



Skywriter



Monthly Newsletter of the Calgary Ultralight Flying Club

May 1998

Across the Wing

by Wilf Stark

I'm writing this near Rochester, NY, four days after Sun'n'Fun. It could have been 3.8 days, if I hadn't inadvertently crossed Chesapeake Bay near Baltimore for only \$5 along with many other commuters. I've now traveled 18 states in 18 days.

I'll have to think twice about coming back next year. It's a 6 day haul from Calgary. With trailer in tow, I'm 6000 lbs. Gas mileage went down 20 percent, yet fuel costs only went up 5 percent (per km.) over my normal Calgary costs. Love that cheap fuel!

Not much new at Sun'n'Fun. Powered parachute and Flexible Wing Trike vendors have absolutely mushroomed! It's very hard to distinguish the brand differentiators, especially when factoring in the many foreign tongues trying to convince you that their Italian/Spanish/Russian/Czech/Slovak machine is better. Ultralights in the US seem to cost \$12,000 now for complete machines that are ready or almost ready-to-fly. 2nd seats cost extra, of course. 'Chutes cost only \$7995 US ! Such a deal !

Sadly, there was a fatality. Another maiden flight of a new composite machine, by an experienced pilot flying it for the first time at this air show. Adrenaline pumping, 2-stroke quitting in a steep turn, must save machine, get it back into the pattern, turn around, 150 feet is lots of altitude, stall in steep turn, spin in--die.

People asked me if I intended to fly mine here this week. I answered, no, don't need to put that pressure on my head, with machine barely finished. Will test fly back at home base strip, surrounded by Friends who all will be wishing me well. No arguments received.

Engines, boy are there engine choices now! A fascinating new one is a 60 hp. package called the 'Subaru-minus-two'. Subaru cut in half, with 2 cyl. producing 60 fuel-injected hp. 125 lbs. all-up weight, incl. belt re-drive. \$5000 US! Made in Canada! Lethbridge, of all places!

Soft-spoken young man looked at my prop placard and said "Irricana, I know where that is". I thought, yea, right, most Americans look at me blankly when I mention that Calgary is only 250 miles north of Billings, MT, yet he knows Irricana. Turns out that young Mr. Curtis Halverson of Lethbridge has

probably built more Subaru Aviation Conversions than any one else in North America. He built 100 last year for RAF of Kindersley, SK, for their Gyros. What does that tell you about Canadian Marketing Skills, folks? Curtis has done over 200 Subaru Conversions. Ed, if you're reading this, might that be our 4-stroke replacement on the Rans S-12 ?

Ok, I'm finished. Spent \$120 US on two arm-bracelets so Lynn and I could walk the grounds for a week. Spent another \$60 for camping (Johnny-on-spot included). Spent \$4 for Lemonade (want the big one?-Yup-ok, 'gimme 4 bucks.). All expenditures for this trip are on one Visa Card. Will be opening Statement near an Emergency Resuscitator Pak when it comes in next month. Just in case.

Final note. Instructor once told me when I was learning to fly Ultralights: "Wilf, if your engine ever quits, whatever else you do, try to keep the machine in straight and level flight as it comes down. If it comes in level, you'll likely only tear some stuff off of it, but MORE THAN LIKELY YOU WILL WALK AWAY !". I haven't been able to keep that thought out of my mind all week.

I'm looking forward to seeing you at the meeting.

CALENDAR OF EVENTS

May 10th, Sundrie, Alberta

Fly-in breakfast 7:00 a.m. to 12:00 p.m.
For more info contact Stan Garnham,
Sundrie Flying Club, at 403-636-4079.

May 31st, Camrose, Alberta

Camrose Flying Club's annual fly-in
breakfast. Contact Glen Lyseng 672-5547.

June 6th, Linden, Alberta

Fly-in breakfast 7:30 - 9:30 am. Contact
Dennis Wickersham 546-4306.

June 7th, Lacombe, Alberta

Annual fly-in breakfast, Lacombe Airport.
For more info contact Cecil Law, 403-782-
2136.

June 7th, Westlock, Alberta

Westlock Flying Club annual fly-in
breakfast, Westlock Airport. For more info
contact John Jasman at 403-398-3676.

June 14th, Hinton, Alberta

Fly-in Breakfast and mini airshow.
Breakfast is 9:00 to 11:00 a.m.. For more
info contact Loran Luis at 403-865-7440.

June 14th, Innsfail, Alberta

Annual fly-in breakfast. EM N52-04-43
W114-01-39. Breakfast is 7:00 to 11:00
a.m.
H. Nelson at 403-728-3457.

June 19th - 21st, Edmonton, Alberta

COPA convention at the City Centre
Airport. For info contact Gord Oswald,
403-469-3547

June 20th, Josephburg, Alberta

Strathcona Flying Club's annual fly-in
breakfast. 7:30am to 12 noon.

July 8th - 12th, Arlington, WA

Northwest EAA Fly-in. 360-435-5857

July 11th, Kirkby Field

Annual fly-in pancake breakfast (free),
8:00am to 12:00 noon, for info contact
Bob Kirkby 569-9541.

