



Skywriter



Monthly Newsletter of the Calgary Ultralight Flying Club

May 1991

View From Above

by Paul Hemingson



I scrambled to put together the program for the April 4/91 CUFC meeting, when the guest speaker cancelled out the night before. But pilots always have an alternative.

So, I chose to review the new UL Aeroplane Policy. The performance and regulatory gap is narrowing between General Aviation and UL Aviation.

The youthful Ultralight movement is gaining adolescent stature. And like the teenager given the car keys for the first time, along with increased privileges go increased responsibilities. Screw up and your grounded.

I believe the intent of the new Regulations are congruent with the wishes of the majority. One would anticipate more C-lxxx registrations as homebuilt/experimental/recreational pilots recognize the advantages. That does not mean they will join CUFC or UPAC, but some will. This is beginning to be reflected in our membership. Currently, we have 70 members. By my calculations, this corresponds to a 20% growth in each of the last 2 years.

The new regulations will require us to exhibit more professionalism and self discipline. If there are any anti-authority UL pilots out there, the time has come to accept and embrace the changes.

The purpose of reviewing the reg's at the last meeting, was to collect member feedback, synthesize it, and reply to TC/UPAC with our concerns and recommendations. TC's stated objectives are to enhance the

serviceability of UL aircraft, develop a licensing system, and encourage self determination thru self regulated activities. The underlying quest is SAFETY. These objectives are in harmony with the interests of the CUFC. Below are what I consider the highlights of the new Regs'. Get a copy of the detailed proposal and give me your feedback.

Serviceability (structural integrity, reliability) will be enhanced thru three new initiatives:

1. A Design Standards program (TP10141) which will be proposed by Canadian UL Manufacturers and reviewed by TC for modification/approval after consultation with the UL community. Those aircraft which meet the design standards will be given a Statement of Conformity (S of C). Manufacturers will issue a S of C for their UL aircraft once satisfied it was built as designed.
2. In addition, the manufacturing standards will be set for new aircraft.
3. Designers and manufacturers of UL aircraft will be required to develop and supply with each aeroplane, a recommended maintenance program.

Industry reps will be nominated by the UL community. These industry reps will assess whether existing UL aircraft meet the design standards. We will need a rep in the Calgary area, and I believe the CUFC should consider nominating one or more reps. Any nominations??

New Pilot Licensing Standards will be adopted. Essentially a Private

Ultralight License (PPL-UL) remains the basic license, to which various endorsements may be added. TC will consider proposals from competent and responsible organizations for a training and certification program. Maybe, we can also influence things here. Any ideas??

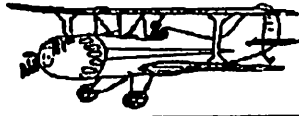
The new Regs will be approved by the Director General, Aviation Regulations, and become Law by Jan 1/93. The limited space here does not allow me to explore the full scope, but I hope I have tweaked your interest sufficiently to prompt you to get a copy of the new Regs. Read 'em and bring your questions/concerns and ideas to the next meeting.

As I see it, the new Regs are a good fit with the objectives of the CUFC. For the past several years we have promoted safety thru a regular safety column in our newsletter, as well as maintenance tips and guest speakers at the meetings. We have also encouraged self discipline and a professional approach to UL flying. We are gaining respect with the aviation community and the Western Region of TC for our efforts in this area. It takes effort to sustain this role. I am proud of our members who contributed to this success by policing themselves (and others) to keep incidents and accidents to a minimum. Blue Younder Aviation is commended for signing up their new student pilots and paying the first years dues to the CUFC. Welcome to all the new members.

Late news. Great news! I contacted the organizers of the Red Deer International Airshow, and we are invited again this year (Aug. 3-4). We will participate in both the Fly-By and the Static Program. At the May meeting I will give more details and the ground rules for participation. We had a great time last year, and this year it will be even better. Much organizing needs to be done.

One Pilot's Opinion

by Bob Kirkby



Regulations

There has been much press and discussion lately about the new regulations governing Ultralights. The new target date for implementation of January 1, 1993 seems a bit more firm than previous targets. This is still almost two years away.

I keep reading again and again that the regulations so far have only firmed up the hardware aspect of Ultralight flying. The software, or pilot licensing, is still up in the air (excuse the pun). I agree with Paul, that we must provide some input to TC on this aspect of the regulations at this time.

Of course, passenger carrying is the hot potato. About four years ago we, as a group, provided some input to UPAC and TC on this subject. That document should be dusted off, updated and resubmitted. As a group, CUFC is a very strong voice in the ultralight community of western Canada and we should stand up and be counted.

