



Skywriter



Monthly Newsletter of the Calgary Ultralight Flying Club

January 1998

President's Message

by Ed D'Antoni

The second Thursday of the month falls on the 8th. Being short of time forces me to write this on New Year's Day, a good day to reflect on 1997's activities. Strong Club participation in a number of aviation events demonstrated the ultralight communities' importance in grass roots aviation. There were a number of events and fly-in breakfasts where only one or two certified aircraft showed up, the rest being ultralights or very light homebuilts. The best part about 1997 is that we are here, there were a few flying incidents, but no injury accidents in 1997.

Our meeting place was in turmoil throughout 1997. The closing of the local RCAFC wing left us without a permanent home. Our move to the War Museum resulted in very poor meeting attendance. A subsequent move to the aviation museum resulted in meeting attendances averaging 60 to 70. The location and setting are excellent, however, set up and tear down of the meeting area is cumbersome, and no refreshments are available. Guest speakers find it a difficult area in which to make presentations. We are working with the Museum Society towards the construction of a meeting area.

Our December meeting was held in

conjunction with the RAA at the NE Armoury. Both Clubs felt this to be an excellent meeting place, and are considering it as a permanent meeting location. The decision of course rests with the members at large. A suggestion has been made that both clubs meet at the NE Armoury on the same evening, but in separate areas. We could then get together after the guest speaker's presentation, or share guest speakers.

The Ultralight Passenger Carrying Proposal is again rearing it's head. The Canadian Owners and Pilots Association (COPA) and the Ultralight Pilots Association of Canada (UPAC) and some Transport Canada officials recently met to discuss the Canadian ultralight scene. It appears UPAC is now willing to accept TC's original suggestions, thus permitting the initiative of allowing passenger carrying to proceed. Further discussion of Passenger carrying privileges are provided elsewhere in this newsletter.

I have arranged to have COPA Western Director Ken McNeil as our February guest speaker. He will speak on the effect the new Air Navigation authority, Nav Canada, will have on us. Ken will be able to answer questions on licence fee increases and new user fee possibilities and probabilities.

Have a Happy and Safe New Year.

Cheers!

New Sport Aircraft Engines

by Gerry Moore

Rumors of new engines can either be answers to our prayers or just the devil incarnate. I recently contacted ASAP for background on their COPA ad outlining new engines. I've included some basic specifications on these engines along with some of ASAP's comments for your assessment.

New Honda Four Stroke Engine

This new entry is made by Honda which is a premiere manufacturer with millions of engines on the road. It is a two cylinder four stroke engine called the HKS-700E Sport Aircraft Engine. It features air cooled cylinders and oil cooled heads, DCIDI, four valves per cylinder, electric start, and stainless exhaust. Weighing in at a total of 116 lb., it puts out 60 hp @6200 rpm with an initial TBO of 500 hours. These engines are factory tested and broken in for 1.5 hours. Surprisingly, Honda has identified this engine as a 'Sport Aircraft Engine' where other manufacturers play the game of selling into the aircraft market but denying their engines are for aviation use.

Comments Brent from ASAP, "I have been following and watching the progress of the HKS 4 stroke for close to 3 years. I know that for the last 1 1/2 years they have been
(continued on page 2)

...flying in Japan in the Murphy Mavericks. The Japan company is very concerned about the liability situation in North America and more importantly in the USA.

The HKS is manufactured by the Honda racing division called HKS, you will note on some of the grand prix cars HKS is on the side of them. Initially there were only 10 shipped into North America with ASAP being one of the ten to receive one. We have been set up thus far as the Canadian distributor and may also handle some of the NW states.

Our intention is to mount it on a Chinook Plus two. Due to the engine not being able to be run in the inverted position, like the two strokes, we are currently changing some components on the engine so that we can get the dimension of the engine to accommodate our engine location. If that does not work we will have to mount the engine on top like every other top root tube engine installation. Initially review of the engine is the machine and finishing look extremely well.



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We have physically weighed the engine and it weighs 108.5 lb. without the muffler, because it has been back-ordered. So their claimed weight of 116 lb. is going to be right. I know the 582 ready to be mounted on our Chinook weighs 127lbs. The price is around \$6400 US plus \$500.00 CDN freight."