July 18th, East of Carstairs, Alberta

2nd Annual Fly-in drive-in barbecue at
club member Glenn Bishell's air strip. Tie
downs and overnight camping available.
Air strip 2700x100 ft. N-S. Flying events
to be announced. For further info call
Glenn Bishell at 337-2564.

July 29th - August 4th, Oshkosh, WI

Annual EAA convention. 920-426-4800.

August 3rd, Vulcan, Alberta

Vulcan Flying Club's annual fly-in
breakfast. Vulcan Airport N50-24-17
W113-17-00, 8:00 to 11:30 a.m.. Family
(\$15), adults (\$5), children 6-12 (\$3) and
under 6 (free). For more info contact Jack
Deans at 403-485-6484.

If you have or know of an event that you
would like to see published here please
contact Bob Kirkby or Berne Kespe.

Skywriter

Skywriter is the official newsletter of the
Calgary Ultralight Flying Club and is
published 12 times per year. Articles and
letters are very welcome and should be
addressed to either Bob Kirkby, Bernie
Kespe or Wilf Stark.

Editor: Bob Kirkby 569-9541
e-mail: kirkby@accinc.ab.ca

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
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Vice President: Stu Simpson 255-6998
e-mail: simpson@cadvision.com

Secretary: Bernie Kespe 255-7419
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Treasurer: Brian Vasseur 948-0688
e-mail: vasseur@cadvision.com

Director: Jim Creaser 226-0180
e-mail: creaser@cybersurf.net

Past President: Ed D'Antoni 247-6621
e-mail: ed.dantoni@logicnet.com

Destinations

by Andy Gustofsson

Good Friday. I haven't flown for weeks.
Between work and bad weather it seems
like I never get a chance to go out to my
hangar. My little "airport" lies way out in
a pasture and is not too easy to get to. It is,
however quite secure and if someone gets
close, there is a fully trained "killer cow"
on the loose to chase the bad guys away.
She does not recognize friend or foe and
has tried to chase me out of there
numerous times. Funny that she does not
bother my airplane. Must be the soothing
crescendo of my 503.

I have access to equipment for snow
removal and so cleared the snow from my
runway weeks ago. It has dried up really
nice and I feel very comfortable operating
out of there.

Well, I made it past the guard cow and
felt the excitement building. Finally, I
would get the "lack of altitude sickness"
cured for another week.

Immediately after take-off I encountered
a pair of swans in close formation at my
11 o'clock, inbound. I quickly broke sharp
right and climbed hard to get away from
the heavy traffic area of the bird altitude.
1000'+ ft/min. Due to all the water around
these parts there is a lot, I mean a lot of
waterfowl all over the sky. Leveling out at
500' agl. there were only the odd flight of
ducks around. They are very difficult to
spot as they blend in totally with the grey
spring landscape. At 700' I spotted a lone
hawk on my right wing at 200' away. To
find out if they really know this art of
flying I eased closer to him and sure
enough, my right wing started to raise.
Leaning in to the rising wing I climbed at
least 400' in a big soft thermal bubble with
the engine rpm cut way back. I could have
turned inside the bubble but did not want
to steal it away from the hawk. Spring
time produces softer convective turbulence
than the harsher hot summer time heated
fields. My Challenger really excels in this
kind of weather. I'm thinking about
re-routing my starter rope to the cockpit
(continued on page 3)

so that I can shut the engine down and restart again when I need to.

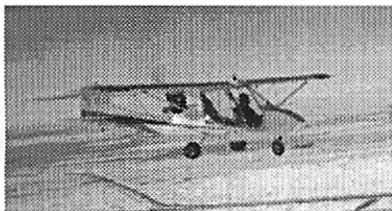
Looking out over the landscape you see water everywhere, and in the event of a forced landing be careful not to be fooled by the dry appearance of the intended field. Hayfields and pastures are very misleading. They look smooth and even, but hide a lot of traps like badger and gopher holes. Stubble fields lack the holes as a rule, but can be very soft. The best place are on a high ground stubble field. If you can find one.

After "Hi Tea" at Bob's I flew northeast making sure to stay out of the bird altitude. I do not want to find out what it's like to take on one of these grain stuffed "Canadians". Ten minutes out of Wildrose aerodrome the wind started to pick up. Calgary International reported 140 at 10 kts and I still had a stop to do at the Poffenroth strip.

The next day which was Saturday, I was out there again. The afternoon turbulence made flying a very good piloting experience. The birds had taken the day off and I could explore the warm rising air by myself. I had planned to go south, but the appearance of heavy rain clouds to the southwest made me change my mind. The surface wind was reported to be 140 at 5-7 kts by the International airport.

After landing at the Wildrose aerodrome the wind had picked up and I'd better head for home before the rain clouds hit. I made it in good time to my strip, landing in a gusty 15 kt crosswind. Say what they want about the Challenger, but it sure handles those cross winds with ease.

