



# Skywriter



Monthly Newsletter of the Calgary Ultralight Flying Club

May 1999

## Fatal Crash Claims Lives of CUFC's Flying Couple

Don and Eleanor Rogers died suddenly when their Chinook II fell out of control into a field close to the Indus/Winter Airpark. The accident happened approximately 8:30 pm on Saturday, April 24. Both were dead when emergency personnel arrived at the scene.

Fred Beck had been flying along with them when he reported seeing a wing drop and the Chinook enter a spiral dive. It dropped from approximately 500 ft in seconds and crashed nose-first into a field. The cause of the accident is under investigation by the Transportation Safety Board.

The entire Calgary Ultralight community is in mourning over the loss of these two very well respected and admired pilots. Don had been flying since the early 80's and Eleanor acquired her Ultralight Permit last year. Not



*Don and Eleanor with their previous airplane- the Norseman. At Beiseker airport in January 1998. Photo by Stu Simpson*



*Don and Eleanor doing what they loved in their Chinook II. February 1999. Photo by Andy Gustafsson*

only did they fly together and attend CUFC meetings together but they did just about everything else together too. Don retired from a Captain's position with the Calgary Fire Department 1 ½ years ago and Eleanor retired from a Nursing position with the Rocky View Hospital.

Don and Eleanor will be missed very much by their many flying friends. They frequently joined in group flights to local destinations and spent many a day at the airfield hangar flying with club members.

We wish to extend our sincere sympathy to their family.

# Classified

**Wanted** - Low-time 2-stroke engine between 40 and 65 hp for newly built trike. Call Ron Linkes 250-389-0800.

**Lazair A-87** - has 3<sup>rd</sup> engine, 3/4 enclosure pod, wider landing gear, always hangered, includes enclosed trailer, \$5500. Betty Whitney 403-684-3459. (4/99)

**KR-2 Sport Plane** - 35 hr TT, 1834cc HAPI VW conversion with dual ignition, carb heat, oil cooler, cruises at 125mph, full power 155mph, registered as homebuilt. 1/2 share \$7000 including flight training and ultralight pilot permit. J.T. Hibberd 617-1831. (3/99)

**Murphy Elite Tail Section** - horizontal stab, elevator, rudder, 75% complete waiting for inspection, includes approx. 1000 clecos, \$6000. Dave Dedul, 403-823-2214. (3/99)

**Suzuki engine** - 3 cylinder, 65 HP @ 5500, with belt reduction drive 2.21:1, can be seen running, \$3000. Ken Johnson 546-2586. (3/99)

**Challenger** - Single place, 288 hr TTSN, Rotax 447 CDI, Instruments: Tack, compass, altimeter, air speed, CHT, Gas gauge, Hr meter, 12-volt power outlet, radio antenna, (GPS & mount optional), fully enclosed with cabin heat, ski package, tundra tires & reg. wheels with pants included, always hangered, at Indus, \$9,800.00. Ray at 403-274-4388, office 275-6540, cell 540-2492. (3/99)

**Rotax 447** - with carb and muffler, low time, \$2700. Chuck duff 938-6157 (3/99)

**Wanted** - Looking for a future Eureka Customer who would like to trade labour for up to 50% off Airframe Costs. Should be comfortable cutting/drilling/filing aluminum tube/channel/bar. Wilf 935-4248 (1/99)

**Mini-Max** - Rotax 447, GSC Ground adjustable prop, Full panel, always hangered, only 114 hours since new. This great flying, well known little airplane can

be seen at Transport Canada's photo album at: [www.tc.gc.ca/aviation/GENERAL/RECAVI/Pictures.htm](http://www.tc.gc.ca/aviation/GENERAL/RECAVI/Pictures.htm) Dale 293-3826, e-mail: [dacl@cybersurf.net](mailto:dacl@cybersurf.net) (10/98)

Forward ads to Bob Kirkby 569-9541.

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## Summer Flying Events

**May 9<sup>th</sup>, Sundre, AB**  
Mother's Day fly-in breakfast, 7 - 11 am, Sundre airport

**June 4<sup>th</sup> - 6<sup>th</sup> Medicine Hat, AB**  
RAA Western Convention, Medicine Hat Airport, Contact Lyle Clarkson 403-524-2407

**June 19<sup>th</sup>, Bishell Airstrip, Carstairs, AB**  
3<sup>rd</sup> annual fly-in/drive-in breakfast, 8 am - 1 pm, tie-downs and camping available, Glen Bishell 403-337-2564.