New 2SI 2 Strokes Engines

On the two stroke engine scene, a company called 2 Stroke International (2SI) is competing with a 45 hp (6750 rpm) 69 lb. engine, and two 70 hp engines. One of these engines has three cylinders with 70 hp @ 6250 rpm, 100 ft.-lb. torque @6000 rpm, weighing 89 lb. The other has two cylinders with 70 hp @ 7000 rpm, 52 ft.-lb. torque at 7000 rpm, weighing 90 lb. Oddly, this later engine was advertised as the 'torque monster', while the other three cylinder version was the only engine labeled with the word 'Aircraft' in its name.

Again, commenting on these engines, ASAP adds: "The 2SI engines are coming in anywhere from 1/2 to 2/3 the price of the Rotax ones, but they have a lot of growing pains right now that we are currently working through. We are also implementing a test program for about three of their engines. Some will go on our planes but first they will go on our test stands for evaluation and pull test

comparison. The Rotax 503 and 582 are still the main engines of choice for our customers."


Commentary

The word 'desperation' comes to mind when I survey sport pilot attitudes towards today's light engines. Price and reliability, especially the latter, are justifiable areas of concern for many pilots. Lets see what these new entries offer as solutions to these issues.

The HKS at \$6400US is priced at \$150/hp, right in between the Rotax 912 which is priced at \$170/hp, and a fully configured 582 at about \$150/hp. Importantly, you must then consider the cost per hour to maintain either engine. For example, the 912 overhaul will cost around \$4/hr (\$7000/1800hr.), a 503/582 about \$6.50/hr (\$2000/300hr.), while we don't yet have numbers for the HKS.

The two strokes were thought to be 'cheap' for pilots who flew, say, 40 - 50 hours a year. However, the accumulated hourly maintenance cost is 50% higher than four strokes because of the short TBO, and accordingly, the residual value at resale is very low.

If you overhauled the HKS at 600 hours, a single 300 hour 582 overhaul at \$2000 would put you well over the cost of the four stroke HKS. Who would buy a



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Skywriter is the official publication of the Calgary Ultralight Flying Club and is published 12 times per year. Opinions expressed by our writers are not necessarily those of the club. Articles and letters to the editor are very welcome from any readers. Address correspondence to: Bob Kirkby, Box 16, Site 20, Calgary, AB T2P 2G7 or Fax: 403-291-1112 or e-mail: kirkby@accinc.ab.ca.

Meetings are held on the second Thursday of every month, 7:30 pm, at the:

Calgary Aerospace Museum
4629 McCall Way N.E.
Calgary, Alberta

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New Engines - continued from page 2

reliability challenged two stroke that cost the same or more than a Honda four stroke of the same power and weight?

HKS could be the engine from hell for Rotax. The HKS represents the first major manufacturer to enter this marketplace, bringing along a vast support network, pricing flexibility, and advanced technology. If the HKS product line expands and the TBO increases to the 912 levels, both fair assumptions; we have the potential to solve a serious problem which currently limits the credibility and growth of ultralight flying.

On the other hand, price seems the only strategy at 2SI given that Rotax has probably taken two stroke reliability as far

as we can afford. But is price enough to keep the sport pilot flying two strokes? If 2SIs were really cheap, as in the early days of ultralights, it might be worth it. 2SI needs to be at least as reliable as Rotax yet maintain a very significant price advantage to make it worth our consideration.

The track record of new engines has, unfortunately, been spotty. Reflecting on one such engine, Brent from ASAP comments " We recently sold a few 2706 Hirths that some of our US customers wanted. I personally flew off 5 hours in one and was pleasantly surprised and impressed. It was a very clean installation. As discussed, I think the Hirth got a bad rap with the belt drive set-up. Their gear drive works well."

The Subaru conversions have been both good and bad depending on the

manufacturer and complexity of reduction and fuel systems. Given its weight, the Subaru is attractive for larger aircraft when using the more powerful 160+ hp 2200cc engine, which is the focus of manufacturers.

Have you noticed the state of our sport lately. We realistically have to spend \$25K - \$35K for new aircraft that still are powered by inferior two stroke engines. Fine enough at \$5K - \$10K, but not at these prices. Our airframes have become very reliable but not our engines. While I doubt that we will ever see low prices again, we had better see much better engine reliability for our money if ultralight flying has any hope of continuing to grow. Stay tuned as ASAP gains more experience with these new engines. Meanwhile, keep praying.

