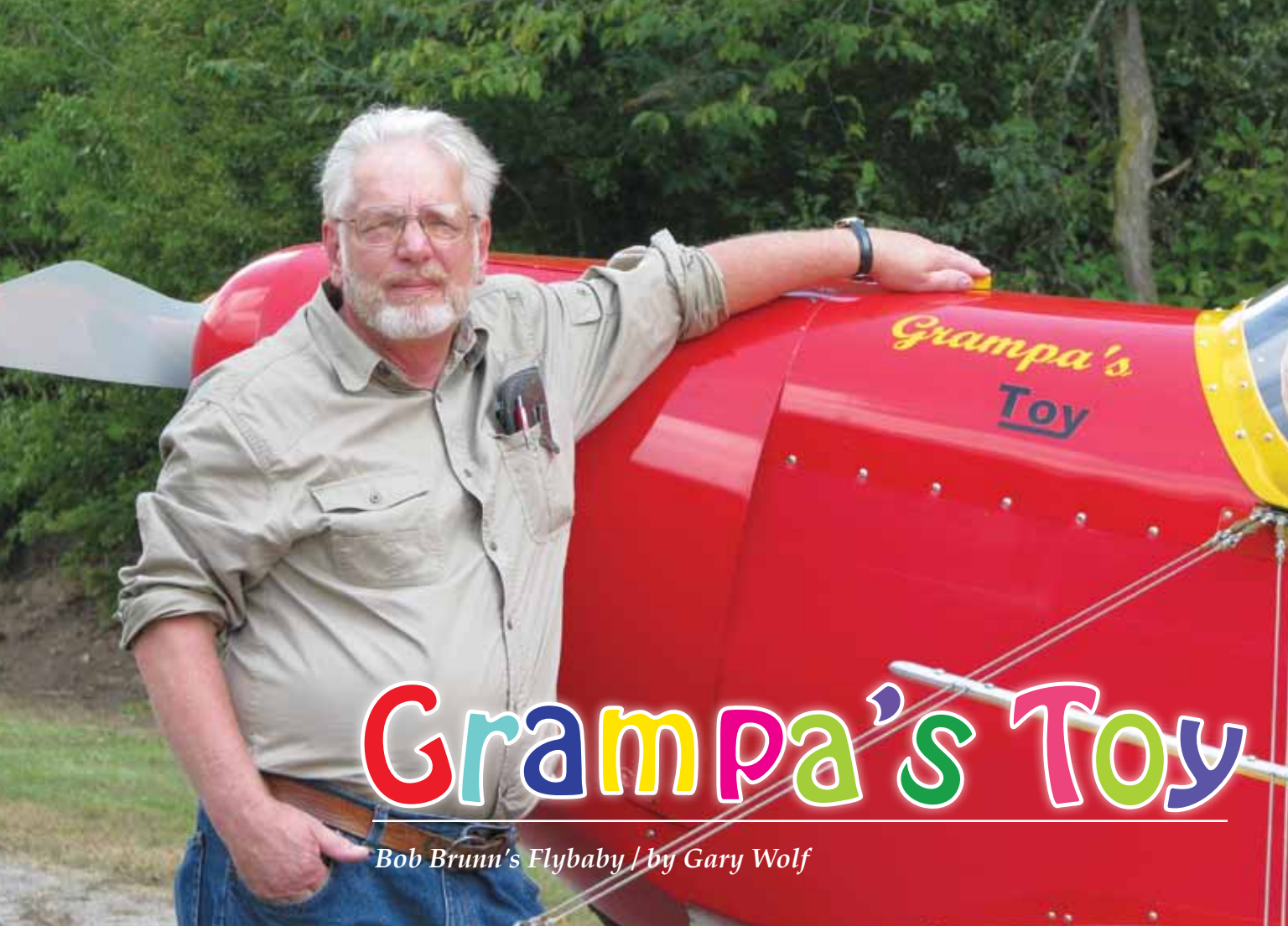
Received from ..... the sum of $ ..... in full payment for one (name and type of aircraft here), serial number ....., registered as ..... Vendor warrants that said aircraft is free and clear of all liens and encumbrances, and purchaser agrees that he has inspected said aircraft and accepts it as is, where is, without any other warranty expected or implied.

Dated this .....day of..... 20.....

vendor .....(signature) .....

purchaser ..... (signature).....

witness.....(signature).....



Grampa's Toy

Bob Brunn's Flybaby / by Gary Wolf

It has been said that no airplane is ever a clean sheet design, and Pete Bowers' FlyBaby design is a good example of this maxim. The FlyBaby lineage goes back to the 1920's designs of Les Long, whose early plane, the Longster, was a high wing wood, tube, and fabric single seater with a kingpost. The wings were wire braced both to this kingpost and to the lower longeron of the fuselage.

A later Long had the wings in the low wing position and the genius of that design was that the fixed landing gear had a lower cabane for the flying wires, which fastened immediately behind the wheels. The upper (ground) wires then went to the upper longerons, giving the appearance of a cantilever design without the weight of a cantilever wing spar.

In the late Fifties the EAA held a design competition and Pete Bowers, who was part owner of a low wing Long, decided that steel tube construction was too difficult for many builders and drew a new all wood plane for the contest, based on his Long. Besides a change of materials, the lower cabane was eliminated and the landing gear axle inherited the work of keeping the wings in place. And so was born the Bowers FlyBaby, a successful single seat gentleman's express for enjoyable sport flying with minimal fuss and expense. Examples of the FlyBaby have been powered by almost every version of the four cylinder Continental engine, essentially by whatever engine has been available at the right price and weight. A FlyBaby is not fussy – give it 50 hp and it will fly, and with as little as 65 hp it flies beautifully.

In the sixties there was a lot of FlyBaby interest at Brampton Airport

The late Mike Davy once said that the most efficient use of materials is in a tractor single seat low wing plane with cowl tank, and the landing gear fastened to the lower longerons. The cantilever wing is then not required to be sized for the fuel and landing gear loads, and these can be taken by the fuselage that already has enough structure for this purpose.

The FlyBaby fills Mike Davy's requirements and it goes one further by using wire bracing instead of carrying the weight of a cantilever spar and its heavy carrythrough. The tradeoff is some drag from the flying wires but this is offset by the light weight and simplicity of build, and for most recreational flying the benefit outweighs the penalty. The wire braced wings have another advantage – the dihedral may be fine tuned to provide the handling desired by the pilot. Further, because all fittings have simple pin joints, the wings may be easily removed when the plane is to be stored for the winter.

In the sixties there was a lot of FlyBaby interest at Brampton Airport, mainly because George Welsh had built one and other pilots saw what a useful and efficient plane it was. Paul Horsten built one and powered it with an A-65 and used it for years. A takeoff accident damaged that plane but Paul persevered and is again in the air in a FlyBaby.

Bob Brunn's FlyBaby, now named "Grampa's Toy" was originally built by Bill Abbott, a »

Bob Brunn is one of the regulars at the Tiger Boys' hangar at Guelph and he has taught fabric and woodwork, so the repairs to the FlyBaby posed little challenge

longtime member of RAA-Toronto Region. When Bill built it, instead of an open cockpit he installed a sliding bubble canopy so that he could fly comfortably all season. Bill flew this plane all over his province and eventually sold it. Unfortunately the next owner could not find hangarage so this little wood and fabric plane spent many years tied down on grass. Exposure to weather began to deteriorate the plane to the point where it might have become structurally unsound, and it was eventually bought to be stripped for an evaluation and possibly for parts. This was when Bob Brunn saw the plane and made an offer on the empty airframe. Bob is an expert at wood and fabric and he felt that he could rebuild it to become his next plane.