**June 13<sup>th</sup>, Hinton, AB**  
Hinton flying club fly-in breakfast and airshow, contact Jim Fry, 780-865-2159

**June 13<sup>th</sup>, Innisfail, AB**  
Annual Innisfail airport breakfast 7-11 am, contact Wilhelm Vohs, 403-728-3341

**June 13<sup>th</sup>, Beiseker, AB**  
Fly-in breakfast 7-11 am, Beiseker airport, contact Richard 403-546-3125

**July 7<sup>th</sup> to 11<sup>th</sup>, Arlington, WA**  
NW EAA Fly-in, Arlington, Wash.

**July 17<sup>th</sup>, Chestermere-Kirkby Field**  
Annual fly-in pancake breakfast, 8:00 am to 12:00 noon, for more information contact Bob Kirkby at 403-569-9541.

**July 18<sup>th</sup>, Vulcan, AB**  
Vulcan Flying Club annual fly-in breakfast, 8-11:30 am, contact Jack Deans 403-485-6484

**July 28<sup>th</sup> to Aug 3<sup>rd</sup>, Oshkosh**  
EAA Airventure, Oshkosh, Wisconsin

### Skywriter

Skywriter is the official newsletter of the Calgary Ultralight Flying Club and is published 12 times per year. Forward your articles and letters to:

**Editor:** Bob Kirkby 569-9541  
e-mail: [kirkby@telusplanet.net](mailto:kirkby@telusplanet.net)

**Assistant-editor:** Bernie Kespe (see below)

### Calgary Ultralight Flying Club

Meetings of the Calgary Ultralight Flying Club are held on the second Thursday of every month, except July and August, at 7:30 pm, at the Northeast Armoury, 1227 - 38 Avenue NE.

**President:** Wilf Stark 935-4248  
e-mail: [wstark@compuserve.com](mailto:wstark@compuserve.com)

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**Director:** Jim Creaser 226-0180  
e-mail: [creaser@cybersurf.net](mailto:creaser@cybersurf.net)

**Past President:** Ed D'Antoni 247-6621  
e-mail: [dantoni@nucleus.com](mailto:dantoni@nucleus.com)

**July 31<sup>st</sup> to Aug 1<sup>st</sup>, Red Deer**  
Red Deer Airshow, Snowbirds perform

**August 4<sup>th</sup>, Cranbrook, BC**  
Cranbrook Airshow, Snowbirds perform

If you know of an event that you would like to see listed here please contact Bob Kirkby or Bernie Kespe.

A husband suspects his wife is having an affair with a pilot but she keeps denying it until finally the husband just knew when his wife said, "Honey, I've told you once, I've told you twice, I've told you niner thousand times, negative on the affair ..."

## Across the Wing

by Wilf Stark

This has been a sad month for all of us. We have lost two good friends, whom we were far from finished with. Au revoir, Don and Eli; may there be blue skies wherever you now travel, as always, together. The grieving is finished; from now we will just remember the many, many moments of good times, kindness, and helpfulness that were always a part of you, and always touched us when we were together.

Another good friend lies in his hospital bed, impatient to get back in the air where he can feel so fine. Our thoughts are with you as well, Jack. Happily, we'll be able to at least talk about flying adventures with you, until your legs obey your body again. Ward 71, Foothills Hospital, main building, Folks, for those of you who can share a bit of time with a Friend who would rather not be there.

I've just returned from the Sun'n'Fun Airshow. My little 59-week old Pickup Truck used up the last of its warranted kilometres just outside Vegas, on the way home. How fitting! I spent all my time in the Ultralight area which was almost twice as large as last year. The polarization of interests continues, with more and more trikes and powered parachutes proliferating, from more and more countries. On the opposite end of the scale, there were plenty of very expensive aircraft aimed at all those future retirees who will not have a problem spending 30 to 40 thousand on their next recreational pursuit. However, the basic ultralight has not been forgotten. A few of the engine manufacturers are quietly preparing low-cost and lower-power engines in the under 35 hp. Range. It has not escaped their attention that distributors and dealers are asking for these engines. We'll see what the next year or so bring in affordable aircraft.

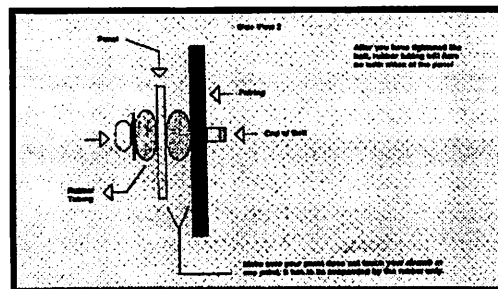
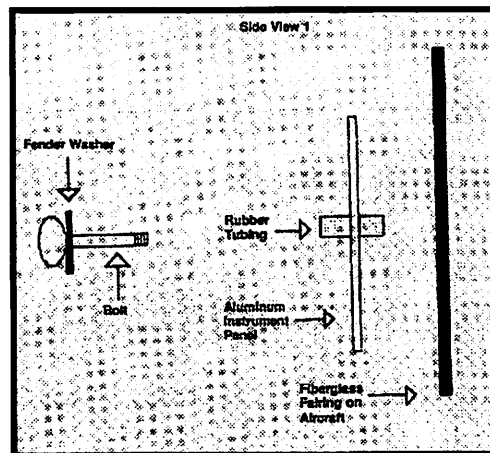
Our meeting in May will probably be of a more quiet and reflective nature. We will undoubtedly have discussion among

ourselves with a view to reaching closure on recent sad events. I ask that useless speculation not occupy any of our time. There will be many positive things to discuss. See you on the 13<sup>th</sup>. →

## Instrument Panels

Protect your instruments by mounting them correctly. Here is a simple and easy way which we have found works very well.