Affordable Aircraft

by Andy Gustoffson

At almost every meeting we are introduced to new and exited Ultralight pilots. They have dreams of owning and flying their own Ultralights. A lot of what is being advertised and offered in ads are priced beyond the common person's wallet. I speak to many pilots that say they can never get their own unless "Lady Luck" strikes in the lottery. Most of us overlook the world of 'Wood and Fabric' aircraft. They all have a common denominator in that they are all priced low and are as airworthy or better than their metal counterparts. We ultra-lighters all have 'affordable' and 'flying by the seat of our pants' as our main interests. As passenger carrying is not really the issue here, we can stick to single seat enclosed or open aircraft. There are an abundance of different makes and models out there and there must be something that catches your fancy, whether it's a high-wing, mid or low-wing or a bi-plane. I have seen T.E.A.M. Hi-Max'es, Mini-Max'es, Fisher Flying Products and Fisher Aero Corp's to name the most popular. These planes all fly great. There is also a new Ultralight

built from wood and pre-painted aluminum sheetmetal to be manufactured in Irricana, Alberta that looks promising. They all look great. Look around and ask around, maybe you can pick one up that's already built if you don't want to build your own. You can choose from plans-built or buy a kit. The kit, of course, is a straight forward assembling process of pre-manufactured parts and not too complicated. Plans-built takes a little more effort as you have to gather the materials and manufacture the parts that are described in the plans. This

takes a little longer. I know of people that have never done any wood work in their life and yet, they have succeeded in creating their dream aircraft. If you get lost in the building process and need local help, you have the experience of our flying club available. The know-how in our club is fantastic. To get some more insight in to the fine art of wood and fabric aircraft, you can read the article that I found at the T.E.A.M homepage on the Internet. It is called " Building Wood and Fabric Aircraft" and is well worth reading.



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MOTAVIA'S ULTRATEC

60 & 80 hp 4 Stroke Engines

by Peter Jackson
Compiled by Bernie Kespe

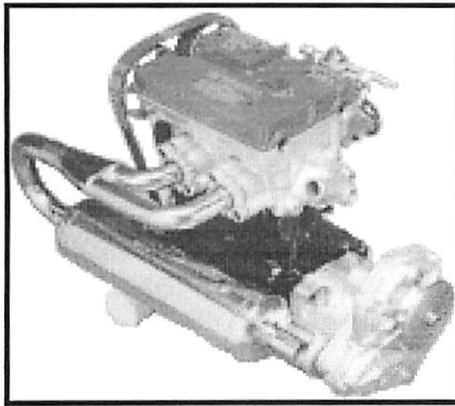
The Ultratec 4 stroke engine is currently being tested to standards beyond those that are required for JAR 22 certification and will be available as a production engine from April 1997. Manufactured and assembled in the UK it offers an affordable alternative to the two stroke engines that currently dominate ultralighting.

Modern design concepts from the automotive industry have replaced the 1950's technology of two strokes giving significantly increased reliability and economy. Features you would take for granted in your car have for the first time been incorporated into an Ultralight engine, and with a powder coated finish the quality literally shines through.

The engine comes fully inclusive of gearbox, electric starter, stainless steel silencer, fuel pump, radiator and regulator. The only decision you need to make is whether to specify the 60 or 80 hp version. Even then a simple change to the Engine Management Unit is all that is needed to upgrade the 60 hp version so when you

need more power you don't have to look for a new engine.

One extra you can choose is our comprehensive instrumentation package which uses data captured by the Engine Management Unit to display key engine operating parameters including a user friendly analog rev counter. You won't be able to see the clever bits which prevent the engine from being overrevved before it is warmed up and which progressively cut down the revs if it is running too hot. However you will appreciate the fact this entitles you to an extended 2 year warranty.



Ultratec 4 stroke 85hp engine

The Ultratec sets new standards for Ultralight engines in addition to providing 4 stroke reliability. Altitude compensation gives enhanced performance and better economy. Longer service intervals means low maintenance

costs. Plus the majority of consumable components are standard Ford parts so a world-wide spares network is already in place.