First matter was to remove fabric from the wings and tail, plus all control surfaces to do a complete internal inspection of the woodwork. Bob found that the bottom of the rudder had collected water and required new woodwork. The fuselage fabric was in good condition but crawling into the fuselage revealed that the tail had collected a lot of oil and would require a good cleanup. Considering how many winters the plane had seen on tiedown it was in very good mechanical condition, a testament to the quality of Bill Abbott's workmanship.

Bob Brunn is one of the regulars at the Tiger Boys' hangar at Guelph and he has taught fabric and woodwork, so the repairs to the FlyBaby posed little challenge. He made a new lower section for the rudder using aircraft plywood, and sanded and sealed all wood with thinned West System epoxy as the varnish. The horizontal stab then received a new aluminum leading edge and the flying and control surfaces were recovered using 2.7 oz ceconite.

Most of the metal fittings were reused after a light bead blasting and finishing with epoxy paint. The landing gear axle was found to have a slight bend so Bob straightened it in a press, then went through the plane replacing wheel bearings, brake pads and seals, and all cables and

Top: the ground wires are tensioned by the central turnbuckle. Releasing it allows quick removal of the wings. Right, Canopy is locked while parked

Another Flybaby, owned by Paul Horsten, also features a bubble canopy and a striking red and white paint scheme.

turnbuckles, especially the large one across the bottom of the panel that tensions the ground and flying wires. He increased the flying wires to 5/32" and doubled them up on these as other FlyBaby owners have done. Bob wanted everything new to eliminate the pucker factor while flying. To keep the wires from strumming in flight Bob made up spreaders with pointed ends to lessen drag. Although these look like machined aluminum they are in fact birch dowels finished in silver epoxy paint.

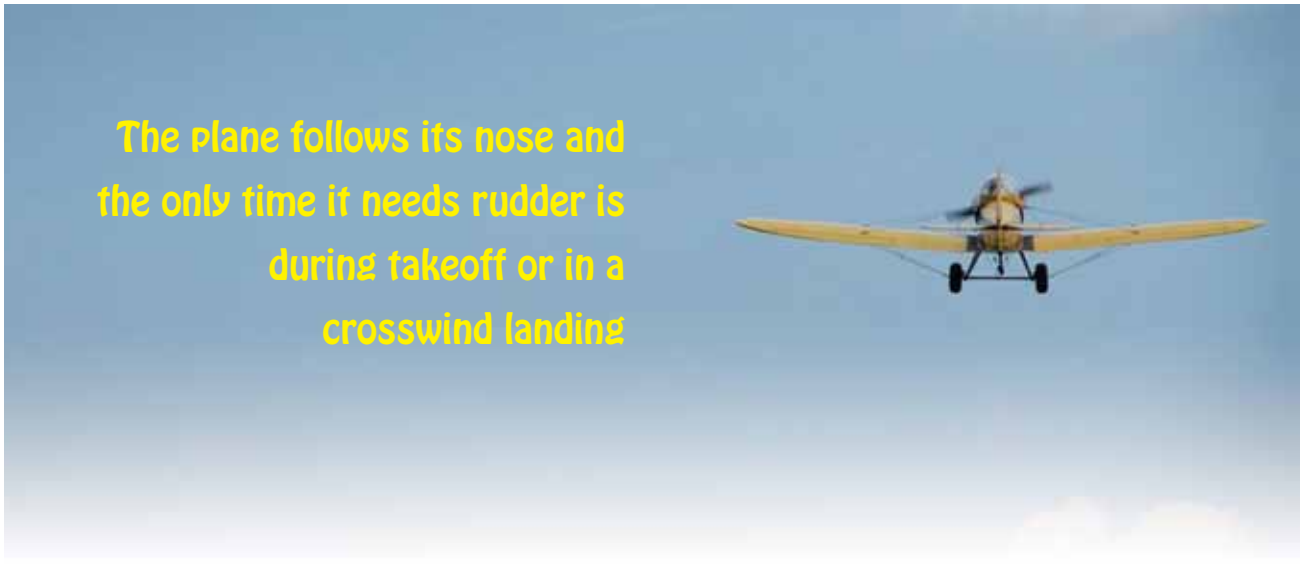
The fabric of the fuselage was stripped to silver using 60 grit sandpaper and a lot of hand work. Bob then redoped it with coats of Randolph silver, then white, and finally the colour coats in Tennessee Red and Lock haven yellow.

The panel received a day VFR collection of new and good used analog instruments, a handheld radio, and a Garmin 195 GPS. Bob buffed the plexiglass windshield and canopy to new condition, regreased the brass slider wheels, and fitted a padlock to the rail to keep everything inside when the plane is parked in its open face hangar. The cockpit woodwork was sanded and resealed, and new placards were installed.

The fuel system was completely cleaned and refitted with new seals, o-rings, and gaskets, and the fiberglass cowl tank came in for a lot of rework. It appeared to have been repaired many times and although it had gained a lot of weight it still wept. Bob ground off all the previous attempts at repair and when he got down to the fabric he could see that some of the original layup had dry patches where the resin had not fully penetrated the cloth. Bob inverted the tank and hooked a vacuum cleaner to the filler neck, then poured a small pool of West System epoxy over the porous section. In a short time the epoxy had infused the glass cloth and the tank was sealed, and was a lot lighter to boot. Since Bob uses only 100 LL fuel there is no concern about alcohol-bearing fuel attacking the fuel tank.

The engine compartment was completely refurbished beginning with the engine mount that was bead blasted and painted with epoxy, then fitted with new Continental rubber mounts. Wiring and control cables were replaced with new parts, as was the gascolator.

Until his retirement Bob was a heavy equipment mechanic so rebuilding the O-200 did not pose a problem. He zero timed the engine with all new parts, and installed four newly rebuilt cylinders. The starter was replaced with a lightweight Skytech,



and to keep the weight down, Bob eliminated the generator. The exhaust system was fitted with a Y-pipe and the ends were flattened and drilled to assist in silencing, and carb and cabin heat muffs were made from common propane cylinders. The engine was fitted with a new Prince P-tip prop, 70 inch diameter and 40 inch pitch, and a set of new prop bolts. The aluminum spinner is from an Ercoupe. The glass nosebowl was sanded to its original gel coat, then sealed with epoxy. The cowlings were then finished with automotive paint tinted to the same colours as the Randolph dope used on the fabric.

Most of the work was accomplished in the Waterloo Airport T-hangar that housed Bob's Tri-Pacer and fortunately it was an end unit with some extra space. He insulated the walls and heated the space with a portable propane unit, warm enough even in the winter for epoxy and fabric work. As the FlyBaby project progressed, the available space became too tight for work so the Piper was sold. Preliminary assembly and rigging to the designer's specs were then possible in the hangar, but shortly the airport sold the building so everything was moved to Guelph Airpark, where it fit in well with the many Tiger Moths, Fleet Finch, and other antiques.

The final assembly and rigging took place at Bob's new hangar and first flight was in July 2007. As expected, it was uneventful so it has been followed by many flights to fly-ins around the province. Bob's typical use of "Grampa's Toy" is for a flight a couple hours away at its economy cruise of 90 mph at 2400 rpms, burning just under 20 litres per hour. The FlyBaby has sporty handling, and in the US these planes have been used for moderate 3G aerobatics. However it is still as docile as a J-3 Cub and trims easily for cross country flying. Surprisingly with its flat wing and zero washout, the stall is almost a non-event, just a mush and a resumption of flying. The plane follows its nose and the only time it needs rudder is during takeoff or in a crosswind landing. Takeoff roll on grass is normally 600 ft and climb at 2600 rpms is 9-1100 feet per minute, depending on temperature.