One particular concern that I have is ultralight instructor continuity. Currently all you need to instruct is a

Commercial Ultralight License and an approved school syllabus. One could instruct for five years and gradually become pretty sloppy at it, without any checks and balances in place to monitor an instructor's techniques and competence. I'm not suggesting that instructors "lose it" after awhile, but if pilots get sloppy and need to be reminded now and then, why not instructors?

With the pending increase in weight and performance of ultralights and the added responsibilities of passenger carrying on the horizon, ultralight pilot training becomes a more important issue than ever before. Therefore, I submit that a system of mandatory, periodic, flight checkrides for instructors, similar to that required for CFI's, is required as part of the new licensing regulations to come about.

If you have any comments or suggestions, please bring them to the next meeting for input. If you can't make it, give myself or one of the Executive members a call. Everyone's options are needed for CUFC to present a representative point of view.

Checklist

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Jim Bradbury, owner of Checklist Pilot Supplies, is pleased to announce that he has purchased Airflair. He has merged the two operations and will continue to operate under the name Airflair at the old Airflair location.

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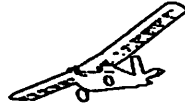
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Calgary, Alberta
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Meetings of the Calgary Ultralight Flying Club are held the first Wednesday of every month at 7:30pm at

R.C.A.F. Association
110 - 7220 Fisher Street S.E.
Calgary, Alberta

Quebec Chronicle

by Paul Pontois



The man who invented the first Ultralight

Alberto Santos-Dumont was born in 1873. He was a small man, eager, enthusiastic, resourceful, who spent his fortune and his energy for an ideal; the conquest of the air.

His father was Brazilian, his mother French. A very fashionable man, he spent his life in France and, for 15 years, was one of the personalities of the "Tout Paris". His modesty was as great as his natural kindness. He was slim, his weight below 100 pounds.

At the beginning of this century, the "Belle Epoque", Parisians would see him passing in the early morning, driving a sulky pulled by an ostrich, to the "Bois de Boulogne", where the elegant men and women would meet.

Lighter Than Air

He had a great deal of experience as a builder and flyer of aerostats. His small dirigibles were famous in Paris. One morning he stopped in front of his house, 114 Champs Elyses Avenue. Passers-by held the guy ropes and Santos-Dumont entered through the window of the fourth floor. On July 14, the French national day, he flew 30 feet over the troops during the parade. He also worked on a helicopter with 2 rotors and a vertical propeller.

Santo's First Airplane

In 1906, he abandoned balloons and copters and built his first real airplane, named 14bis. A biplane canard with 660 square feet of wing area and numerous vertical surfaces between the wings. The 14bis had a really strange look, a big double shelf, more than an airplane. The dihedral was about 7 degrees, the engine developed 24 Hp and was installed as a pusher. The pilot would stand in a wicker nacelle. The gross weight was 660 pounds - 1 pound per square foot. Santos tested his plane hung from a cable, then under a balloon. After the first real flight on September 13, he took off again on October 23 and then flew 240 yards in 21 seconds on November 12.

The First Ultralight

The next project was a sort of

motorcycle under a cigar shaped balloon, damaged during the first flight. Then No. 18 was a hydroplane. In November 1907, one year after the historic flight of the 14bis, the indefatigable inventor made the test flight of No. 19, "la Demoiselle" (Young Lady). Modified after the flight, it then became No. 20.

With an empty weight of 103 pounds, it was the first ultralight in history. I saw the original airplane in the Paris Air Museum. The wing span is 16'-8" (19'-8" for the serial model) and the overall length is 26'. The wings have two spars and cambered ribs covered with varnished silk. Two struts on each side and upper and lower cables give more strength to the spars. It is a two-axis plane with the dihedral giving enough lateral stability. However, the pilot could warp the wings using cables attached to the trailing edges and two straps around the chest.

The fuselage really looks like an ultralight fuselage of the 80's. There are two 26" bicycle wheels in the front, one at the rear which does not exist

anymore in the serial model, and a tall skid. The triangular shaped fuselage is made of three bamboo poles with uncovered vertical members. The cruciform horizontal and vertical tail rotates around a ball joint and is controlled with cables. The pilot uses a left hand wheel for the rudder and a right hand wheel for the elevator.