We have paid attention to detail throughout the design with the result that the engine has a particularly smooth operating performance. The pistons and connecting rods have been balanced to within 0.5 gms, the counterweight crankshaft has been balanced to within 25gm/cm and a machined balanced shaft has been incorporated to remove primary and secondary forces. Another thoughtful touch is that we have made the engine mountings bolt compatible with existing ultralight frames to make installation as painless as possible. What's more you won't need to change your propeller as our engine spins the same way as existing two strokes.

Technical Specification

All dimensions shown are in millimetres. Maximum overall width including exhaust, silencer and air filter 520mm. Specification and details are subject to change.

Twin cylinder, 4 stroke, liquid cooled, DOHC, 4 valve per cylinder, twin spark, fuel injection dry sump

Performance: 80 hp at 6500 rpm
Torque: 80 Nm (58 ft.lbs) at 5500 rpm
Fuel consumption: 6 litres per hour

Fuel: Unleaded

Bore: 89.5 mm

Stroke: 67.5 mm

Displacement: 849.0 cc

Compression ratio: 9.2: 1

Castings: L99 aluminium alloy

Weight: 55 kg incl. exhaust, gearbox, electric starter, oil pumps, oil tank and radiator

Ignition timing: Digitally mapped

DC output: 13.8 volts / 17 amps

Cooling liquid: 80% BASF Anti-freeze / 20% Water

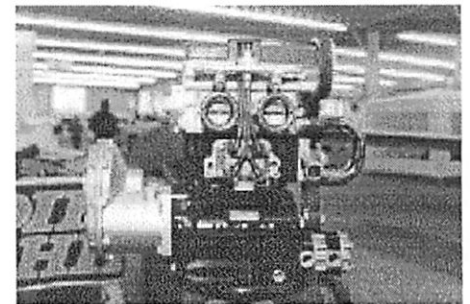
Oil capacity: 2.5 litres SAE 10W - 30

Spark plugs: NGK platinum tipped

Exhaust system: Stainless steel throughout

Reduction drive: 1:/ 2/62 - 3.55 (8 ratios available)

Price: \$7395. US



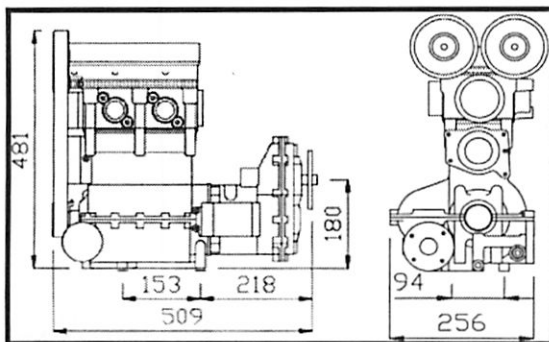
For more information contact Motavia USA in Port Angeles, WA at:

Tel: 360-452-0117

e-mail: motavia@olyphen.com

Web site: www.slopilot.com/motavia_usa/

Or contact Motavia in the UK at:
info@motavia.com



Member Profile

by Wilf Stark

The manufacturers of the Challenger line of airplanes have sold over 1000 of their fine craft the world over. This month's Profile Member is a proud owner of one of them, a Challenger II.

Andy Gustaffson got his first itch as a 10-year old in his native Sweden, when his father bought an intro ride for the two of them in a Seabee. This itch was finally scratched properly in October of '88 when Andy took UL lessons from Don Richter. He had started with conventional lessons in Springbank the prior year, but got turned off thoroughly, when his medical was lost for one full year, somewhere between Springbank and Edmonton. He had heard about the UL activities at Indus, and found his niche.

Soloing in May of '89, he received his PPL-UL in September of that year, and rented planes, while continuing to look for the project that might satisfy him.

Andy joined the CUFC in Jan. '93, and later that year finally decided to order a Challenger. Their excellent safety

record coupled with a very high completion rate, and many, many flying, were the main selling points for Andy.

His kit arrived in Jan. '94, and his 3-car garage now became garage and building facility. His job as a heavy equipment operator obviously gave him the gusto to get at it and stay with it : he flew it on Aug. 20th of that year.

In the 3 years since, he has logged over 135 very satisfying hours. After two Calgary winters wishing he was flying, Andy decided to fashion his own skis for the Challenger, which greatly extended his '96-'97 flying season. Coupled with the heavy-duty heating system he had installed the previous year, it now has to be mighty cold before Andy decides to pursue indoor activities. Oh those Swedes !