First of all, decide where you will be mounting your panel and the exact location of the mounting bolt holes.



Then, find a piece of rubber tubing. Neoprene products work well because it tend not to harden in the cold. Another one that works well is the tubing that you sometimes get with your fuel filters.

Cut a small piece of this tubing and enlarge the hole in your instrument panel, so you can wiggle the tubing through. Then place a fender washer on the head side of your bolt and insert the bolt through your rubber tubing. As you tighten up the bolt, it will flare out the rubber on both sides of the panel.

This will give you good isolation from the vibration that damages your precious instruments. →



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## April Meeting Highlights

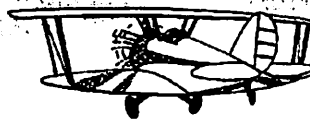
by Ed D'Antoni

Wilf Stark headed to Sun n Fun in Florida leaving the chairing of the April meeting to Stu Simpson. At the last minute Stu realized he had to work the evening of April 8 so he asked me if I would chair the meeting. My answer was of course no, but I volunteered to ensure someone chaired the meeting, hoping Wayne Winters would be available to do what he does best, namely look after the confession sessions, new projects and answer any technical questions that come up. No guest speaker had been arranged for, but we were so far behind on technical and safety issues that, in the end we would not have had time for a guest speaker.

The meeting started with the announcement Constable Stu Simpson was working and could not chair the meeting, this was greeted with loud applause. We are not sure if the applause was because Stu was out there somewhere protecting us or one of a myriad of other reasons.

Wayne Winter ran the meeting demonstrating his well known ability to get the membership personally involved. Wayne's "confession session" ran for over an hour with several members telling and reliving tales of personal errors that we can all learn from. Chuck Duff told of driving to the flying field several times only to find it too windy to fly. In frustration one day he took off into conditions that taxed his ability to the limit. He described 4 hair raising circuits that included wild vertical climbs caused by uplift from wind over a cliff and subsequent aborted landing attempts. His description of, after finally landing, jumping down and hugging the ground will come to all of our minds next time we think of going flying during questionable weather conditions. Glen Bishell recounted his story of after 200 hours in a Beaver, and then switching to his new Bushmaster how he pulled back on the stick instead of the throttle on touchdown. (the Bushmaster stick and elevator controls are opposite from those of the Beaver). Reconstruction of his Bushmaster is almost complete.

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Gord Tebbutt told of attempting a touch and go with his Beaver 550 at a local Radio Control Flying Field only to find his touch was into a foot of slush which stopped the aircraft in a few metres. There was a touch, but no go. Gord worked until midnight digging out a path in the snow for a runway. He came back in the morning to attempt a take off before the frozen ground melted into a sea of mud, only to find his wings so ice covered he could not take off.

On their way to Linden for coffee and Alberta's best pie, Fred Beck & Chuck Duff also had a deep snow experience. Fred always does a tail first touch down on landing his Norseman. A good thing in this instance as if he attempted a wheel landing he certainly would have nosed over. After a quick stop, without brakes, they were unable to even taxi so Fred and Chuck walked to the restaurant for their morning snack. After coffee they talked a passerby in a 4 X 4 into towing their aircraft to the highway. A couple of other coffee shop inhabitants stopped traffic along a stretch of the highway while another gentleman took bets. We are not sure of the bookmakers odds, but the winners were the ones betting on a successful take off.

The confession session was followed by a short break and door prize raffle. The prize, a clock mounted in a beautifully refinished wood propeller by Kim Skulsky was won by Ron Ribit. The limited number of tickets available for the June iCOM A4 transceiver were sold out in a few minutes.

More tickets will be available at the next meeting. After the break, Wayne chaired a technical question/answer session. Several members spoke of what appeared to be carb icing problems. Wayne reminded us that ice forming in the bowl below the needle valve is actually sucked up to the jet causing it to plug. In below freezing temperatures one should always remove and empty the carburetor sediment bowl before flying.

A few new projects underway are Fred Wright and his 2 + 2 Chinook, Wayne Winters twin engine Easy Flier is almost ready to go, and Jim Creasser indicated Wilf Stark is now delivering two Eureka's. Jim stated the aircraft are being delivered with the understanding they will not be flown by the owners until Wilf has completed all of the test flying in his own Eureka.