The engine is installed in front of the plane on top of the wings, like on many ultralights, and activates a tractor 2-blade 53" diameter, 41" pitch propeller. The engine of the prototype was a flat, twin, water cooled Duthell and Chalmers which developed 17 and 20 HP. It was very reliable with dual ignition. The engine installed on the serial model was a flat twin, water cooled, 30 HP at 1000 RPM, Darracy. The radiator was made of 200 copper tubes placed horizontally in the wing. The pilot was seated behind the front wheels, very close to the ground, on a wide fabric strap, with feet resting on the landing gear axle.

About twenty "Demoiselles" were built and flown all over Europe. It was a very safe aircraft, small for easy storage, easy to fly, cheap to purchase and to maintain. The top speed was around 60 mph. It was the unquestionably the prototype of the *(continued on page 4)*

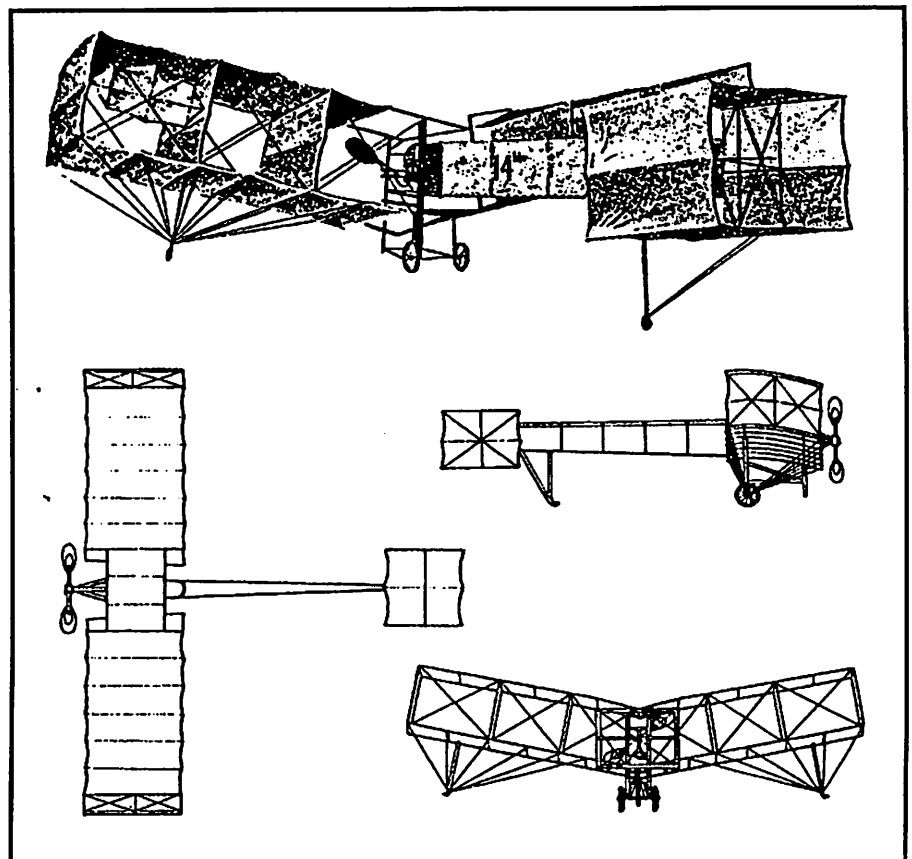


Figure 1. The 14bis.

(Quebec - continued from page 3)

light aircraft and announced the start of sport aviation.

At least three replicas have been built. One by Cole Palers in the US, another by Jean Salis (The Souvenir Squadron) in France, and a third in England by Doug Bianch for the film all of us still remember; "Those magnificent men in their flying machines". Santos-Dumont stopped flying in 1909. He had achieved his goal, which was to make aviation a popular sport.

Suicide

A few months later he contracted a very painful kind of sclerosis, which tortured him until his suicide in 1932, at the age of 59. Some of his friends said that he could not endure the thought that the sport he contributed so much to develop, killed so many people during the First World War. He has been the only flyer of his time to design, build and fly 4 different kinds of flying machines: monoplanes, biplanes, aerostats and dirigibles.