In the circuit when descending on base Bob uses 1400 rpms and pulls back for a 70 mph airspeed. On final he reduces to 1000 rpm and 55 mph, which produces a sink rate of 500 fpm; the landing is at 45 mph. The big 8.00 tires have 17 psi and do a good job of softening the land-

The Prince P-Tip revs to 2700 in level flight. The solar cell recharges the battery between flights - there is no generator.

ing despite the fixed gear. Rollout is usually the same length as takeoff and requires a bit of dancing on the pedals to keep it straight.

Never one to relax, Bob now has another project in mind. The FlyBaby is a keeper but he has his eye on an Aeronca C-3, a barebones restoration project that he will register as an Amateur Built. He plans to power the new plane with an A-65 or perhaps the original Aeronca E 113 flat twin engine. The C-3 is a very ambitious project and by the time it is finished, the new plane might have to be called "Great Gramps's Toy" RAA

Wooden landing gear legs and steel tube axle are wire braced laterally, and do double duty as the lower cabane for the flying wires.

Review: Garmin 240 Audio Panel

Wayne Hadath

I CHOSE TO INSTALL an Audio Panel in the RV 10 instead of an Intercom and I chose the Garmin 240 Audio Panel but I have been disappointed with the purchase. The first surprise came when my mono David Clark headsets could not be used. Only Stereo Headsets can be used with the Garmin 240. I was not aware of this before purchase and could not find anywhere that Garmin mentions this. One of the reasons I chose the 240 was that it would manage a cell phone. My second surprise came when I could not get any of my cell phones to work with the 240. I spoke to two Garmin employees at their booth in Oshkosh this year to address my concerns. I was told by both of them that the reason the phones would not work is that a satellite phone is required. I said I had been through their literature thoroughly trouble-shooting my problems and was sure that this was not mentioned. The two reps assured me that it was in the manuals and shooed me off. I have looked since and there is no mention of a satellite phone and clearly states that cell phones can be used, but there is no mention that some phones may not work. I have not yet contacted Garmin tech support yet to see if there is a way to get my IPhone to work.

The Deliberately Weak Link

Mike Murphy

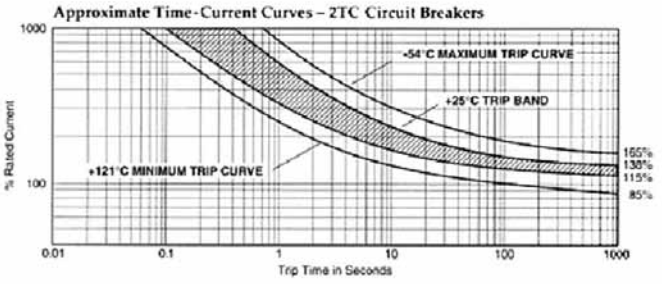
Circuit breakers! They stare at you from panels at your knees, overhead, behind you or perhaps on the console between you and your crewmate. Occasionally, they trip. Just what do these humble yet hardworking devices do, what does it mean when they pop and, just as importantly, what do they not do?

CIRCUIT BREAKERS probably don't get the attention they deserve. However, several recent high-profile aircraft disasters have reminded us that assumptions, misunderstandings or neglect of critical components, even small ones, like circuit breakers, can have tragic consequences. The problem is even more acute as aircraft become increasingly dependent on highly integrated electronic systems for navigation, stability and control. Fly-by-wire aircraft are obviously totally dependent on electricity for safe operations.

Aircraft circuit breakers are designed to interrupt the flow of electrical current when specific conditions are reached. Those conditions of time and current, generate heat. Circuit breakers are designed to trip (open the circuit) before this heat damages either wiring or connectors. A specification might be for a breaker to trip under a massive short jolt (e.g. 10 times the rated load of the circuit-breaker for between .5 to 1.4 seconds) or a longer, less intense overload (e.g. twice the rated amperage for 3-130 seconds, depending on the type of circuit breaker). If the designed overload conditions are not exceeded, the circuit breaker will not trip. Some breakers are temperature sensitive and will trip earlier when warm than cold (opposite page).

This highlights one of the limitations of circuit breaker design. The very tolerances that must be built into a circuit breaker to prevent nuisance tripping, such the high transient current that flows when a motor or component is started, means some glitches may not trip the breaker. Ticking faults and arc-tracking are examples. Ticking faults occur when tiny bolts of electricity intermittently arc from exposed wire conductor. On wires covered with aromatic polyimide wrap, installed in many aircraft built since 1970, this can burn the thin insulation, converting it into carbon, which is an excellent conductor - a nasty case of the insulator turning into the conductor! This can in turn lead to very

An Aviation Circuit Breaker
Picture courtesy of Texas Instruments



Typical Trip Curve
Courtesy of Texas Instruments

short bursts (micro-seconds) of violent arcing where localized temperatures can reach extremely hot temperatures (well in excess of 1,000°C) capable of igniting nearby flammable material. Nevertheless, short, violent bursts of arc tracking will not necessarily trip breakers, which are comparatively slow-acting devices. Special arc fault circuit interruption devices, still a few years away from widespread use in aviation, are needed to deal this type of situation. If your aircraft has aromatic polyimide wire, there are very good reasons not to be in a rush to reset any tripped circuit breaker. The results could be catastrophic.

Circuit breakers are not intended to protect the electrical equipment, which may have its own built-in protection or mitigation system, but the wiring and connectors, which would otherwise have no such protection. Aging, vibration, excessive bending, improper installation, heat, moisture, friction, wind blast, chemicals such as de-icing fluid, toilet fluid, hydraulic fluid, oil and fuel can damage the insulation on the wire, if not the conductor itself and any connectors. In addition to disabling the circuit and any associated component, this could also create a fire hazard, possibly in an area where it could be impossible to use extinguishers and that could easily threaten the safety of the flight. With any in-flight fire, especially one in an inaccessible location or close to critical components, an immediate landing becomes a very high priority. Because such an option may not always be readily available (e.g. in mountainous, arctic or oceanic areas) adequate circuit protection and a good knowledge of what it can and cannot do, is essential.

Circuit breakers, are thermal-mechanical in nature. Bimetallic elements, with one metal expanding more under heat than the other, pop the breaker open. This also enables them to be reset, albeit only after they have cooled down. However, there are good reasons why it MAY NOT BE ADVISABLE to do so, as we will soon see.

On many light aircraft, the circuit breakers are mounted along the bottom of the instrument panel. Many are flush fit and cannot be manually tripped or pulled. On larger aircraft, they are usually grouped in panels placed around the cockpit in locations were they would not be displacing vital instruments, switches or controls, and most can be manually tripped or pulled. Having them within sight and reach, although a necessity is both a blessing and a curse. A blessing because they can be seen and, IF NEED BE reset. A curse, because it is tempting to use them for a purpose they were never intended (i.e. as a switch) and to reset them when they should not be reset.

The electro-mechanical construction of a circuit breaker was not designed for use as a switch, and using it for this purpose causes premature

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It is wise to think twice before resetting any circuit breaker in flight. It is telling you something is wrong.

Fly The Circuit

Many of us may remember our good old days in flight training doing the circuits and bumps. Our logbooks contain reams of entries attesting to exercises 16,17 and 18. For many of us our memory of doing hours of circuits is off in the fuzzy distant past. When we flew with our instructor, we had a built-in error detection and correction mechanism / By Chris Basham

My instructors found that I managed to make many strange deviations much to their astonishment. Like many of our fellow pilots, I survived my training and continued to fly. However, as we move away from the constant vigilance of our instructors, we may forget or unlearn our habits developed from hours flying the circuit. In this article, I would like to assist my fellow pilots with remembering how to fly a circuit and to provide some pointers on what not to do and some work-around.