After the meeting almost all of the 60 + members and guests stayed to watch the Ultralight video from the Outdoor Life Channel's, Wings series.

The fact the meeting lasted past 10:30 and then everyone hung around for the video confirmed and showed appreciation of Wayne's ability to simply chair the get together and have the members carry the meeting.

Thanks Wayne. →

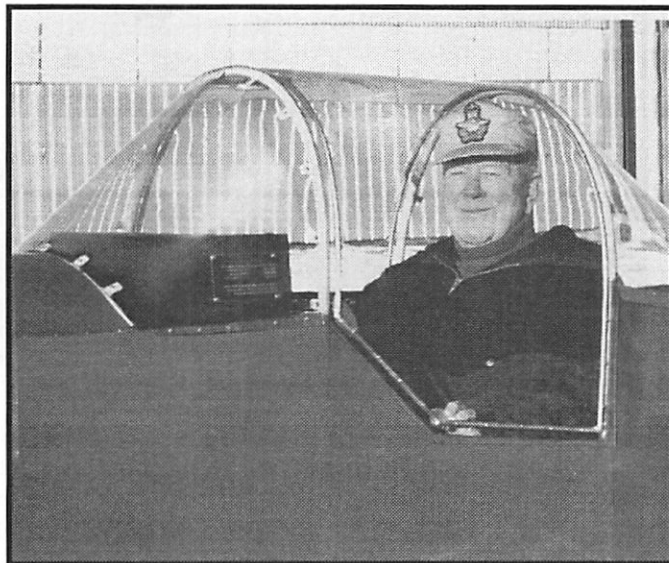
## Turner Valley Accident

On April xx, Jack Barlass and Winston Brown were flying together in Jack's E-Z Flyer. During a landing attempt at Turner Valley something went wrong and the E-Z Flyer impacted a stand of trees. Jack sustained significant leg injuries and is in Foothills Hospital undergoing repairs. Winston was not injured. Although it will be months before Jack is getting around on his own again, he is in good spirits and looking forward to getting back in the air.

The following is Winston's report on the experience:

*After an excellent flight to Turner Valley, everything turned sour at about 2 to 4 feet from what appeared to be a textbook landing. The left wing dipped and the bottom fell out from under us. We hit hard on the left landing gear then bounced on to the right gear, then on all three. At this point I noticed the plane was being sucked to the left and off the runway. Jack had already applied full power. It seemed as though we got*

*airborne, because we went off a small dip and came back to the ground quite hard. The next thing I could see was the trees coming at us. We then made contact with the trees and came to a sudden stop. This series of events took about 5 to 10 seconds. Jack Barlass was airlifted by Stars ambulance to the Foothills Hospital with*

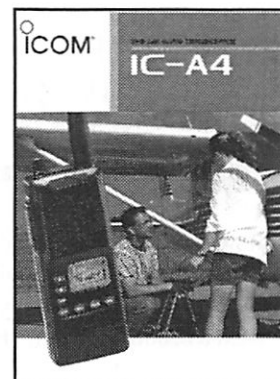


Jack Barlass in his King Cobra. Photo by Graham Millington

*severe injuries on both legs and spent seven hours in the operating room. Jack is in unit 71, room 722 and is well enough for visitors. As for myself, there is something to say about being the back seat driver. All I received from this accident was a few good size bruises, a couple of scratches and a little whiplash. →*

## June Raffle

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This raffle is available to MEMBERS ONLY. Tickets are 3 for \$10.00 or 1 for \$5.00. and money must be received no later than Thursday June 10th, 1999. Draw to be held at the June 10th meeting. Good luck!

Send cheque or money order payable to: Calgary Ultralight Flying Club  
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## FLIGHT OF THE SHADOW DANCERS

by Stu Simpson

It was as close to perfection as I'd ever seen. Our two ultralight planes floated along in a rare harmony that could have been a beautiful dream. Except this reality was much better.

It was an early September evening as Don in his Chinook, and me in my Beaver, made our way gently southward toward the Bow River. The air was warm and velvety, offering a faint breeze to any and all creatures of the sky. Below us, the summer was making a final, gallant stand against the inevitable autumn and the landscape seemed caught in the middle. Acre after acre of harvested grain fields were quilted together, glowing in the golden sunlight.

Don led the way. I placed my ship off his right wing in an easy echelon formation. Both our planes are yellow with blue trim and the early evening sun seemed to give each plane its own halo.

Neither of us carried a radio, meaning there was nothing to distract us from the pure, simple magic of flying.

I looked down to my left and watched our shadows dart and flit over the earth. They too kept perfect formation with one another as they raced along, occasionally assuming some distorted shape while passing over a ditch or a building.

Every now and then I would see the Chinook's control surfaces move just a little and the plane would go exactly to where Don wanted it to be.