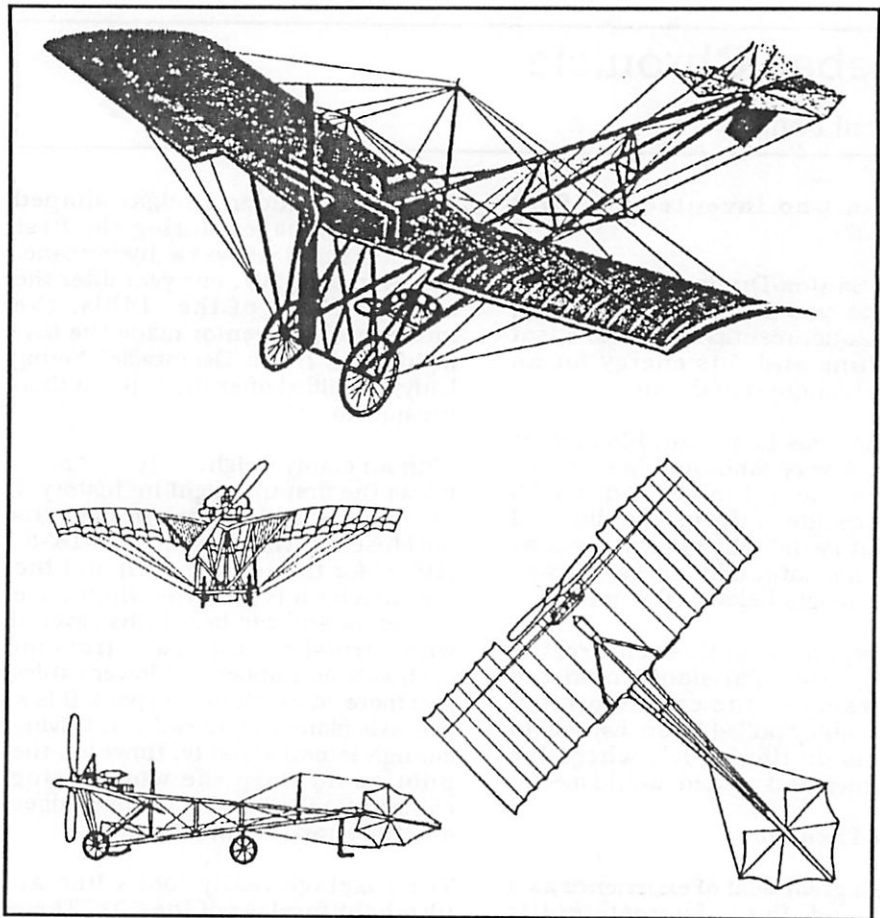


Figure 2. La Demoiselle.

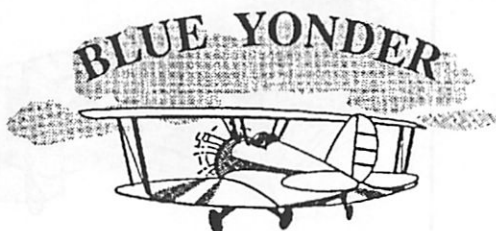
Aviation Extravaganza

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- Breakfast 9:00 - 11:30
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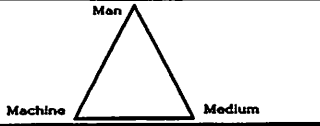
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Safety Corner

by Paul Hemingson



Checkout Time

The note on my fridge door said:

Sat. - 7:30 am
Sp-Bnk A/P
Mike @ Famous Flyers Hanger

I had decided the week before to get my annual checkout flight. It's not a requirement, I do it for my own reasons that are important to me. It cost me good money...about \$127 plus GST. But you get it free! Just put your hands and feet lightly on the controls, and follow me through.

A friend of mine recommended a guy named Mike Dupuis, at Famous Flyers Academy, who offered training in a Bellanca Citabria. There are not many taildragger trainers around here. I phoned Mike and told him I was an Ultralight Pilot who wanted a checkout to see what bad habits I had acquired in the last year... and also to do some unusual attitude stuff to increase my confidence. Mike said, matter of factly, "OK...no problem, see you Saturday morning".

On the Friday night eve of the flight, I slept fitfully. I was going to be performing under the watchful eye of a CFI. Some anxiety and self-doubt crept into my dreams. I was wondering how I would measure up. Strangely enough, pre-flight jitters seem to settle down once I am airborne. I tried to remember the last time I flew a Citabria, what were the procedures and systems, and anticipating the differences between it and my Hiperlight. I remembered that the controls were heavy and that it felt like I was driving a Mack Truck.

Saturday dawned severe clear with Alberta blue skys and only light west winds. The low angle rising sun tinged the snow covered mountains a pinky-orange. The kind of day when you don't mind getting up early.