The circuit itself is a simple rectangle with one of the longer legs centred over and aligned with the runway in use. Each corner of the rectangle is defined as a turn in heading of 90 degrees to the left. Each leg has its own name excepting the leg centred over the runway that has two names. Starting from the point of liftoff, the first leg is named the "Take-off," the second is named the "Cross-wind," the third leg is named "Downwind," the fourth leg is termed the "Base" and the final leg returning us to the starting point is named, aptly, "Final approach." Historically, the circuit evolved through trail and error to suit the needs for a safe and efficient flow of aircraft. It behooves us to keep to this proven technique.

Take-off Leg

The Take-off leg is a simple strait-ahead climb to a safe turning altitude

Many problems start simply because the pilot spends too long in establishing the cruise condition and consequently rushing or failing to complete the other tasks.

of 500 feet. Typical problems that occur with pilots are drift correction, heading control and airspeed control. Each of these issues is interdependent. First, if a pilot maintains a higher than normal attitude when climbing, it is more difficult to maintain heading and correct for drift. Pilots who have not flown for some time will find that yaw control is the sloppiest. High nose attitude coupled with the prop effect causes a yaw and roll to the left. Without visual cues from ahead, drift can only be gauged by looking out the side of the aircraft. Operating at the best angle of climb may appear spectacular in some aircraft, but it produces high prop effect and yaw rates, not to mention reduced engine cooling. By keeping visual contact with the ground ahead, a pilot can maintain heading control and correct for drift. Two ways come to mind to assist you with controlling yaw; choose a point on the horizon and maintain its position on the nose and periodically monitor your turn and bank. Keep the use of obstacle clearance take-off technique to a reasonable altitude such as 100 feet and climb normally there after.

Cross-wind Leg

After executing a turn of 90 degrees to the left, we continue our climb to 1000 feet on the Cross-wind. On this leg, we encounter increasing drift and the illusions created thereby. With the wind now blowing at 90 degrees to our plane, the effect of drift is more pronounced. Our slow ground speed during the Take-off leg is replaced by the increasing ground speed as we move from flying into the wind to directly across it. Pilots unprepared for this illusion could interpret the increase in ground speed and an increase in airspeed that could lead to a turning departure stall.

Coping with this illusion is simple -- maintain the attitude of the aircraft's nose relative to the horizon and monitor the ball for slip or skid. Remember the formula we have been taught in ground school: attitude plus power equal performance.

Downwind Leg

After a reaching 1000 feet above the ground and turning again 90 degrees to the left, we enter the Downwind leg. Strait and level cruising characterizes the Downwind leg. Ideally, the downwind should be the most relaxing portion of the circuit. However, many pilots are inundated with the tasks to complete. Such tasks are establishing cruise flight, correcting for drift, being vigilant for other aircraft, issuing the radio call and the downwind checks. Many problems start simply because the pilot spends too long in establishing the cruise condition and consequently rushing or failing to complete the other tasks. There is only one cure for this problem and that is practice, practice and practice - Attitude, Power, Trim. I personally use a budget plan with the first quarter of the downwind to achieving cruise condi-

tion, the second quarter to fine drift correction and the downwind radio call, with the third quarter left for the down wind checks. The final quarter is restricted to establishing where to initiate the turn onto the Base leg. Normally we turn onto Base when the runway threshold is at 45 degrees relative to the aircraft. The simple rule is the runway is halfway between the wing and the tail. The decision to turn must be predicated on the conditions. Specifically, wind, traffic and your airplane's glide performance will overrule the 45-degree guideline. Priority will be given to traffic, glide performance of your aircraft and wind.

Base Leg

Having completed our 90-degree left turn, we establish ourselves on the Base leg. Our specific tasks on base are to establish the glide, correct for drift and determine the location on which to turn onto final.

Establishing the glide has two meanings. The first is borrowed from the forced approach exercise. When you reduce power to begin the descent, you have to get things down PAT. PAT is the often taught rule for establishing the descent -- Power, Attitude and Trim. Many pilots will reduce power and allow the nose to descend resulting in a high-speed glide causing problems with their ability to control the aircraft's speed. Like the forced approach you should maintain the altitude while you slow down to the approach speed. Then place the nose into the glide attitude and trim. I cannot over emphasize trim. Some pilots seem to totally ignore the use of trim. Flying the circuit with these pilots is like watching the WWF as the unfortunate soul wrestles the aircraft right onto the ground. Normally, you should establish the best glide speed on Base. The second aspect of establishing the glide is the first estimate of the touchdown point. We have all been taught that the location we can glide

to is a fixed point on the windscreen. Essentially, this point allows us to create a zone defined by the angle of the fixed point below the horizon. By mentally extending this point to it intersects the extended runway line, we can determine if we are high or low. Small power adjustments during base can eliminate large power adjustments on Final.

Similar to the Cross-wind leg, Base experiences the highest drift rates. Compensation is easily achieved by planning to turn 3 to 5 degrees more as you turn from Down-wind onto Base. Only minor adjustments are necessary after completing the turn.

Turns onto final require more accurate judgement. You can use solve the problem by choice of turn-point and bank angle. The ideal choice would be to lead the extended centre line of the runway such that when you roll out of a gentle gliding turn (no more than 15 degrees) you are on that centre line. Monitor closely how fast you are closing on the centre line to determine when you should turn. Overshooting is preferable to over banking. As you are aware, you are already at a low airspeed and any attempt to speed up the turn rate will result in a decrease in stall margin.

Final Approach

Final approach is the precursor to a successful landing. Control of glide path and drift is essential to that success. Use crab for drift correction will identify the direction and strength of the crosswind. Keep in mind that the wind direction will actually shift clockwise and decreases as you approach and land (great for left-hand crosswind approaches). The aircraft's speed must be reduced to the final approach numbers for your aircraft and control must be tightened up. Again effective use of trim is useful to simplify the approach. Judge the approach based on visual cues, i.e., the fixed point on the windscreen. This fixed point should at best be between the threshold and no more than 1/4 the way down the runway.

Issues for Higher Performance Aircraft

Of late I have been admiring the performance of some of the home-built aircraft. One thing that I have noticed is that the pilots flying these aircraft use the increased performance of these aircraft in the circuit. I suggest that the pilots of these aircraft use discretion when operating in the circuit. The pilots of the higher performance aircraft need to remember what it was like during your student days when a powerful aircraft was following. Suggestions I would have for these pilots are:

- Climb to 500 feet with full power then reduced power thereafter.
- Climb to circuit height before turning crosswind.
- Cruise at approximately 100 MPH to mesh with the training traffic.

Finding Water

Gary Wolf

DO YOU LIVE in a semi arid region and need water? You might want to head to your airport to check the fuel tanks of the hangar and tie-down queens that have been parked with tanks that have been less than full. Given a season of warm days and cool nights, a fuel tank can collect a lot of condensation.

Sampling the fuel will not always reveal if there is water, as many tanks have a low spot that cannot easily be drained. Water can collect there, and the typical preflight check does not include raising the nose or tail to see if there is water in a low spot.

This plane had sat for eight months, so at annual the AME required that all three tanks be emptied and refilled with fresh 100LL. Checking the tanks a day later revealed that they still held some water and foreign material. The tanks were each drained of a gallon, but a later check showed that there was still water in the header tank. We then drained the header and refilled it with fresh fuel.

The plane shortly had its nose raised to the climb attitude but a day later when we sampled it we still found water. We then drained a gallon of fuel and found a lot of water in the bucket. The next day the header tank was still showing water so the plane was taxied around to see if the engine could vibrate any more water loose. Raising the nose and draining another gallon right after taxiing produced a bit more water but sampling in both flight and climb attitudes over the next day showed clean fuel samples. It is obviously not easy to get rid of water, even in some certified planes. Once we had consistently clean samples the gascolator was then checked, cleaned, and safety wired.