With the change to -saving time- the evenings stay lighter longer and we can enjoy nice smooth flights long in to the twilight, but when the sun goes down behind the 'Rockies', we better be very close to the home field.



GPS of a Different Kind

by Dan Mitchell

As pilots, we all recognize the necessity for backup and support systems. Systems that can be relied upon when the unexpected occurs. Support systems to get us through an immediate crisis. If these support systems are in place and well maintained they can often prevent a minor problem from becoming a crisis.

A GPS receiver is such a system, I have one as do many of the Ultralight pilots I fly with. The receiver is a wonderful tool for identifying your current position and providing you with ground speed and direction to your destination.

I have learned several crucial things about the proper use of a GPS since purchasing mine. First and most importantly, the GPS is of little value while flying if you leave it in your car before takeoff. Second, and almost as important are the batteries. If your GPS is powered by batteries, as is mine, be aware that the batteries will not last forever. That little grass strip in the foothills may become harder to find when the batteries go dead. The last point I want to make is the same one that is repeated several times in the owner's manual. The GPS should not be used as your sole means of navigation. It should be used along with other conventional navigational aids. The GPS is a support system.

In recent weeks a small group of CUFC members have come together during a time of need. Members with a passion (an obsession is more like it) for flying, have recognized that we each have a common problem. Due to the record snowfall that dumped on Calgary and area on March 17th, and the fog and rain we have endured before and since then and not to mention the soft ground and snow-covered runways, we have not been able to fly. We were lost, without focus and didn't know which way to turn. We needed (professional?) help to get through these difficult times, something, anything to

point us in the right direction. From this need was born (drum roll is heard in the background) the GPS Group (Grounded Pilot's Support Group.)

The GPS Group was formed as an alternative to sulking, pouting and otherwise making ourselves and spouses miserable on days when we could not fly. When other activities have been scheduled around those few hours that are set aside for pursuing our dreams, and Mother Nature pulls a fast one with the weather, a void is left in our lives that begs to be filled. What better way to fill that time than meeting with your flying buddies over some good food, and talk about flying.

At this time the Grounded Pilot's Support Group is made up of an informal gathering of half dozen full-time "members" and a small number of part-time "members". The group has been meeting regularly (too regularly, that's the problem) at 9:00 AM, Sunday mornings at Humpty's, south of Fish Creek Park on Macleod Trail. We meet, socialize over a hearty breakfast, and provide that much needed moral support to fellow grounded UL pilots.

The meetings consist of breakfast, hanger talk, a little pouting and the occasional "show-and-tell". The food is good, the company is excellent and show-and-tell is always worth coming out for. Flying books and magazines are shared, videos are borrowed, our latest flying photographs are exchanged and information and pictures of interest, often gathered from the Internet, are also passed around the table. The highlight, of course, is the field trips. These trips are generally spontaneous, spur of the moment affairs and take the form of a pilgrimage to Indus where we get a partial "flying" fix and reminisce about happier times, when the weather was better.

Lately, we pilots have been joined by our wives, daughters or significant others. As they say, the more the merrier. We would like to extend a welcome to other members of the Calgary Ultralight Flying Club who may be in need of the support of his fellow grounded pilots. However, it must be noted that meetings will be canceled at the first sign of good weather.

The Jabiru Engine

compiled by Bernie Kespe

Engine Description

4 Stroke -4 Cylinder Horizontally Opposed
1 Central Camshaft
Push Rods
Over Head Valves (OHV)
Ram Air Cooled
Wet Sump Lubrication
Direct Propeller Drive
Dual Transistorized Magneto Ignition
Integrated AC Generator
Electric Starter
Mechanical Fuel Pump
Naturally Aspirated
1 Pressure Compensating Carburetor
6 Bearing Crankshaft

Engine Specification

Displacement 2200cc
Bore 97.5mm
Stroke 74mm
Compression Ratio 9.5:1
Rotation of Prop Shaft Clockwise
Weight 56kg (123lb) inc. Exhaust,
Carburetor, Starter Motor, Alternator &
Ignition System
DC Output 10amps Power Rating 60kw
(80hp) @ 3300rpm
Fuel Consumption 14 litres/hr @ 75%
power
Fuel AVGAS 100LL
Oil Aero Shell W100 or 15W50 or
equivalent aircraft grade oil
Oil Capacity 2.31 (2.2 Quarts)
Spark Plugs NGK D9EA - Automotive

Further Details

The JABIRU 2200cc Aircraft Engine is a 4-cylinder 4-stroke horizontally opposed air cooled engine. Versions are available from 54 to 80 hp. At 56kg (123.5 lbs) installed weight it is the lightest 4-cylinder 4-stroke aircraft engine of this output manufactured in the world. It is a highly efficient engine, burning only 13 litres (2.9 Imp. Gal.) per hour. Overall dimensions are extremely small. It's 596mm (23.46") width allows tractor applications with very small frontal areas. The Jabiru engine is designed for either tractor or pusher installation.