I was overwhelmed with delight. No one who has been there, in a faultless sky, with a trusted wingman, comes away from the moment untouched.

A few minutes later we had reached the Bow. The Chinook dropped its nose and began a steady descent toward another,



*Don Rogers' Chinook over the Bow Valley.*

*Photo by Stu Simpson*

adjoining river valley, the Highwood. My Beaver followed obediently.

We felt a few bumps in the air as the wind wiggled its way over and around and through the valley. We passed over a campground with trailers and tents. Campers and fishermen stopped what they were doing and gazed up at those glowing airplanes. The people exclaimed to each other that it sure looked like fun and that they sure wouldn't mind trying it. Only a few announced, "You'd never get me up in one of those crates!" And for a few seconds, for better or worse (mostly better), we had an audience of a few dozen fascinated souls.

While the flatlands above the river were starting to look like fall, the Highwood Valley was still firmly entrenched in summer. The trees still held their deep green shades. The grassy meadows looked luxurious, calling out to any person who wanted to run through them, inviting any airplane to land in them. Though tempted, we politely declined and flew on.

Once away from the campground, we flew even lower, the Chinook still out front and me right behind. We continued to explore the valley, finding surprises like a twin Cessna, an old railway bed and a herd of cows that simply ignored us.

I pushed my throttle lever and moved the stick to the left. A second or two later I pulled along Don's left wing. I waved to him "Follow me". I pulled the nose up and banked away from him, heading for the flats above the valley.

We left the valley behind and crossed the top of the cliffs with twenty feet to spare. I pushed over and headed earthward again. What I had in mind was some nap-of-the-earth flying. That's where an airplane buzzes along only a few feet above the terrain following the exact contours of the ground.

The whole world zipped along just inches below us, our shadows now near and large. My adrenaline surged. It's such a paradox flying that close to the earth, because it magnifies the separation from it and gives a pilot the purest sensation of flight. A slight tug on the control stick, and the airplane is bound for the heavens. A tiny push to the left or right, and you go there too. It is simply the ultimate freedom.

I looked over my right shoulder and watched Don a few feet away. I could see a huge grin on his face. I turned forward and noticed a grove of trees a few hundred metres ahead. I dropped even lower. 75  
*(continued on page 7)*

*Dancers - continued from page 6*

mph of airspeed ate up the distance quickly and I pulled the nose up, missing the tallest tree with just enough daylight between us. I looked back and watched Don do the same.

We nosed back over together and continued on, making shallow turns here and there and climbing slightly to clear any barbed-wire fences.

Then I spotted some familiar shapes on the ground ahead. It was a small herd of deer. I looked over to Don and pointed. He gave me a thumbs up indicated he'd spotted the deer also.

The leader of the herd was a huge five-point buck. He wasn't even afraid of us. He just looked up, kind of curious I suppose, but he didn't move. We wheeled around and made another pass just to see watch him a bit longer. This time the animals seemed a little nervous and jogged a few meters as we neared. We decided to let them get back to their dinner and continued on back toward the Bow.

That's when it happened. Don had just finished buzzing a row of small trees and bushes. He banked left, well in front of me. I turned left also to stay with him. I watched in utter amazement as our two shadows lined up and overlapped. They

stayed that way for several seconds, moving with each other in a way that looked like they were dancing. It was a beautiful, unforgettable, image as the sun and two airplanes - our airplanes - aligned in a manner so rare.

We passed by some farmers next. They were in a field with a truck and a tractor. We waved happily as we whistled by and they waved back.

We crossed the river again and just continued to make the most of the evening's unusual magic. We started chasing each other around, getting on one another's 'six' until something else distracted us. Then we'd zoom down to see what it was. We saw some more deer and even a coyote. We followed the shape of the earth from five feet up and we hopped over fences and trees and power lines. We watched as the sun sank lower too, telling the world to get ready for bed. Life just doesn't get much better.

But we were quickly losing our daylight. I followed Don as he reluctantly turned for Indus airport, his home-drome.

We pulled up and entered the circuit and made a pair of greaser landings. Nothing was going to spoil this flight.

We taxied over to Don's hangar and shut down. We talked excitedly for a few

minutes about the things we'd seen and how much fun it all was. I happened to notice that Don had a permanent smile tacked onto his face. I noticed I did too.

We soon ran out of things to discuss about the flight, so I saddled up again and took off for home.

I felt like Don and I had been granted the keys to a magic kingdom that day. A place where only the lucky and the skillful get to go. And even though we were only allowed a short visit, I knew we had certainly made the most of it. I wonder what our next visit will be like.

*Editor - This story first ran in Skywriter in 1992.*

## An Alberta Air Adventure Tour


CUFC member Stu Simpson is organizing a cross-country trip to Canadian Forces Base Cold Lake this coming summer. The trip will start on either Sunday, June 27th or Monday June 28th with a direct flight to Cold Lake. On Tuesday the 29th there is a tour scheduled of the base.