Many pilots are reluctant to waste fuel because it is expensive and hard to dispose of. Fortunately most aircraft tugs, lawn mowers, pressure washers, and snow blowers can run happily on 100LL fuel, so the only penalty is the difference in cost between auto fuel and 100LL. In this case we drained five gallons in all, then poured it through coffee filters and a funnel, so the penalty was a $15 difference. The benefit is that we do not have to keep getting fresh auto fuel for the lawn mower and other equipment.

SAYAL ELECTRONICS

WHEN IT'S TIME for electronic components it is well worth looking up Sayal Electronics at www.sayal.com . This place is a warehouse of consumer and hardcore electronics items, what Radio Shack used to be in the seventies before they went mainstream. Sayal operates six retail stores that ring Toronto, and they also have a warehouse from which they send out daily shipments across the country.

Although the retail stores do not carry mil spec items the 85000 sq ft warehouse does, and its inventory may be accessed from the website. The retail stores do carry all manner of switches, tiny nuts and bolts, batteries, capacitors, shrink tube, connectors including BNC, battery eliminators, diodes and transistors, meters, patch cords, soldering equipment, you name it, and the inventory is well labelled and logically arranged. Some parts are blister packed but the majority is in open bunks so that the customer can feel the click of a switch before buying it.

I was recently trying to make up a cord to power a handheld radio from the aircraft's 12v supply and needed the connectors that Icom uses. Sayal had them in straight and 90 degrees for a couple dollars each, and best of all they had a cigarette lighter power cord already made up. It fit and it works. This cost $5.00 compared to Icom's price of $30 to $50.

Sayal has also introduced a hobby line so that you may teach your children or grandchildren the basics. The kits range from solar, magnets, and electronics to robotics.

Sayal Electronics - Toronto, Vaughan, Mississauga, Burlington, Cambridge www.sayal.com and www.sayalhobbies.com

Circuit Breakers / continued from page 29

wear and the risk of failure. When a circuit breaker fails, it will take down a system, which may be needed for the safe operation of the aircraft; or it will leave on line a circuit that should be de-energized. Both alternatives are unattractive, and both are capable of inflicting catastrophic consequences.

It is wise to think twice before resetting any circuit breaker in flight. It is telling you something is wrong - that there has been a serious electrical event. This danger signal must be interpreted with extreme caution. The old rule of thumb to automatically allow one reset is not prudent. Safety-conscious airlines are now telling their crews not to reset any breakers unless they are essential to safety and then to do so only once. Wherever possible, this should be done only after consulting the relevant resources (e.g. the Quick Reference Handbook, the MEL, Aircraft Flight Manual, Company Operations Manual, and/or maintenance.) This approach might suggest that the reset be delayed until the service is needed. There is no need to reset a landing gear circuit breaker that trips after take off until one is committed to landing.

Unless your organization already has a comprehensive policy on circuit breakers, it is time that Flight Ops and Engineering/Maintenance develop one. Even if you have one, don't assume that everyone is aware of it, understands it and is using it. Better to be surprised by finding out now that they are not than to learn about it after a tragic event. Being at altitude with a deteriorating situation on your hands is no time to develop a good policy. In the meantime, logging any circuit breaker anomalies gives maintenance a much more accurate picture of the nature of the problem.

Circuit breakers: a willing friend, ready to save you from harm's way, provided you understand and respect their limitations. RAA

Mike Murphy, former ATPL pilot and ex-TC executive, now chair of the Air Passenger Safety Group, thanks Mark Van Berkel at Transport Canada Aircraft Services for his insights into this important topic, Texas Instruments (Klixon Circuit Breakers) for permission to use the above graphics, and a group of his former colleagues for vigorous peer review of this article.

This article is reprinted from the July-August, 2001 Recreational Flyer.

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It's better to be down here wishing you were up there, than to be up there wishing you were down here.

consider that every non certified plane is a one-off, there is little to be learned that would benefit other pilots, so there is little reason to spend the budget for our sector. At one time when most planes were built from plans this policy might have made sense but now with CNC production of cookie-cutter kits, planes of a given model share everything except perhaps upholstery and panel, so there is much to be learned that could inform other builders of common safety issues.

In some cases the investigation has been handed off to the local police, and in non fatal crashes the investigation has taken the form of a phone call to the pilot. When the police handle an investigation it is rare for the investigator to have any aero training so it is not unusual for the cause to be missed. And when the investigation is just a phone call to the pilot it is unlikely that the pilot will blame himself, so the aircraft might unjustly be blamed. In neither case is there likely to be much accuracy but both types of report do und up as part of the TSB report, and these can negatively affect the safety statistics released by the TSB.

In the typical Level 5 investigation the investigator does not have the time to call up all occurrences in the same type of plane, so there is little likelihood that a pattern can be recognized. The report is filed and that is that. For many years RAA has been following up fatal crashes and has recognized common problems, so in our July meeting with TSB it was agreed that RAA would provide background information to TSB after occurrences in non certified aircraft. In this way we hope to encourage TSB to take more interest in the concerns of pilots and builders of non certified aircraft.

NAV CANADA FEES

If your plane has a gross weight of 1320 pounds or higher you already receive an annual bill from Nav Canada for their services, whether you use them or not. The only exceptions are for planes that gross less than 1320 or for planes that have been taken out of service, and about which Nav Canada has been informed. Your AAIR information is not given to Nav Canada so filling in "zero hours" on that document does not have any effect on your responsibility to Nav Canada.

Further, there is a quirk in the Nav Canada billing method that you should know about. The Nav Canada fiscal year begins on March 1st and the registered owner on that date is responsible to pay the annual fee. If you buy or sell a plane and the date of change of registration is March 1st or later, the bill will go to the owner who is registered on that date. Normally it can take Transport Canada several weeks to effect a change in registration, so a delay can result in the wrong party being billed for the Nav Canada fee but there will be no recourse by appealing to Nav Canada. Registration on March 1st is what matters.

Further, there is a quirk in the Nav Canada billing method that you should know about.

WEIGHT AND BALANCE FOR UL AIRCRAFT

For some unfathomable reason-Transport Canada does not require a Weight and Balance as a condition of registration for Ultralights, even when these planes have two seats. For a basic UL that has no construction or design standards this might just barely be a justifiable position, but for an Advanced UL that is legal for the carriage of passengers this makes little sense. Transport Canada's position is that it is the responsibility of the manufacturer to say whether or not his planes require a W&B, and many manufacturers interpret this as meaning that a W&B is not required. Some Advanced UL manufacturers do not want the owners to know that their planes are too heavy for the category so they just tell the owner what standard numbers to put into the boxes on the registration form, and Transport Canada will happily accept them. Transport Canada knows the game that is being played but as long as TC is free from liability their Chief does not have any concerns. Some Advanced UL's weigh as much as 150 pounds heavier than the manufacturers' stated weights, and because a W&B has not been done there is no way for the new owner of an Advanced UL to know where in the CG range he is flying.

I have weighed quite a few UL's now and what I have seen sometimes scares me. Some are patently overweight and some have the CG so far forward or to the rear that the plane is all but uncontrollable. One fatality occurred in a plane that had just rolled out of the "factory" door and its CG was so far ahead that it took nearly full power to get enough elevator authority to flare for landing. Another plane had the CG so far to the rear that it took a lot of forward stick to keep the plane level, and if the plane had stalled there would not have been any way to break the stall.

RAA Canada has sets of electronic W&B scales positioned across this country, and these are available for the use of members. Make sure that your UL plane is flying within the envelope and do the "brother's keeper" number and make sure that your fellow pilots are doing the same.

Classified Ads

To submit or delete a classified ad, please send to classified@raa.ca and place "RAA ad" in the subject line.