I arrived early. I always like to arrive early...kind of case the place...and get into an aviation mindset. Watch the windsock, and any local traffic. I was rewarded in seeing an aircraft (Thorp??) do some high speed passes over Runway 16-34, and then pull into rapid climb that took him to circuit height in a matter of seconds. I made a mental note to watch for this aircraft later...he would lap me 3 times to 1 in the circuit.

Mike Dupuis, the CFI, soon arrived. We introduced ourselves. I found Mike to be confident...but not cocky, business like,...but not gruff. Youthful, and outgoing, he put me at ease and I soon had no qualms about placing my trust in him.

We rolled the Citabria (Delta Delta November) out of the hanger, topped up the fuel and pre-flighted the machine. Mike and I climbed in, went thru the checklist, fired up, and got clearance to taxi to the active. Mike said I had control...I wasn't so sure. On the taxi to the runup area I knew I was overcontrolling, and found the heel brakes awkward. At the hold area, we went thru the pre-takeoff and run-up checklist. Switching to tower frequency we received immediate clearance for take-off. The test was about to begin.

Lining up with the center line, I slowly advanced the throttle. At 40 mph I shoved the stick ahead and the tail came up nicely. The white stripes were suddenly much more visible.

Accelerating, I had to counter the forces of the prop with rudder and again overcontrolled as we weaved our way down 25. My heels were also dragging on the brakes as I danced on the rudder pedals. Not a good beginning I thought. I had earlier asked Mike about the take-off and climb speeds, and was prepared to pull it off at 70 and climb around 80. The climb rate seemed anemic at 500 fpm, compared to ultralights, but don't let this fool you...a Citabria can get away on you if you're not alert. I then banked right in a climbing turn to head northwards for the practice area and reset the trim. During the climbout to 7000 feet I found I had to hold right rudder to compensate for the prop wash created by a clockwise spinning propellor. Just the opposite to my Rotax Rooster Rocket. Mike put me at ease with small talk about some local historical sites...he must have sensed some anxiety.

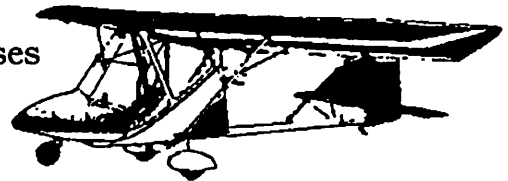
Levelling off at 7000 feet, I reset the trim and power for cruise, while Mike made his requests. He first wanted some shallow turns (Photo 1) to give me a feeling for the Citabria. Raising each wing first to check for traffic I did a 30 degree left turn first and it felt good. I knew what his next request would be...the dreaded right turn. I always find turns to the right harder to
(continued on page 6)

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(Safety - continued from page 5)

coordinate. But I did it OK. I told Mike I always felt more comfortable doing left handed turns and he took the mystery out of this for me. Mike's explanation is that in a stick and rudder airplane a right hand turn requires a kind of backhand on the stick, and being weaker in this position the stickhand does not feel natural or as powerful and sensitive. Makes sense to me, and I wonder why I never thought of it this way before. Another lesson learned.

The next request was for steep turns (Photo 2). First a quick check for traffic. This is a practice area remember, and has lots of itinerant traffic passing thru. I entered a steep left turn and it felt good. The tilted horizon thru the windscreen reminded me to hold a little more back pressure so as not to enter a spiral. The familiar feel of the G-tug in a steep turn returned. It had been a while, but it felt and looked good. The nose pivoted nicely about the horizon. The ball was centered...for now anyway.

The steep right hand turn was not as good. Mike suggested I take my left foot and place it flat on the floor for the next right hand turn. After entering the turn I removed all left rudder pressure and the turn went much better. I needed this reminder to not hold left rudder pressure. This is what I came up for...to see what bad habits I had acquired. Here was a good one to get rid of.

More steep turns in each direction



Photo 1.