After Cold Lake, we'll head east to St. Paul and hopefully tour the ASAP factory, where Beavers and Chinooks are made. Then it'll be on to St. Albert and hopefully some time with the St. Albert Flying Club. The SAFC is the equivalent of the Calgary Ultralight Flying Club.

After St. Albert, we'll head south to Wetaskiwin to tour the Reynolds Aviation Museum. The last leg of the trip will be south to Red Deer then along the Red Deer River Valley to view its spectacular scenery. We'll follow the river to Drumheller and then turn southwest back to Calgary.

Anyone who is interested in going along as either flight crew or ground crew please contact Stu Simpson at 255-6998 or e-mail at [simpsonst@cadvision.com](mailto:simpsonst@cadvision.com)

This trip could be the flying event of the year! →



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## Turbines For Homebuilts

by Brian Vasseur

In the past few months I've been searching for my next project and decided to try and design something myself. My idea originally was a canard style aircraft with a ducted fan. Something that looked Jet-like but could be registered as an ultralight. I started looking at ducted fans on the internet and found a lot of articles on ducted fans for RC Models, most of which also had articles on turbine engines for these models as well. With stars in my eyes I began dreaming of a jet ultralight, something to make me the envy of the neighborhood.

A turbine engine is actually quite simple. It has only one moving part and only a few components. Air is sucked into the intake and compressed with a compressor wheel, much like you find in a turbocharger. This pressurized air is split with some going to the combustion chamber to be mixed with fuel, the rest passing thru the center of the engine to cool the bearings. The hot air from the combustion chamber passes thru the turbine causing it to spin and passing hot gas out the back. Some thrust comes from the hot gas passing thru the turbine,

the rest from the centre of the engine that was used to cool the bearings. The Compressor and turbine are fixed onto each end of a shaft within the engine, as the air passes thru the turbine it spins the compressor which pulls in more air, mixes with fuel, and back thru the turbine again. About half the power generated by the turbine wheel is lost to the compressor to pump in more air, a lot of it. The more air you can move thru the more fuel you can mix and the more power you produce. Power is basically limited by how hot the burning fuel gets, as long as you can push air thru to cool the engine you can keep adding power.

What I found for RC articles on the web was sites offering ready to fly engines, and a lot of sites on how to manufacture your own. Surprisingly it's not really difficult to build a turbine engine with a lot of off the shelf turbocharger components and a little welding. Unfortunately these engines didn't put out more than 40 pounds of thrust which is just a bit too small even for a multi engine combo. Of these engines the larger ones ran on kerosene or diesel, the smaller ones ran on propane. Early on though I found some major disadvantages about turbine engines in general. First, these engines are complicated to start, use a lot of fuel, and are sensitive about fuel flow. If you add fuel too quickly the engine overheats and the turbine blades

melt. If you remove power too slowly the engine starves until the compressor slows down and you run the risk of a flameout. The other problem is that these engines run upwards of 100,000 RPM and can do a lot of damage if you abuse them and they come apart.

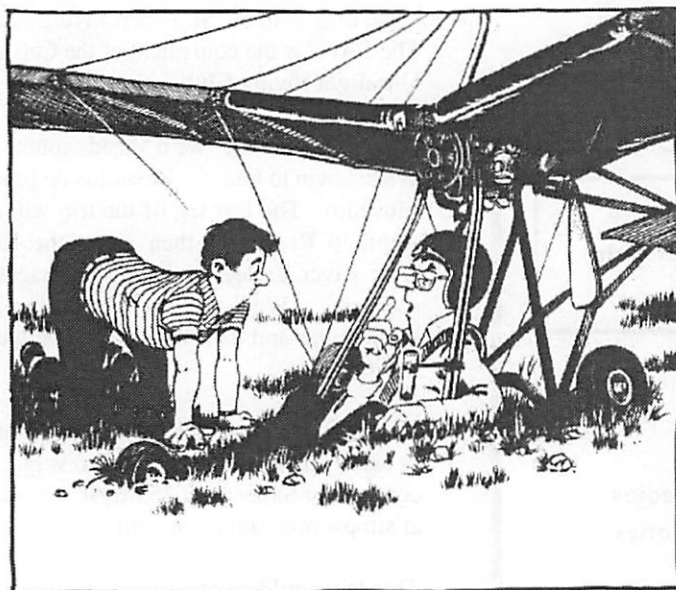
Still, liking the smell of Jet A coming from MY airplane I decide to look for turboprop engines. Basically the engine is the same except the shaft with the turbine and