Jabiru Aircraft Ltd originally designed a 1600cc 60hp engine to replace the KFM 112M engine which it had been previously



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using to power the Jabiru sport plane. Jabiru 1600cc engines have in excess of 30,000 fleet hours.

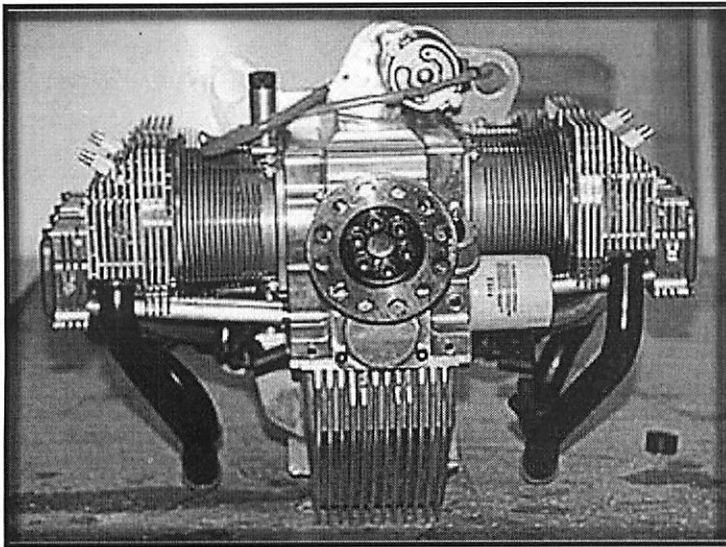
Jabiru also identified an opportunity to develop a range of light aircraft engines which would be light enough to replace the existing 2-cylinder 2-stroke engines used in the majority of ultralights, microlights and very light aircraft throughout the world. At 56kg installed weight the Jabiru 2200 Aircraft Engine is an ideal replacement for the Rotax 582 2-cylinder 2-stroke engine which powers many of the existing light aircraft; surprisingly it is the same weight as the Rotax 582. It is also a lightweight, smaller-package alternative to all of the VW derivative engines and the Rotax 912. It is an engine designed by aircraft designers for aircraft applications!

The engine is designed to be manufactured in small batch quantities using the very latest Computer Numerically Controlled (CNC) machine tools. The vast majority of the components are manufactured in Southern Queensland in a network of high technology small companies. The sump is the only casting on the engine. The crankcase halves, cylinders, crankshaft, starter motor housings, gearbox cover (the gearbox powers the distributor rotors), coil mounts and the tappet covers, together with many smaller components are machined using the latest CNC machine tools.

The cylinders are machined from solid bar 4140 chrome molybdenum alloy steel, with

the pistons running directly in the steel bores. The crankshaft is also machined from solid bar 4140 chrome molybdenum alloy steel, the journals of which are precision ground prior to being Magnaflux inspected. The camshaft is provided by a specialist camshaft manufacturer. The engine is direct crankshaft driven and does not use a reduction gearbox. This facilitates its light-weight design and keeps maintenance costs to a minimum. The crankshaft features a removable propeller flange which enables the easy replacement of the front crankshaft seal and provides for a propeller shaft extension to be fitted, should this be required for particular applications. Cylinder heads are machined from solid aluminum machining billet which is purchased directly from one of Australia's largest aluminum companies, as is all alloy used in the engine, thereby providing a substantive quality trail to material source. Conrods are machined from solid aluminum plate; the 45mm big end bearings are of the automotive slipper type.

Under a direct supply arrangement with Honda, various components of the engine
(continued on page 5)



Jabiru 4 cylinder, 4 stroke engines

Jabiru - continued from page 4

are sourced. These items include valve springs, camshaft followers, and the bendix gear in the starter motor. The ignition coils are also sourced from Honda, but are modified by Jabiru for their own particular application.

An integral alternator using rare earth magnets, provides alternating current for battery charging and electrical accessory drive. The alternator is attached to the flywheel and is driven directly by the crankshaft. The ignition system is a transistorized electronic system; two fixed coils mounted at 180 degrees adjacent to the flywheel are energized by two banks of rare earth magnets attached to the flywheel. The passing of the coils by the magnets creates the high voltage current which is then transported by high tension leads to the center post of two automotive type distributors (which are simply rotors and caps) before distribution to eight automotive spark plugs, two in the top of each cylinder head. The ignition system is fixed timing and, therefore, removes the need for timing adjustment. It is suppressed to prevent radio interference. The ignition system is fully redundant, self-generating and does not depend on battery power. The six bearing crankshaft is designed with a double bearing at the propeller flange end and a main bearing between each big end; it therefore does not have flying webs. 48mm main bearings are also of the automotive slipper type. Pistons are sourced from GM but are re-machined

to include a piston pin circlip groove. They are fitted with 3 rings, the top rings being cast iron to complement the chrome molybdenum cylinder bores. Valves are 7mm (stem dia) which are manufactured for the Jabiru engine. The valve gear includes pushrods from the camshaft followers to valve rockers which are CNC machined from steel plate, induction hardened and polished on contact surfaces and mounted on a silver steel shaft through an aluminum bronze bush. Valve guides are manufactured from aluminum/bronze, as is found in larger aero engines and high performance racing engines. Replaceable valve seats are of specially hardened steel and are pressed into the aluminum cylinder heads. The valve gear is lubricated by a mist oil system from the crankcase. An internal gear pump, direct mounted on the camshaft and incorporating a small automotive spin-on filter, provides engine lubrication. An optional oil cooler adapter is available; however, most existing installations have not required it's use.