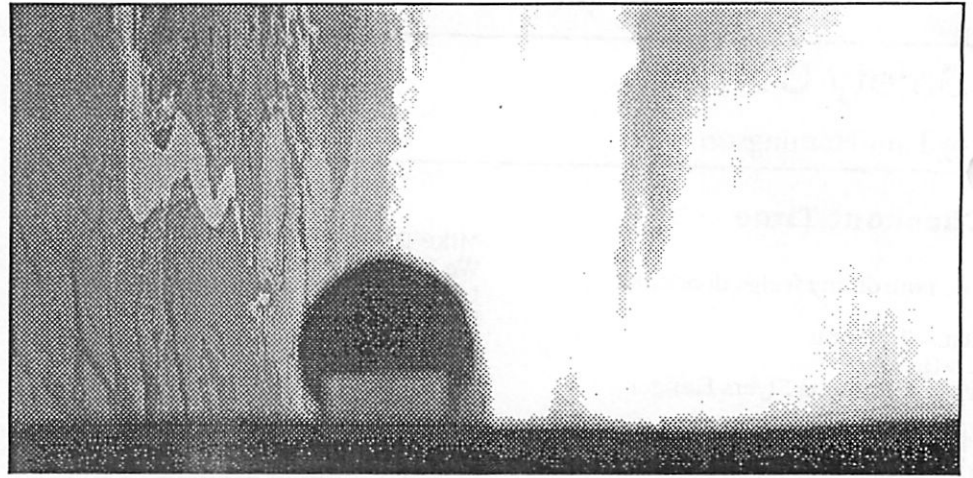


Photo 2.

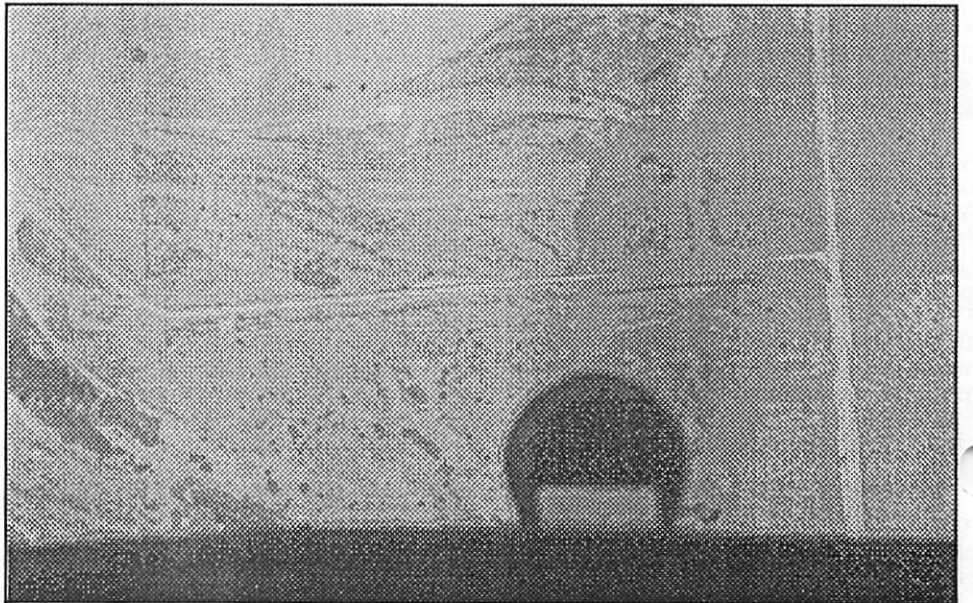


Photo 3.

until I had it down pat. Then it was time for slow flight. I throttled back and retrimmed for 65 mph. The Citabria felt solid, even though we were only a bit above stall speed. I then did some shallow turns to left and right in slow flight. Mike told me I was only a tad above the stall, and suggested I add some power in the turn, but the Citabria felt rock solid to me. Another lesson relearned...know your airplane and how it feels close to the stall, or it will bite back. Slow flight went well and now it was time for some unusual attitudes. Stalls and spins (Photos 3, 4 and 5).

First some stalls. I climbed to 7500 feet, checked for traffic and throttled back, while simultaneously applying progressive back pressure to hold altitude and slow the Citabria to its stall speed. You have to peek at the altimeter to hold your altitude at this height. You simply won't recognize an altitude loss by observing the ground.

(continued on page 7)

(Safety - continued from page 6)

At just above 60 indicated, the nose dropped, and only a bit of forward tick was required to get it flying again, add power and level off. Mike was satisfied with the stalls so now it was time for spins.

Mike, demonstrated the first spin, and then it was my turn. Power back, stick coming back, and hold a boot-full of rudder at the stall. Over we go, hold back stick, stop the rotation with opposite rudder, stick ahead, pull out and add power. On the first spin recovery I pushed the nose over too far, and added power too soon, and then went half way into a loop to get rid of the speed. Not good technique. So I did it several more times until Mike was satisfied. Me too. Stalls and spins, properly executed do a lot for your confidence in recovering from unusual attitudes. The checkout flight was nearly over. Time flies when your flying.