compressor also has a redrive on it. This looked more promising because the thrust from the propellor was more effective than just jet thrust so I could look at an engine of reasonable size. There are two classes of turboshaft engines suitable to aircraft, the first are APU's (Auxiliary Power Units) found on the bigger jets and then the turboprop engines found on production aircraft. The APU's run from 30 up to 160 horsepower, the smallest turbine is 250 hp, and the next size after that is 600. I decide to focus on APU's under 100 hp to see what might be possible. From the handful of sources who can actually supply these items the Garrett JFS100 was the most popular. I found the price of the 90hp JFS100 to be about \$3500 US for a mid-time engine (about 1000 hours I think). Other model higher time engines can be found as low as \$1200 from time to time but you better be prepared to buy today because they don't last. I wasn't able to find any sites that had actually installed one of these in an airplane, however Joe Rinke has installed a similar Solar T62 in a Mini500 helicopter. CAM engines in Vancouver has produced a prop drive for the JFS100 but won't give me a price unless I commit to buy an engine from a certain supplier. I won't commit to buying anything unless I know the total price. I decided to wait.

Doing more research on the JFS100 engine as the most suitable candidate I was able to find the following information.

1. Fuel consumption is listed as 1.3 pounds/hp/hour for pretty much any size of turbine engine. At the full 90 horsepower this equates to about 120 pounds/hour of JetA which is about 20 gals/hour. The current price of JetA in Calgary is \$0.80/litre so this works out to over \$60/hour. Even at lower throttle settings this is still over \$40/hour just for fuel. Imagine what a 1000 horsepower PT-6 costs to run.

2. At 15-20 gallons/hour you'd have to allow for 200 pounds of fuel in your airplane to have something you could actually fly somewhere. Linden and Carstairs aren't likely places to find JetA, and even though you could use diesel  
*(continued on page 9)*



**NEW BIFOCALS!**



you'd have to make a few trips with a jerry can.

3. Turbine engines aren't really happy unless they're running at full RPM. You can lower the pitch on the prop and cut back on the fuel maintaining the RPM but you now have the added complexity of playing with the prop and throttle together to find the right combination. Remember, if you make prop or throttle adjustments too quickly or in the wrong combination you'll burn out the engine or flame out the

engine.

4. You can't make quick power adjustments with a turbine engine. If you're having to abort your landing you won't be able to add power quickly, expect 3 seconds from idle to full power. Three seconds is a long time when you're at 50 feet and low airspeed.

5. Parts for these engines are horribly expensive even if you have the tools to do the maintenance yourself. A new, out of the box JFS100 is about \$100K US so any part you buy will probably cost more than

what you paid for the engine. If you do get it fixed you'll also have to ship it to the states as nobody in Canada wants to service them. On a bigger airplane like a Glasair the numbers look more promising and things are a bit more feasible, but for an ultralight the inconvenience and problems seem to outweigh the "Cool Factor". So for now it's back to Plan "A" and research ducted fans to see what the possibilities are.

Visit Brian's Web site at:  
<http://www.cadvision.com/vasseurb>

## TECH TIP

Possibilities for picking up a knot or two.

To learn practical tricks for drag reduction, take a close look at high performance sailplanes. These planes fly with no power, so drag reduction plays a key factor in the planes performance. One common practice is sealing all control surface gaps. This not only reduces drag but also contributes to better control response.

One common method of drag reduction is illustrated in Fig 1. The gap seal is a thin plastic/aluminum strip with a slight arc. I find that a Venetian blind slat works very well and is available at most factory

outlets, usually free from their scrap bins and you might even find a matching color. This strip is now attached to the fixed surface side of the gap using double sided adhesive tape found at your local hardware store.

Placing this gap seal on the under side of the aileron may cause the stick forces to increase. The slip stream will tend to force the gap seal to hug tight against the aileron, but for many of the slower ultralights this should not be an issue.

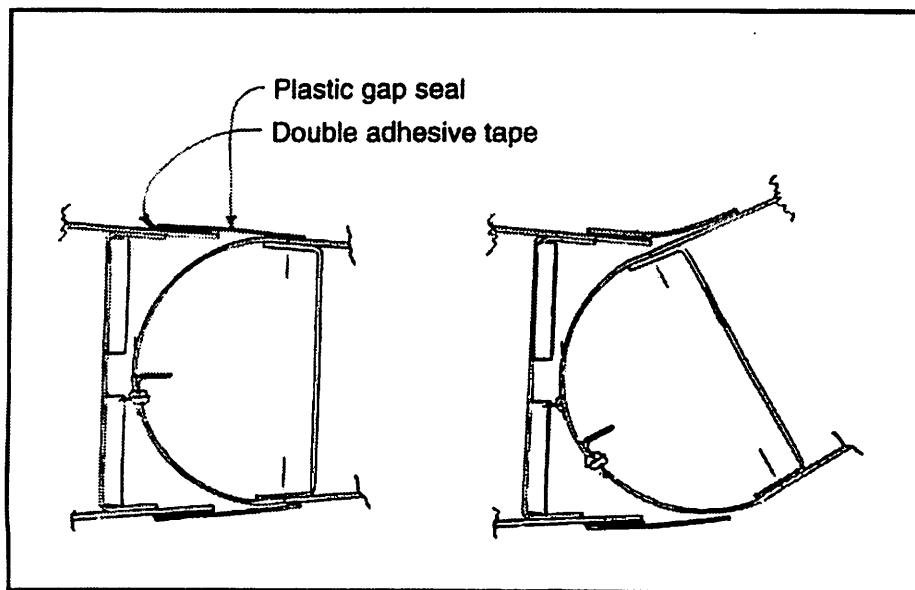
Many sailplanes have ailerons and flaps which must be sealed over the entire span. This can be 50 feet or more. Coupled with the lengths of gaps of the elevator and rudder, it has a noticeable effect on an already clean airframe.