The standard engine is supplied with two RAMAIR cooling ducts, which have been developed by Jabiru to facilitate the cooling of the engine and direct air from the propeller to the critical areas of the engine, particularly the cylinder heads and barrels. The use of these RAMAIR cooling ducts is a great bonus for the home builder or engine installer, as they obviate the need to design and manufacture baffles and the establishment of a plenum chamber, which is the traditional method of cooling air-cooled aircraft engines. The fact that these baffles and plenum chamber are not required also ensures a "cleaner" engine installation, which in turn facilitates maintenance and inspection of the engine and engine compartment. So the hard work of engine installation has largely been done for you by the Jabiru design team.

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RAMAIR ducts are available for tractor or pusher configurations. The engine is fitted with a 1kw starter motor, which is also manufactured by Jabiru and provides very effective starting in all conditions. The engine has very low vibration levels, however it is also supported by four large rubber shock mounts attached to the engine mounts at the rear of the engine. An optional bed mount is available.

The fuel induction system comprises a BING pressure compensating carburetor, similar to that used in the Rotax 912 engine. Following carburation, the fuel/air mixture is transported to a small plenum chamber in the sump casting, in which the mixture is warmed prior to entering four short induction tubes attached to the cylinder heads. An effective exhaust and muffler system is fitted as standard equipment, ensuring very quiet operations, which in the Jabiru aircraft have been measured at 63dB 1000' full power flyover. For those owners wanting to fit vacuum instruments to their aircraft the Jabiru engine design includes provision for a vacuum pump drive, direct mounted through a coupling on the rear of the crankshaft.

The Jabiru engine is manufactured within an Australian Civil Aviation Authority (CAA) approved Quality Assurance System to exacting standards. A TBO of 500 hours currently applies, although Jabiru have a TBO extension program in place which should result in TBO of 1000/1200 hours within 12 months. The engine is currently available in uncertified form (Model 2200A). The 2200J model will soon be available, type certified to JAR-22H.

Canadian Distributor: Bill Watson
 Watson Flight Centre
 Box 64, Site 2, R.R. 1,
 St Albert, Alberta T8N 1M8
 Email: bill@watsonflight.ca
www.watsonflight.ca
 Phone: 403 962 7894

PROPOSED FLYING EVENT

by Bernie Kespe

Once again a new flying season is upon us. With the warmer weather and longer days, we begin entertaining thoughts of flying to new and distant airstrips. As a club we seem to have few trips of this nature so I would like to make an effort to get at least one day trip organized.

My first concern was a destination, and if we'd be welcome there. I found the Alberta Air Facilities map to be a good starting place. After studying the map I had decided on a destination NE of Chain Lakes, "Bar S Ranch" which boasted a 2000 x 75 foot grass runway. Perfect!

After contacting Clay Chattaway, the owner, I was disappointed to hear that the strip has not been used in the past five years and was now a pasture. He had indicated that it was still visible but potted with gopher holes. In other words, land at your own risk. He did however put me onto Gary Fox who had just recently purchased a Merlin from club member Jack Barlass. Gary was thrilled at the idea of a group flying to his strip, and looks forward to meeting with us. His strip is grass, 1000 feet long running NE - SW, elevation 4000 feet, and is approximately 12.5 miles SW of Nanton and approximately 55 miles SSW of Indus and

at the northeast edge of the Porcupine Hills.

Since the airfield is not on any map, Andy Gustafsson and I plan to take a drive to Gary's field to get a better handle on its location and condition and to meet with Gary.

The second leg of the flight will be NNW to Longview, then north to Ray Glasrud's strip which is approximately 5 miles south of Priddis and 2 miles west of Hwy 22. Ray had indicated that we would be more than welcome to use his field, and again at our own risk. Stu Simpson and I landed there last October; believe me there is no risk! Four ultralights could land and take off simultaneously and still have lots of room. The main runway runs N-S and

Dealers for

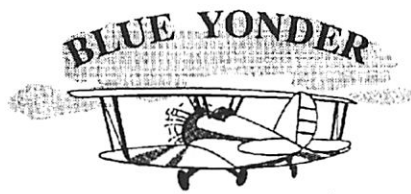
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AVIATION

936-5767

Located at
Indus-Winter
Aire-Park

shorter one NW-SE. This leg will be approximately 45 miles.

The final leg of the journey will be northeast to meet up with 22X and then east to Indus approximately 25 miles.