On the return to spring bank, Mike asked for sideslips to both the left and

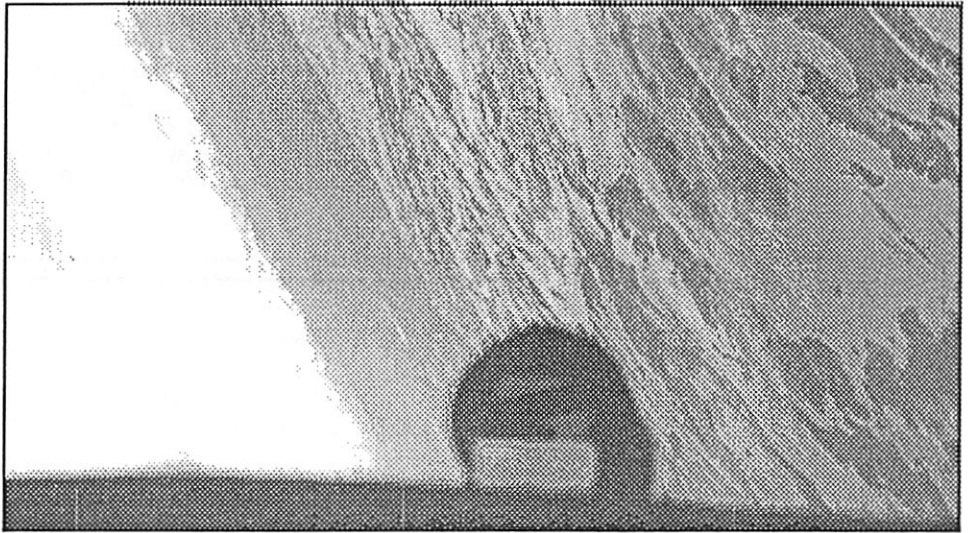


Photo 4.

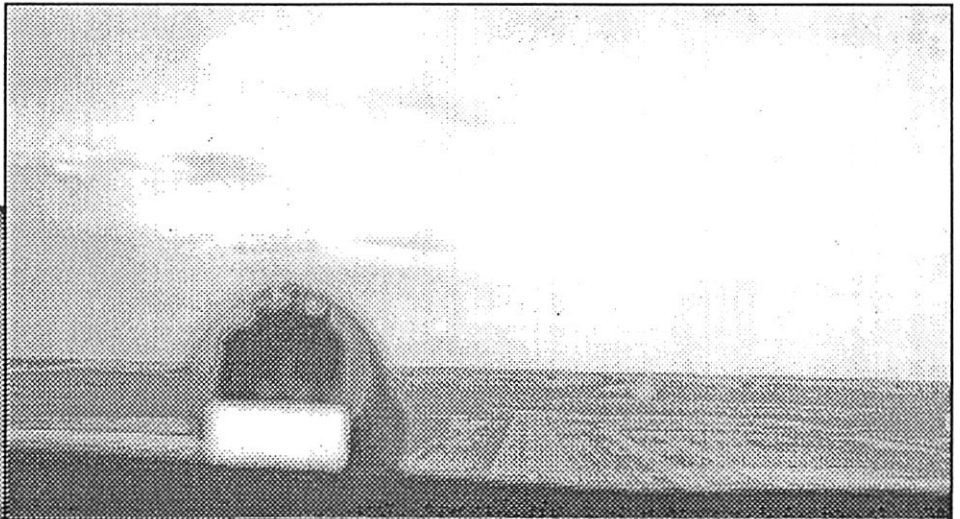


Photo 6.

right. I love slips and these were easy since the Citabria falls like a manhole cover and has lots of rudder authority. Power back, full rudder with opposite aileron and down we go the inbound altitude of 5000 feet. Add power, retrim and call up the tower for clearance to land. Not being completely familiar with the correct nose position I peeked at the altimeter occasionally to assure I stayed at the circuit altitude. I entered the down wind at 45 degrees and cut power on base and retrimmed to 80 indicated.

The turn to final gave me the right perspective of runway 25 and I thought I had everything in control. Over the fence at 80, pull the nose up a bit and speed quickly bled off to 70...everything still looking good (Photo 6). At about 20 feet above the ground I checked the descent further and was looking forward to a grease job. At least hoping anyway. But technique works better than hope once the runway disappears under the nose. I pulled more backstick and would have made a perfect landing if the runway elevation was about 5 feet higher. Maybe I thought the gear was 7 feet long. Anyway, I got a good bounce but recovered and taxied back to the hanger. A humbling end, but fitting I thought, better to end humbled than overconfident.