The Recreational Flyer is pleased to offer you colour advertising within the magazine. Previously limited to the back cover, we have added 4 new colour pages which will be available with limited space for your advertising needs. Our rates for both black and white and colour ads remain very competitive and you reach a captive and qualified audience.

Ads can be emailed to : ***classified@raa.ca***

Deadline for submissions is the first of the month preceding date of issue.
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Recreational Flyer Magazine

Registration Mail Publication No. 09869

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Printed by Rose Printing Orillia, ON
The Recreational Flyer is published bi-monthly by the Recreational Aircraft Association Publishing Company, Brampton Airport, Caledon, ON L7C 2B2. Toll Free line: 1-800-387 1028 email: raa@zing-net.ca. Purchased separately, membership in RAA Canada is $35.00 per year, subscription to Rec Flyer is $35.00 per year; subscribers are elegible for reduced membership fees of $15.00 per year. Rec Flyer to have a single issue price is $6.95.
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For Sale

Zenith CH-250 Project For Sale. Tricycle configuration First inspection done. Ready for rigging. Have 3 in 1 engine gauge, VSI, ALT, Compass, Tack, and air speed gauges. Have a dinafolcal engine mount for 0320 engine, prop, some pneumatic tools. Plus lots of old news letters for the project and pictures of different configurations. $10,000.00 Ph. 604-859-6884, John.

SIDEWINDER. All metal two seats. Equipped with Lycoming O-290-D engine with logs. 3-blade ground adjustable Wrap Drive Prop. Bendix / King KY97A radio, Icom portable standby radio; transponder / c. Full cockpit & panel lighting; strobes, nav lights & L/L lights. Ready for MD/RA final preflight inspection. All drawings and building manuals included. $20,000 CDN. Call Norm @ 519-745-7971 or e-mail Idservice@rogers.com. June/10

FOR SALE: ZENITH CH-300 on floats. First flight, Sept 1983, total hours 575 (300 on floats since July 1993). Engine O-320-C2A zero timed in 1999 now with 170 hours. panel, no radio. Prop McAuly 1A175/GM8241 new in 1993, Floats Zenair 1850. Location Lake Muskoka. $30,0000 George 705 445 7054 Collingwood Aug09

(1) 1967 C-172, 3155 TT, Cont. 0-300, 1005 SMOH, new windshield, new battery in 2007, new paint in 2005, a working DME,

two 720 com. radios, a ELT, current annual until Nov.09. $41,000. (2) 40' X 30' Calhoun structure hangar at Earlton,CYXR, 5' high steel walls, 10' high doors, fabrene roof, put up in Nov. 2004, will hold a C-172. $12,000. Phone 705-544-8743 or whiteheadbj@msn.com Aug09

For Sale: Avid Flyer Mark IV STOL wing. 800 TT, folding wings, 1150 lb gross, 540 lb useful load. Engine liquid cooled 582C 50 SOH. Registered as homebuilt, restored 2005. 720 channel Com, ELT, new 3 blade GSC prop, new wheels, tires and brakes. Cruises at 90 mph, stalls 32, low cost and lotsa fun flying. Skis and some parts included. Asking $16K. Email planes1057@hotmail.com. Phone Tom 780-632-9396 days, Lowell 780-632-2931 evenings. Oct09

For sale/trade: 0290D2, good but scored crank journal, no accessories, dismantled $2000.00. Also, Revmaster mount and electrics $500.00. Bendix dual mag $500.00. Call 519-692-5309 for details. macmaz@mnsi.net Oct09

For Sale: Avid Speedwings new and uncovered, at the ladder stage,with factory made flaperons. $500. Avid stabilizer $100. Avid stab lower braces $75. One jury strut assy $30. As a batch - $575. garywolf@rogers.com 519-648-3030 Oct09

For Sale: McCauley propeller 1A101DCM6948 modified to a GCM6948 that takes a prop extension. Prop is in good condition and removed from Cessna 150 for age. Last major overhaul by Western Propeller Jan 1991 and has about 1090hrs since then. Because of the modification for a prop extension, prop cannot be recertified. Good for your homebuilt powered by a Continental O-200. Price $700 Cdn. Call Don Bentley 250-764-0880 Oct09

For Sale: I have an Rv 6A, nose wheel and main gear legs, fairings, gear attachments,motor mount etc would like to sell or trade for complete tail wheel components, if you know of anyone interested please have them contact me at rosymury@aol.com. Oct09

Murphy Super Rebel Kit SR2500 (Moose) Complete airframe kit. Tricycle landing gear. In factory crate. $15,000.00 Larry 905 460-0880, work 905 677-8300 or email lawrence.strilchuk@sympatico.ca Oct09

NEW PRICE! Zenair Zodiac 601HDS Tricycle gear, registered 1993, Rotax 912 UL, ARPLAST flight adjustable prop. 756 hrs TT. ICOM A-4, 2 headsets, GARMIN 95 GPS, Vacuum AH. Stainless exhaust, new upper paint 3 years ago. Canopy cover. Cruise 120 mph. Asking $24,000 CDN. At Oshawa. Dave, 416-282-5252 Oct09

Cessna 150H, 3980 TTAF, 1820 SMOH, KX145 NavCom, Icom 200 Com, Narco Mode C, paint 8/10, interior 7/10, 4 new cyls/321hrs $19500 gbemus@rogers.com Dec09

For sale, new RV9A parts; Lycoming conical engine mount, 3 L/G legs with mounting brackets, nose wheel, fairings. All the parts I didn't use when I converted to tailwheel. Approximate cost to buy $3000. Contact Terry Elgood for list at TMB_Elgood@shaw.ca or 250-503-5188 Feb 10

Early model Zodiac HDS Speed Wing spars, ribs & plans. $400 or best offer. F.O.B. Don Benton 1-519-442-2962 dorothybenton@hotmail.com Apr10

One set of aluminum floats for sale. Were built for a Super Koala ultralight. Gross weight of Koala is 830 lbs.Approx. 12 feet in length. The floats are very light in weight. Similar to a Murphy float design. Pump out ports in each compartment. Rudder on right float. Asking $2500.00 OBO. Contact, Richard at 250-374-6136 e-mail: richard_suttie@telus.net Apr10

MINI-MAX ttsn 217 seoh 29.8. Rotax 447 new GSC prop. skis. radio. always hangared. excellent condition $11,900.00 obo

Lazair project. ttsn 123 hrs. total new Ceconite 2.7 covering. ROTAX 248 24 hp engines and 4017 props. skis. $4900.00 obo New Colin Walker prop SAE1 6856 epoxy LE $500.00 GSC 48" prop with adjustable hub Rotax 75mm bolt pattern.$200.00 Scott tailwheel, C65 to C90 Starter, Cessna 180 generator, NAS3 carburetor Stromberg. All for $200.00 Contact 780-460-6841 (Home) J J Williams 780-945-0411 (cell) June/10

Beaver RX 550 serial number BRX0090. 503 Rotax with electric start. Single ignition, dual carbs. Full dash, Altimeter, Vertical speed, Tach, dual EGTs, single CHT, Compass, Hour meter, Capacitive fuel probe and gauge, Airspeed, Slip indicator. Hydraulic disc brakes, individual heel operated. Airframe was totally rebuilt by an AME 4 or 5 years ago. All flying surfaces covered with aircraft fabric. Wings totally rebuilt with turnbuckles in every bay of the wing. Covered with fabric. Has flaps on the wings. Engine has low hours as crosshatch still on cylinders. Checked and regasketed as actual hours not known. 10.9 hours since check on engine. Larger 600 x 6 tires. One of the nicest Beavers around!! Asking $11,500.00 OBO. Located in Kamloops, B.C. Richard 250-374-6136 richard_suttie@telus.net Apr10