Andy keeps his plane at his employer's acreage on the north side of the Delacour Road, exactly 3 miles outside the Calgary Intl. Control Zone (he made me take the co-ordinates on the GPS one day, while flying with him). Before that, he always 'knew' that he was legal. Really!

Like the rest of us with the life-long

bug, Andy is looking for his next project. He thinks the next one will be his 'keeper' (ha!). Perhaps in '99, a full 25 years after coming to this country, he will have found it. Somehow I doubt it. Stay tuned.

Classified Ads

Flight Jacket - MA1 USAF, navy blue, orange reverse, never used, size M, \$50 OBO. Ed Wawzonek 286-2664. (1/98)

Wanted - partners (2-3) for possible Ultralight building project (or re-build) or to buy a 2-place aircraft. Ed Wawzonek 286-2664. (1/98)

Warpdrive - 70" 3-blade right hand, SAE1, with spinner, ground adjustable, \$800. Ken Johnson 403-546-2586. (11/97)

Bushmaster - (Modified), new Rotax 582, C drive, electric start, new 77 x 53 Culver Prop w/urethane leading edge, complete restoration and modification in 1996 includes: round cowling, extended landing gear, tundra tires, Azusa brakes, new style pneumatic tail wheel, new fabric, Endura paint, new instruments, professionally upholstered seat, split doors, 15 gal fuel, electric boost pump, short take off, great climb, fast cruise. This aircraft performs and looks great to boot. Bob or Dan 403-452-4664. (11/97)

Beaver - RX550 2-place, Rotax 503, 30 hrs, upgraded wings, steerable nose wheel, Mono 2000 Amphib floats, will consider trade on an AULA, \$12,000. Don Leonzio 250-427-2046. (10/97)

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Destinations

Springbank Airport

by Stu Simpson

I'm filling in for Andy Gustafsson this month since he's busy with contract negotiations with a major publishing firm who may produce a book detailing a combination of Andy's memoirs and past Destinations articles.

One of the more interesting destinations for ultralight pilots in the Calgary area is Springbank airport, located just a few miles west of the city limits along the Trans-Canada Highway. The airport handles a huge amount of light plane traffic, and takes a lot of pressure off YYC, thereby freeing it up for faster and heavier commercial traffic.

Springbank is a tower controlled airport and actually ranks as the 10th busiest airport in Canada. It's not uncommon for its controllers to see 600 - 700 takeoffs and landings in a single day.

You may think you need a radio to get into Springbank in an ultralight but it's not necessarily so. If you call ahead to the tower, or perhaps Flight Service, you might be able to go in using the tower's light signals. Just make sure you are where you say you're going to be when you say you're going to be there. And be very sure you're completely boned up on the signal procedures.

If you do have a radio things will be a heck of a lot easier for everyone. With a radio, even if it's only a receiver, the controllers will be able to treat you the same as their regular conventional traffic. And naturally, easier communication will make the whole job that much smoother and safer.

Something else you might not know is Springbank can see you on radar. From my own experience, metal ultralights have a much higher likelihood of getting picked up. Wooden machines, like the TEAM or Fisher products, are rarely detected.

Springbank's airspace gets very busy, especially on weekend mornings when a heap of flight training and fam-flights are going on. Keep in mind during such times you'll be mixing with student pilots who likely have less flight experience than you, though they might be more familiar with controlled airports.

The airport features paved runways 16/34 and 07/25. If you're a tad nervous about landing on pavement, there's also a grass strip on the west side of 16/34 that Springbank's several flight schools use for soft-field training. I've landed on the grass on the north side of 07/25 and found it to be just fine, also.

Once down, I find it convenient to park at the base of the tower and set out on foot from there. Some guys like to make their way south along taxiway Alpha and park on the Calgary Flying Club's ramp. I like to be further away to avoid unwanted prop wash.



Simpson's Himax, Rogers' Norseman, and Robinson's miniMAX as seen from atop the Springbank control tower

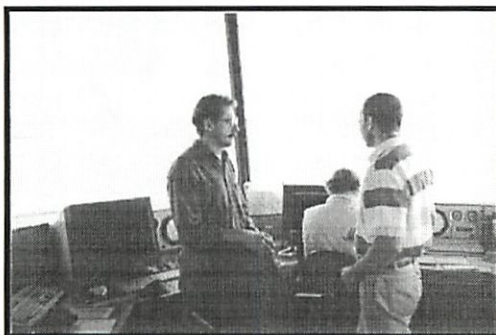
in whenever we're in town. I recommend you take advantage of it.