Total miles flown will be approx. 120 and will cover prairie, foothills and hopefully a spectacular view of the Rockies. For those that are salivating and chompin' at the bit to go, the tentative date will be one of the last 3 weekends of May, preferably the long week-end, but this is open and will be decided among the participants. Anyone interested in going in either capacity (flying or ground crew) please contact me, Bernie Kespe at home or at work at 255-7419(H) 259-5423(W) and lets make this a trip to remember and put the flying back into the Calgary Ultralight Flying Club.

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The ME109 - see article page 7

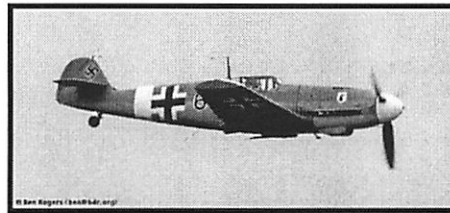
**Messerschmitt 109G-10
"Gustav"**
History Of The Me 109G-10
compiled by Bernie Kespe

In 1933 the German Luftwaffe issued a requirement for a single-engine, single-seat fighter aircraft. Chief designer for Bayerische Flugzeugwerke (Bf), Professor Willi Messerschmitt responded with a design designated as the Bf 109. In 1936 comparative trials took place between two contenders; the Heinkel model 112, and the Messerschmitt Me 109; the "109" was selected. Production began in 1937, and until the company was reorganized by the German government in 1938, all production ("109's") carried the prefix "Bf", once the company had been reorganized as Messerschmitt A.G., all subsequent "109's" carried the "Me" prefix.

The Me 109G or "Gustav" series was a result of improvement of several previous models which included the "B", "E", and "F". Between 1937 and 1942 over 11,000 of the earlier models were produced. In late 1942 the "G" (Gustav) was introduced, and by the end of World War II over 33,000 Me 109 models of all variants had been produced. The "109G" was primarily a defensive fighter; as the "Allies" developed their bombardment capability, and began their long-range deep-penetration raids into Germany the Luftwaffe's demand for fighter aircraft

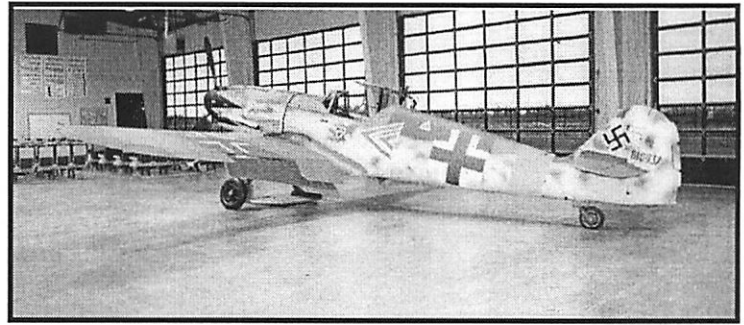
became greater and greater. In 1943 Messerschmitt A.G. produced 6,418 Me 109G airplanes; in 1944 that production figure rose to an unprecedented number of 14,212 machines manufactured in one year.

The Me 109G-10 was the fastest Me 109 ever produced with a top speed of 428 mph at 24,250 feet. It could climb to 20,000 feet in just 6 minutes which gave the airplane a sustained rate of climb of just under 3400



feet per minute! Like all of the Me-109 series of aircraft, the "Gustav" single performance design flaw was its fuel load which gave it a combat radius of only 350 miles, or just 55 minutes of fuel endurance. Many aviation historians believe that this "single design flaw" cost the German Air Force the "battle Of Britain" in 1940 and as a result, possibly the war.

By 1944, the Luftwaffe was caught in a



The Michael King Smith Evergreen Me 109G-10

vicious cycle. With the increased ferocity of the air war, there was a need for more aircraft and pilots. The more hastily trained pilots had trouble handling the aircraft which caused heavier pilot losses. Despite these later problems the type was arguably the most important fighter of World War II, it is credited with shooting down more aircraft than any other airplane in aerial warfare history. Fifteen German pilots shot down more than two hundred allied aircraft each, while two shot down more than three hundred....a record the Allies never approached. Air combat "ace-of-aces" Erich Hartmann is credited with 352 victories, all of them in the Me109.

History Of The Michael King Smith Evergreen Me 109G-10:

This aircraft was originally manufactured as a 109G-14 in 1943 and was remanufactured as a G-10 in 1944. Evergreen has data plates of both the G-10 and G-14. Me 109G-10. Serial number 610937 went directly to Bulgaria from the Messerschmitt factory in Regensburg, Germany in October of 1944 as part of 145 aircraft delivered to the Bulgarian Air Force with which to help defend the oil refineries at Ploesti, Romania. Nothing has been found of the airplane's war record; however, after the war ended military equipment trade negotiations took place between Bulgaria and Yugoslavia. In 1948, as part of these negotiations, the Yugoslavian Air Force received 59 Me 109G aircraft of different variants, serial number 610937 being one of those aircraft. This "Gustav" was flown actively with the *(continued on page 8)*




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Gustav - continued from page 7

former Yugoslavian Air Force until its last recorded flight, which was listed as October 17, 1950. The airplane was then placed in storage until 1953 when it was declared as "scrapped". The "109" was then acquired by a technical school located somewhere in the country until the mid-1970's when it was transferred to the "Yugoslav Aeronautical Museum". The museum apparently did not have the financial resources to restore the airplane, and in 1984 the "G" was sold to Mr. Doug Arnold, owner of "Warbirds of Great Britain". Mr. Arnold placed the Messerschmitt in storage until January of 1989 when Evergreen purchased the airplane.