ED RILEY'S BD-5B: Bare Weight 561 lb. Fuselage; Stretched (Kieth Hinshaw Kit); Belly-scoop Cooling; Taxi Cooling Fan. VHF

Antennea Skin mounted on Vert Stab; Barber Pole. Matco Wheels and Brakes. Three Gear Doors Fitted; Windshield Defrost Fan; External Plug-in for Battery Boost or Charge; Wings: Standard "B".: Rib Spacing 5 3/8" (Preformed Kit) Auxilliary Wing Main Spar (use optional) ; Leading Edge Mounted Land Lights; Wing Tip Mounted Nav and Strobe Lights. Fuel Guage in Skin. June/10

Instruments: Vertical Card Compass; Altimeter (feet); ASI (mph) Manifold Pres (inches); Empty Hole (3 1/8") VSI; T & B (electric); RPM (digital); Exhaust Gas Temp; Coolant Temp; Volts; "G" Meter; Oil Temp; Oil Prss; Hobbs Engine Time/ Power: Zero Time Honda Civic 1200cc Turbo; Forged Aluminum Racing Pistons: Power Regrind Valve Cam: Two Coil, Two Breaker Point Ignition, Gated. Power Train: Jerry Kauth System; IVO Prop, Three Blade Electric Variable Pitch. Built & Painted by; Ed Riley. Asking $20,000. Phone/Fax 250-339-2887 egariley@shaw.ca June/10

For Sale: C 90 engine core $2500. Four overhauled cylinders with new pistons and rings $1000. As a package, $3200. Bob 519-884-9094 June/10

Acro Sport II project. Tacked fuselage, wings ready to cover, tail feathers, wheels, tires, brakes, instruments, fuel tank, windscreens, hardware, much more. $8,500.00. lussierm@telusplanet.net June/10

For sale KR-2 fuselage in boat stage and metal kit for retractable landing gear castings $300.00 call Ian 604-856-1159 or email tri-pyramid@telus.net

For Sale: Lycoming 0-235-C engine, disassembled, rebuild started,crank good, needs carb and ring gear hub. $1800.00. Tom at 1-519-822-6693, 1-519-638-5075, millfly@sympatico.ca June/10

For Sale: CH-701, Basic Ultralight, Rotax-912, jeep gear, gull wing doors, $24,500. Tom 1-519-822-6693, 1-519-638-5075, millfly@sympatico.ca June/10

C-IGVE Cara-two (Karatoo) 2 seat basic UL with overhauled Continental 75 hp engine and Zenith wood prop. Steel tube and fabric taildragger fuselage with all metal wing. Day vfr panel, no electrics, 600-6 wheels with disc brakes. $12000 OBO Bill Rice 519-461-1894 June/10

C-ICPZ Silverbird single seat Basic UL with aluminum fuselage, all metal wings, HAPI VW 1600 direct drive engine with dual ignition and Ellison carb/injector, day VFR panel. First $5000 takes it all Bill Rice 519-461-1894 June/10

C-IFWE Cloud Chaser single seat Basic UL that began life as a Schweitzer 126B sailplane. 40 ft span all metal wing, steel tube and fabric fuselage and tailfeathers, tricycle gear with telescoping nose strut and fibreglass main gear. Powered by electric start Kawasaki 440 with belt redrive and IVO prop. Day VFR panel. plexiglass canopy. $7000 OBO Bill Rice 519-461-1894 June/10

LAZAIR : Ready to fly, full 3 axis flight controls. Pioneer engines with custom designed Tuned Exhaust Pipes. Static thrust boost from 35 lbs to 50. Remote radio antenna including coax with BNC terminus at panel ready to accept your GPS and handheld Radio. Hall Brother Airspeed with long extension arm included. Put the fun back into flying for just pennies an hour. Asking a paltry $3250. Contact William Wojcik (905) 765 8477 or email mrbill@mountaincable.net Sep10

2002 Emeraude with 47 TT. O-290G Lycoming with 393 SMOH. Sensenich metal prop, Icom A5 and intercom. Full conventional panel, custom interior, all logs. Always kept in a heated hangar in Stratford. Asking $29K. Jim Demerling 519-348-9655 for details. Sep10

1997 Challenger 2 Clip Wing with 503 and tall redrive. This plane has been flown regularly and is high time but it works well. It was an AULA but has been deregistered and is being sold as parts or to be reregistered as a basic UL. $7000 for all or make an offer on parts. 519-622-8154 Ontario. Sep10

Wanted

Wanted- Great Plains only VW dual spark plug heads, Aerovee 29mm Injector Carb or similar Revflo in good condition, or even Ellison ESF 2, low time Slick 4316 mag, Great Plains only complete Force One Prop Hub. John Donaldson, 519-426-8583, jdonaldson@kwic.com near Simcoe ON. Dec09

Wanted: Geshwender redrive for my Spitfire project. 519-692-5309 macmaz@mnsi.net Oct09

Ads run for a maximum three issues depending on space available and then must be renewed for continued display. Please direct all classified inquiries and ad cancellations to: classified@raa.ca and place "RAA ad" in the subject line.

Classifieds On The Internet:

http://www.ocis.net/tvsac/buyandsell.html -more ads from our Kamloops chapter
http://www.lyncrest.org/sfcclassifieds.html -more ads from our Winnipeg chapter

George Gregory

Arlington 2010

RAA Chapters and Meetings Across Canada

The following is a list of active RAA Chapters. New members and other interested people are encouraged to contact chapter presidents to confirm meetings as places and times may vary.

ATLANTIC REGION

HAVELOCK NB: Weekly Sunday morning get together year round, all aviation enthusiasts welcome. Havelock Flying Club - 25 mi west of Moncton. Contact Sterling Goddard 506-856-2211 sterling_goddard@hotmail.com

QUEBEC REGION

COTE NORD (BAIE COMEAU): Meeting times to be advised. Contact Pres.Gabriel Chouinard, 418-296-6180.

LES AILES FERMONTOISES (FERMONT): First Sunday 7:30 pm at 24 Iberville, Fermont. Contact Pres. Serge Mihelic, 418-287-3340.

MONTREAL (LONGUEUIL): Chapter 415, Meeting in French second Wednesday at 8 pm, at CEGEP Edouard Montpetit 5555 Place de la Savane, St. Hubert, PQ. Contact president Normand Rioux at NRIOUX@lapresse.ca

OUATOUAIS/GATINEAU: Every Saturday 9:00 am to noon at the restaurant l9Aileron in the airport terminal. Contact Ms N.C. Kroft, Gatineau Airport, 819-669-0164.

ASSOC DES CONSTRUCTUERS D'AVIONS EXPERIMENTAUX DE QUEBEC (QUEBEC): Third Monday 7:30 pm at Les Ailes Quebecoises, Quebec City Airport.

ASSOC AEROSPORTIVE DE RIMOUSKI: First Saturday at 9:00 am, La Cage aux Sports, Rimouski. Contact Pres. Bruno Albert, 418-735-5324.

ASSOC DES PILOTES ET CONSTRUCTEURS DU SAGUENAY-LAC ST JEAN: Third Wednesday 7:00 pm at Exact Air, St Honore Airport, CYRC. Contact Marc Tremblay, 418-548-3660

SHERBROOKE LES FAUCHEURS de MARGUERITES. Contact Real Paquette 819-878-3998 lesfaucheurs@hotmail.com

ONTARIO

BARRIE/ORILLIA CHAPTER Fourth Monday 7:30 PM Lake Simcoe Regional Airport Contact Secretary Dave Evans 705 728 8742

E-mail david.evans2@sympatico.caCOBDEN: Third Thursday 8:30 pm at Club House, Cobden Airport. Contact Pres. Clare Strutt, 819-647-5651.