There are some fascinating planes on the airport, some in hangars, some not. It's a good idea to get out and walk around once you've finished brekkie. You might even be able to wangle an invite up to the tower if things aren't too busy.

Getting out of the airport is actually easier than getting in to it. Just be sure to follow the controllers' instructions and try to anticipate what they'll be.

If you're coming to Springbank from either the north or the south there are some things you should be aware of. Springbank's practice area is northwest of the field and there's a lot of traffic in it, and also between it and the airport. Northeast of the airport is the Bears paw area. The terrain and tower obstacles on this ridge rise to 4500' ASL. Since YYC's Class C airspace (where no ultralight shall tread) starts at 4800', this means UL jocks have only a 300' slot to sneak through. Luckily, it only lasts for a few miles.

There's good news in that the Sarcee military restricted area at the southwest edge of Calgary has been decommissioned. It's now legal to fly over that airspace again, which makes for a shorter trip if you're coming from the south. The bad news is, should the unspeakable (engine failure) happen, you may have to deal with unexploded ordinance on the ground. What a shame it'd be to pull off a perfect
(continued on page 7)



Air traffic controllers hard at work in Canada's 10th busiest tower

Springbank Flight Service Station, located a few meters south of the tower, is also an educational place to visit, and CUFC members have a standing invitation to stop

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emergency landing only to get blown back into the sky on account of a long forgotten artillery shell. No doubt, the rest of the guys in the club would make great sport of such an event for years afterward.

I've flown to Springbank numerous times and here's what I recommend from the experience I've gathered. If you're coming around the north end of the city contact Calgary International's VFR Advisory (known as "Terminal") on 119.4 when you're directly east of the International (get YYC's ATIS first, on 127.2). You'll eventually be told to contact Springbank

once you're over the Bearspaw area.

There's no legal requirement to contact Calgary since you'll be in uncontrolled airspace, but it's a great courtesy to them and will make things safer for you. Everytime I've done it the controller has been very grateful. If you plan to be talking to Calgary Terminal, get familiar with your radio procedures.

If you come from the south, call Springbank Tower on 118.2 after getting its ATIS on 127.9. Make the initial call no later than about 12 miles out, roughly west of the Glenmore Reservoir. You can expect to have to call again crossing the Elbow

River and probably be cleared toward Calaway Park and to be set up for landing. Springbank's controllers are used to novice radio work, and this is a good way to practice if you need it. Ground control is on 121.8. I suggest bringing along a map for your first jaunt into Springbank (lest ye stray where it is forbidden); the 1/250,000 VTA is excellent for this purpose.

One of my favourite flying activities is to circumnavigate the city and land at Springbank along the way. With a little bit of preparation and planning, Springbank can be a fun, interesting and educational ultralight destination.

**Calgary Ultralight Flying Club
Balance Sheet
as of December 31, 1997**

Assets	
Bank Balance Total Assets	\$2,790.86
Fund Balance	
Opening Balance January 1, 1996	3,347.79
Closing Balance December 31, 1996	2,790.86
Receipts	
Bank Interest	6.72
Membership Dues (to 30 Nov 97)	700.00
New Years Party	1,607.00
Raffle Receipts	369.50
Skywriter Ads	170.00
Silent Auction	385.75
Donations	6.72
Cap and Crest sales	21.00
Total Receipts	\$3,266.69
Disbursements	
Printing and Postage	722.34
Rent/Museum of Regiments	300.00
New Years Party	1,450.92
Registry/Bank Charges	8.00
Caps and Crests	1,342.36
Total Disbursements	3,823.62
Excess of Receipts over Disbursements	(556.93)

Prepared by *Brian Vasseur*
Reviewed for Members by *W.Stark*


Editor's Note : This month we have some Internet Article contributions including the Motavia Ultratec engine, with thanks to Bernie Kespe. Also, Gerry Moore has contributed an excellent article on Engine Developments at ASAP in B.C. Thank you for your effort, Gerry.
Keep those articles coming. Our Newsletter will only get better!
- Wilf Stark




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Equipment Survey

We would like to compile an accurate database of aircraft and projects owned by our members so that we can publish some stats and lists. Please complete the following information and mail, fax or e-mail it to Bob Kirkby in the month of January.