## LARON AVIATION TECHNOLOGIES SOLD

Laron Aviation Technologies' H.B. Wise has sold his company's assets. New owners president Gary Dalrymple and vice president Stephen Johnson plan to build the CFM Shadow and Wizard lines of 2-seat microlights at their Webster, Texas facility, and are in the process of selling the 2-seat Tundra manufacturing rights, which Laron Aviation also held.

A senior engineer at NASA's Johnson Space Center, Dalrymple took on the company "because the Shadow is a fantastic airplane," he explains. "The Shadow is a well - designed with an immaculate safety record." In addition to manufacturing Shadow and Wizard kits, Dalrymple says they will "provide advise and for the first year sell(Shadow and Wizard) parts at 10% above cost to existing Laron Aviation customers who were short of parts from their original purchase. "And we're currently negotiating with CFM Aircraft in England for mutual technology transfer and future developments," Dalrymple continues. "We're lucky to be where we are, as all our subcontractors are NASA-qualified and use the latest technology."

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# Life Is Risky Business

contributed by Linda Beck

"To trust in the law of good is to constantly believe that we are surrounded by a Power which will cast all fears from our minds, free us from all bondage, and set us safe and satisfied in a new order of living."

Ernest Holmes

One of the prime motives that moves us all into action is the desire for security. We seek security in our finances, relationships, work and health. This is both natural and healthy; however, outer security alone is not the answer to enduring happiness or to a worthwhile and meaningful life. Living fully also demands risk. To grow, we must be willing to risk what we have gained up until now and to invest our energy and resources in new ways and means of prospering.

To love someone new or to reach out to someone we have known for years in a new way is to risk the possibility of rejection. To succeed both internally, within ourselves, and externally, in the world, our work requires that we constantly try new ideas and approaches and risk the possibility of failure. To live a creative and rewarding life, we must risk the possibility of

injury to our bodies through participation in activities of daily living that may have a potential for physical harm. To be fully ourselves, to be completely alive, we must participate fully in life, not letting any fear limit us from entering into those relationships and situations that attract us.

As we contemplate the risks we take each day, it is essential to remember that the Law of Cause and Effect governs all our activities. Spiritually, there is no such thing as an "accident" or a random occurrence. We are the sole authors of our every experience. This does not mean that there is never any risk in various areas of our activity; it means that we are not dealing with capricious forces that govern our experience. We are dealing with the one universal Principle that returns to us what we put into it. We can use this Principle to demonstrate both greater aliveness and security, whether we are taking an apparent risk by jumping out of an airplane, changing jobs, committing to a relationship or driving to the store.

This month, I invite you to set aside a little time each day to contemplate what the next step in growth might be in the various areas of your inner and outer life. Know that the full Presence and Power of God is within you and all around you, supporting you in demonstrating your limitless potential.

Dr. James Golden



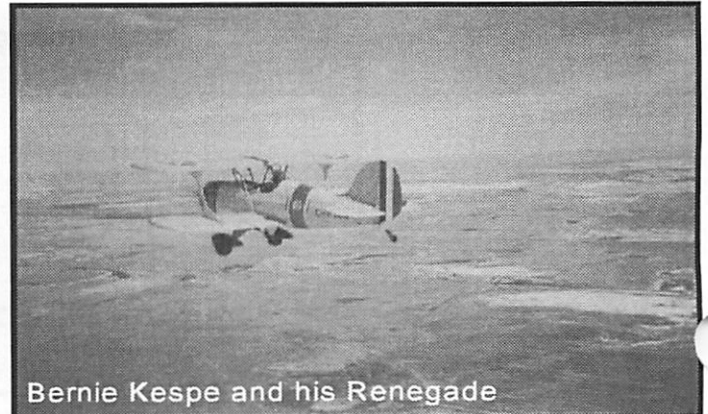
Fred Beck and his Bushmaster



Chuck Duff and his Sorrell Hyperlight



Don Usher and his Mini Max



Bernie Kespe and his Renegade