In 1991 Evergreen contracted "Vintage Aircraft Ltd" to completely restore the "109" to a flight-worthy condition. This project required five years to complete. This airplane represents one of only three authentic, out of the over 33,000 built, flyable German Messerschmitt fighters remaining in the world. This aircraft is painted to resemble the markings of World War II's leading ace, Eric Hartman, and can be seen in the restoration hanger at the Michael King Smith Evergreen Educational Center in McMinnville, Oregon.

Aircraft Information:

Manufacturer Messerschmitt
Aircraft Model - 109G-10
Classification - Military (vintage)
Serial Number - 610937
Aircraft Type - Fighter
Maximum Speed - 428 MPH
Engine Daimler - Benz DB 605D
Registration - N109EV
Year of Manufacture - 1944
Range - 350 miles
Service Ceiling - 39,372 feet
Empty Weight - 5,893 lb.
Maximum Weight - 7,496 lb.
Wing Span - 32 feet 6 inches
Length - 29 feet
Height - 8 feet 2 inches
Armament - 1 - MK 108 30mm cannon
and 2 - MK 131 13mm m.g.



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Feature Aircraft of the Month

compiled by Bernie Kespe

FISHER FLYING PRODUCTS FISHER CLASSIC

SPECIFICATIONS

Wingspan 22'
Wing Area 154 sq. ft.
Aileron Area 18 sq. ft.
Length 16'9"
Height 5'11"
Empty Weight 400 lbs.
Gross Weight 850 lbs.
V.N.E. 110 mph
Max Speed 90 mph
Cruise Speed 75-80 mph
Stall Speed 35 mph
Climb Rate 800 fpm
Takeoff Run 150'
Landing Roll SOLO 250'
Engine-Rotax 582LC-65 hp
Usable HP Range 65 to 80 HP
Estimated Construction Time 350-500 hrs. (Probably wishful)
Field Assembly Time 30 min.
Construction Material Wood, Fabric and Aluminum
Plans N/A
Kit Price \$6,775.00 (US)
Info Pack \$10.00 Video \$15.00

The two-place Classic represents a reborn era in airborne adventure. This bi-plane

aircraft is a throw-back to seat-of-the-pants flying, complete with minimal instruments and bare-necessity controls. Featuring short wings, four ailerons and a semisymmetrical airfoil, the aircraft answers commands instantaneously. Geodetic wood construction and additional bracing contribute to exceptional structural strength, enough to withstand higher Gs than most light planes. For experimental models, a 64 horsepower Rotax engine pours out more than enough power for exhilarating, 800 feet-per-minute climbs and turns that will push you and your passenger back in your seats. The plane is as responsive as you are aggressive.

Flying the Classic:

Sharing the responsive flight characteristics of the 404, the two-place Classic also lets you share the experience with a passenger. Dual controls give you the option of front or back position, and an 85 mph cruise speed gives you just plain fun.

Construction Kit:

These bi-planes are available either as a complete kit - which contains everything you need except instruments, paint, varnish and pilot restraint system - or in "pay as you build" partial kits. Aircraft quality materials are supplied throughout; you simply epoxy the wooden pieces together over the full-size plans. After the

(continued on page 9)
Fisher - continued from page 8

woodwork is completed, it is sealed with polyurethane varnish, covered with heat-

shrinkable aircraft fabric, sealed and painted to provide a long-lasting durable airframe. The average builder can assemble a Classic in 350-500 hours using normal household tools.

Quick Build:

The Quick Build Kit contains prefabricated ribs, spars, wing tip bows, bulk-heads, formers, fuselage sides, fin, rudder, horizontal stabilizer and elevator in addition to the other pre-cut and formed parts from the construction kit.



The Fisher Flying Products' Classic

Airframe Kits:

Contains all parts necessary to build a complete aircraft (except paint, varnish, pilot/passenger restraints, instruments, and engine) • precut, shaped, and slotted wood parts • formed, drilled, and shaped fittings • hardware • molded fiberglass cowling • fuel tank • all parts are numbered • inventory list • full scale plans • fabric and fabric cement • no welding required.

Quick-Build Airframe Kits:

Contains everything listed in the airframe kits plus the following pre-fabricated components to shorten building time-ribs, spars, wing tips, fuselage sides, bulkheads, fin, rudder, horizontal stabilizer, and elevator.

Partial Kits:

These kits are provided for builder who prefers to "pay-as-you-build." The wing or fuselage kits are optional as first or second kits, but the hardware kit is sold only as the third kit. Once these three partial kits are

purchased, they are equivalent to the airframe kits described above.