On the post flight briefing Mike told me I flew well and
(continued on page 8)

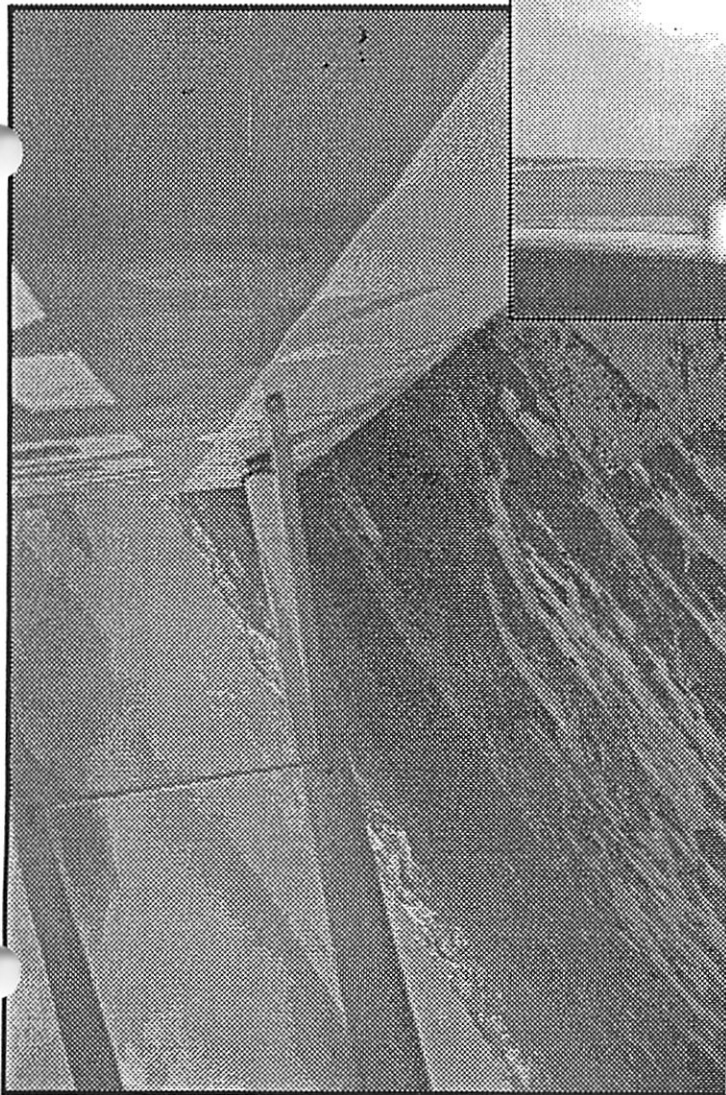


Photo 5.

(Safety - continued from page 7)

smooth. I felt good. It had been several months since I was last airborne, and I needed the confidence booster.

Some of my pilot friends ask me, "Why do I go for annual flight checks?" The

short answer is SAFETY. I always learn something new. I respect the critique coming from a CFI. The long answer is that I want to see what bad habits I have acquired. The independent judgement of a CFI on pilot technique is one way to find faults, and make me a safer pilot. After

a session with a CFI, I feel more confident and competent to control an aircraft.

This time, next year there will be another note on my fridge door.

CALGARY ULTRALIGHT FLYING CLUB

Balance Sheet
As at December 31, 1990

ASSETS:

Cash in bank	\$392.62
Petty cash	39.58
Total Assets	\$432.20

FUND BALANCE:

Opening Balance, January 1, 1990	\$699.05
Excess of Receipts over Disbursements	<266.85>
Closing Balance, December 31, 1990	\$432.20

Statement of Receipts and Disbursements
For year ended December 31, 1990

RECEIPTS:

Membership Dues-1988	\$685.00
Raffles	198.00
Advertisement in CUFC Newsletter	100.00
Video rentals	17.00
Christmas party	190.00
Crest sales	10.00
Bank Interest	18.51
TOTAL RECEIPTS	\$1218.51

DISBURSEMENTS:

Honouraria (3)	\$200.00
Raffles	146.59
Postage	223.67
Christmas Party	236.75
RCAF Dues	150.00
Alberta Aviation Council	45.00
Video purchases	35.35
Aerospace Museum donation	100.00
Hobby show	348.00
TOTAL DISBURSEMENTS:	\$1485.36

Excess of Receipts over Disbursements: <\$266.85>