Name _____	City _____	Tel # _____			
Aircraft Make & Model	Type (UL,AULA,Homblt,Conv)	Ident _____	If project, % complete	Location Hangared	Additional Comments
_____	_____	_____	_____	_____	_____
Send to: Bob Kirkby; Fax: 403-291-1112; e-mail: kirkby@accinc.ab.ca; mail: Box16 Site20 RR 7 Calgary AB T2P 2G7					

ULTRALIGHT AEROPLANE PASSENGER CARRYING ENDORSEMENT

by Ed D'Antoni

The original proposal by Transport Canada (TC) has not changed. It is my opinion that the proposal would now be in place had it not been for UPAC's original objections. I have been told by Dave Loveman that the proposal would now be in place if it had not been for "ME" supporting TC. The original proposal's ultralight pilot proficiency requirements were very close to those required of a Recreational Pilot Permit (RPP) UPAC are now accepting the original proposal, and will work with TC to tailor the training and examinations to be more specific to ultralights.

Applicants must now pass the same examination as those applying for an RPP. Some of the material covered is not really relative to Ultralights, and it would be beneficial to have the non-relevant subjects replaced with items of relevance to ultralight flying. A brief summary of the requirements to obtain a passenger carrying endorsement follows.

Applicants must obtain 60% in each of 4 areas, Air Law, Navigation, Meteorology and Aeronautics - General Knowledge. The first item, Air Law, covers regulations, rules and orders, air traffic services, practices and procedures and licensing requirements. Nothing in this

section is additional to requirements for the ultralight exam. Navigation - navigation, radio aids, and electronic theory. Enough navigation could probably be covered sufficiently in 2 hours to ensure pilots enough knowledge to obtain 100% in this section. Electronics is a red herring, and is nothing more than knowing how to turn on a radio or transponder, and knowing how to check, turn on and turn off an ELT and a few safety precautions. Basic navigation is relevant to ultralights, however we do not have gyro instruments and fly fairly close to the ground. Therefore differences between true, indicated and calibrated airspeed, winds aloft etc. are not very significant. Any ultralight I know of does not have manuals showing fuel consumption and speed at specific rpm's and altitudes. Perhaps the revised ultralight training and subsequent exam could cover methods of developing and using some of these principles in ultralights.

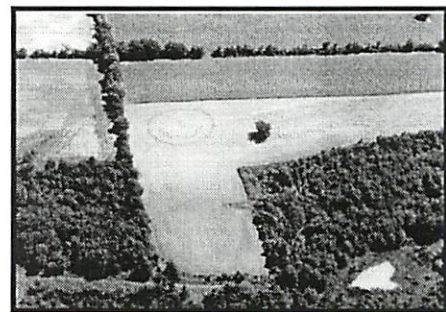
Meteorology - meteorology is something most ultralighters have probably not received formal training in, but are fairly competent at. We all get routine briefings from our local FSS and recognise the significance of specific cloud formations and fronts as they approach. Nav Canada has published an excellent pamphlet titled Aviation Weather Services Guide. Understanding this guide and some basic meteorology are required to pass the Meteorology section. The last section is Aeronautics - General Knowledge. This section covers Airframes, engines and systems, theory of flight, flight instruments, flight operations and human factors. This

is mostly basic knowledge and common sense.

Experience required is 25 hours ultralight flight time of which 5 hours is solo and 15 hours is dual instruction, including 2 hours cross country with at least 2 legs of at least 30 minutes each. Skill - The applicant must complete the same flight test as that of an RPP, however the flight test can be taken in an ultralight aeroplane.

The above is a brief and incomplete outline of the proposed regulations. Should anyone have questions on the above, or the proposed Flight Instructor requirements for authority to provide passenger carrying endorsements, please feel free to contact me.

Cheers!



You see things from a different perspective from the air. I guess this is one of the reasons that I wanted to fly ultralights. This picture was not staged, at least, not for me! After I looked at this picture and thought about it, I think that a farmer was marking his landing strip. The green behind the smile sure looks like a strip to me.

- Bernie Kespe