For more information contact:
FISHER FLYING PRODUCTS
PO Box 468
Industrial Park
Edgeley, ND
58433

Phone: 701-493-2286 - Fax: 701-493-2539
or visit their Web Site at
<http://www.fisherflying.com>

history, complete panel, upgraded wing, brakes, \$11,500. Tony 217-5549 or Phil 246-2615. (4/98)

Chinook 2 pl - 1988, 186 hrs TT, Rotax 503, hangared, \$7990. Adrian Winship 640-7429 or 280-3631. (3/98)

Wanted - Ultralight aircraft, complete or requiring work. Allen 546-2588. (2/98)

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

Classified ads are free to CUFC members. Forward ads to Bob Kirkby.

A loyal reader wrote us, retelling the story about the military pilot calling ATC for a priority landing because his single-engine jet fighter was running "a bit peaked." ATC told the fighter jock that he was number two behind a B-52 that had one shut down.

"Ah," the pilot remarked, "the dreaded seven-engine approach!"

Classified Ads

Super Koala - C-IEIB (a 7/8 scale Taylorcraft look-alike). Only 26 months in use, with 503 DCDI engine and 66-34 Culver Prop. Lovely, docile, predictable. 60 mph. at 4600 rpm and 11 litres/hr. consumption. 45 liter tank. 75 mph top speed. 51 hours total on engine/airframe. Will consider any serious offer and/or interesting barter proposal. Hangarage at Wild Rose negotiable. Wilf: 935-4248

Props - 3-blade GSC fixed pitch for 277 pusher (R.H.) New 4-blade GSC Fixed pitch for 447 pusher (R.H.) Used. 10 Warp blades (R.H.) to make 72' Prop (you supply hub) new with nickle leading edge. Jim Creasser 226-0180. (4/98)

Beaver 2 pl - 1986 RX550, 275 hrs TTSN, Rotax 532, always hangared, no training

Applying Dacron Sails

Having trouble getting that tight new sail to go on? Try this.

First, put the sail in a bucket of water, put it in the fridge overnight. Dacron stretches when cold and wet and tightens up when hot and dry. Next, put scotch tape over all the pop rivets on the outer edges. Then spray the thing with silicon spray (note: don't use silicone spray if you plan on adding paint or UV Protection as they won't stick to the area were the silicone was applied). Get yourself some rubber dishwashing gloves, then start pulling, working your way down and taking up slack as you go. If there are any grommets in the open end, make a couple of loops of rope through the holes so you can put a piece of tubing through the loops and pull evenly. Then, pull and pray.

YOU MAY BE A REDNECK PILOT IF.....

Your stall warning plays "Dixie".
Your cross country flight plan uses flea markets as checkpoints.
You think sectional charts should show trailer parks.
You've ever used moonshine as Avgas.
You have mudflaps on your wheel pants.
Your toothpick keeps poking your mike.
You've ever just taxied around the airport drinking beer.
You use a Purina feed sack for a wind sock.
The side of your airplane has a sign advertising your septic tank service.
You think GPS stands for Going Perfectly Straight.
You refer to formation flying as "we got us a convoy".
You've ever fueled your airplane from a mason jar.
You've got a gun rack on the passenger window.
You have more than one roll of duct tape holding your cowling together.
Your preflight includes removing all of the clover, grass, and wheat from your landing gear.
You figure the weight of the mud and manure on your airplane into the CG calculations.
You siphon gas from your tractor to put in your airplane.
You've never landed at an actual airport though you've been flying for years.
You've ground looped after hitting a cow.
You consider anything over 100"AGL to be high altitude flight.
There are parts of your airplane labeled John Deer.
You answer all radio calls from females with, "That's a big 10-4 little darling".

There's exhaust residue on the right side of your aircraft and tobacco stains on the left.
You have to buzz the strip to chase off the sheep and goats.
You use your parachute to cover your plane.
You've ever landed on the main street of town to get a cup of coffee.
You fly to family reunions to meet girls.
You've won the "Barb Wire" award at a spot landing contest.
The tread pattern, if any, on your main tires doesn't match.
Your primary comm. radio has 90 channels.
You have fuzzy dice hanging from the magnetic compass.
You put hay in the baggage compartment so your dogs don't get cold.
Your flight instructor's day job is at the community sales barn.
You've got matching bumper stickers on the vertical fin.
There are grass stains on your propeller tips.
There is a brown stained Styrofoam cup strategically placed in your glove box.
The FAA still thinks you live at your parents house.
You think Zulu is an African time zone.
Your hanger collapses and more than 4 dogs are injured.
Somewhere on your airplane is a "I'd rather be fishing" bumper sticker.
You navigate with your ADF tuned to exclusively country stations.
You think that an ultralight is a new sissy beer from Budweiser.
Just before the crash, everybody at the airport heard you say, "Hey, y'all watch this!!".



Chris Kirkman's colourful Murphy Rebel being attentively guarded.