COLLINGWOOD AND DISTRICT; The Collingwood and District RAA, Chapter 4904, meets every first Thursday of every. month, at 7:30 PM except July and August, at the Collingwood Airport or at off-site locations as projects dictate. The January meeting is a club banquet held at a local establishment. For more information contact Pres. Keith Weston at 705-444-1422 or e-mail at ckweston2@sympatico.ca

EXETER: Second Monday 7:30 pm at Summers-Sexsmith Airfield, Winters-Exeter Legion. Contact Pres. Ron Helm, ron.helm@sympatico.ca 519 235-2644

FLAMBOROUGH: Second Thursday 8:00 pm at Flamborough Airpark. Contact Pres. Karl Wettlaufer 905 876-2551 or lazykfarm@sympatico.ca

KENT FLYING MACHINES: First Tuesday 7:30 pm at various locations. Contact President , Jim Easter 519-676-4019 jim.easter@teksavvy.com.

KITCHENER-WATERLOO: Meets the third Monday of each month in the upstairs meeting room of the cadet building at CYKF, except during the summer months when we have fly-ins instead. Please contact Clare Snyder clare@snyder.on.ca

LONDON/ST. THOMAS: First Tuesday 7:30 p.m. At the Air Force Association building at the London Airport. Contact President Angus McKenzie at 519-652-2734 or angus.mckenzie@sympatico.ca

MIDLAND-HURONIA: First Tuesday 7:30 pm Huronia Airport. Contact Tom Massey 705-526-5304, fax 526-5310

NIAGARA REGION: Second Monday 7:30 pm at Niagara District Airport, CARES Building. Contact Pres. Elizabeth Murphy at murphage@cogeco.ca, www.raa-niagara.ca

OSHAWA DISTRICT: Last Monday at 7:30 PM at the Oshawa Airport, South side, 420 Wing RCAF Assoc. Contact President: Jim Morrison ,905 434 5638 jamesmorrison190@msn.com

OWEN SOUND Contact President Roger Foster 519-923-5183 rpfoster@bmts.com

OTTAWA/RIDEAU: Kars, Ont. 1st Tuesday. Contact: Secretary, Bill Reed 613-831-8762 bill@ncf.ca

SAUGEEN: Third Saturday for breakfast at Hanover Airport.

YQG AMATEUR AVIATION GROUP (WINDSOR): Forth Monday, 7:30 pm Windsor Flying Club, Airport Road, Contact: Kris Browne e_kris_browne@hotmail.com

SCARBOROUGH/MARKHAM: Third Thursday 7:30 pm Buttonville Airport, Buttonville Flying Clubhouse. Contact Bob Stobie 416-497-2808 bstobie@pathcom.com

TORONTO: First Monday 7:30 pm at Hangar 41 on north end of Brampton Airport. Contact: President Brian Heinmiller 905-877-7947 b.j.heinmiller@sympatico.ca

TORONTO ROTORCRAFT CLUB: Meets 3rd. Friday except July, August, December and holiday weekends at 7:30 pm Etobicoke Civic Centre, 399 The West Mall (at Burnhamthorpe), Toronto. Contact Jerry Forest, Pres. 416 244-4122 or gyro_jerry@hotmail.com.

WIARTON: Bruce Peninsula Chapter #51 breakfast meetings start at 8:30am on the second Saturday of each month in the Gallery of Early CanadianFlight/Roof Top Cafe at Wiarton-Keppel Airport. As there are sometime changes, contact Brian Reis at 519-534-4090 or earlycanflight@symptico.ca

MANITOBA

BRANDON: Brandon Chapter RAA meets on the second Monday of each month at the Commonwealth Air Training Plan Museum at 7:30 PM except in the months of July and August. Contact Pres. John Robinson 204-728-1240.

WINNIPEG: Winnipeg Area Chapter: Third Thursday, 7:30 pm RAA Hangar, Lyncrest Airport or other location as arranged. Contact President Ben Toenders at 204-895-8779 or email raa@mts.net. No meetings June, July & Aug. RAA Winnipeg info also available at Springfield Flying Center website at http://www.lyncrest.org/sfcraac.html.

SASKATCHEWAN

Chapter 4901 North Saskatchewan. Meetings: Second Tuesday of the month 7:30pm Prairie Partners Aero Club Martensville, Sk. info at www.raa4901.com. Brian Caithcart is the chapter president. Contact email: president@raa4901.com.

ALBERTA

CALGARY chapter meets every 4th Monday each month with exception of holiday Mondays and July & August. Meetings from 19:00-22:00 are held at the Southern Alberta Institute of Technologies (SAIT) Training Hangar at the Calgary Airport. Join us for builder discussions, site visits, tech. tips, fly out weekends and more. Contact president Gerry Theroux 403-271-2410 grtheroux@shaw.ca

EDMONTON HOMEBUILT AIRCRAFT ASSOC: First Tuesday 7:30 pm EAHS boardroom. Contact President Bill Boyes 780-485-7088

GRANDE PRAIRIE: Third Tuesday, Chandelle Aviation Hangar, contact Jordie Carlson at 780-538-3800 work. or 780-538-3979 evenings. Email: jcarlson@telusplanet.net

BRITISH COLUMBIA

ABBOTSFORD: Third Wednesday 7:30 pm Abbotsford Flying Club, Abbotsford Airport. Contact President, John Vlake 604-820-9088 email javlakeca@yahoo.ca

DUNCAN: Second Tuesday 7 pm members homes (rotating basis). Contact Pres. Howard Rolston, 250-246-3756.

OKANAGAN VALLEY: First Thursday of every month except July and August (no meetings) at the Kelowna Yacht Club. Dinner at 6:00pm, meeting at 7:30pm Contact President, Cameron Bottrill 250-558-5551 moneypit@junction.net

QUESNEL: First Monday/Month 7:00 p.m. at Old Terminal Building, CYQZ Airport. Contact President Jerry Van Halderen 250-249-5151 email: jjwvanhalderen@shaw.ca

SUNCOAST RAA CHAPTER 580: Second Sunday 13:30 pm Sechelt Airport Clubhouse, sometimes members homes. Contact Pres. Gene Hogan, 604-886-7645

CHAPTER 85 RAA (DELTA): First Tuesday 7:30pm, Delta Heritage Airpark RAA Clubhouse. 4103-104th Street, Delta. Contact President President: Tim Nicholas vibraanalysis@shaw.biz.ca. Website http://raa85.b4.ca.

VANCOUVER ISLAND AVIATION SOCIETY (VICTORIA): Third Monday 7:30 pm Victoria Flying Club Lounge. Contact Pres. Roger Damico, 250-744-7472.

THOMPSON VALLEY SPORT AIRCRAFT CLUB: Second Thursday of the month 7:30 pm Knutsford Club, contact President - Dick Suttie Phone 250-374-6136 e-mail - richard_suttie@telus.net

ALASKA HIGHWAY: meetings held every third Thursday of every month (except July & August) at the Taylor Fire Hall at 7:30 p.m. For more information call Richard at 782-2421 or Heath at 785-4758.

Chapter executives please advise of changes as they occur. For further information regarding chapter activities contact RAA Canada, 13691 McLaughlin Rd, R R 1, Caledon, ON L7C 2B2 Telephone: 905-838-1357 Fax: 905-838-1359 or call toll free: 1-800-387-1028 email: raa@zing-net.ca www.raa.ca

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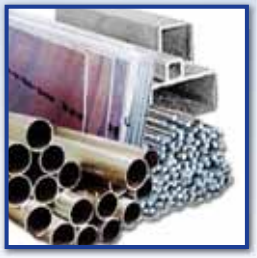
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