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Carb Heat

NEWSLETTER

Hot Air and Flying Rumours

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January 2001

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Next Meeting:

Thursday January 18, 2000 8:00 PM
Canadian Aviation Museum

Featuring:

Bob Bell on the reconstruction of the Silver Dart replica

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President's Page
by Gary Palmer

Now that the new millenium has finally arrived, we can all look forward to new challenges; hopefully lots of them of the aviation kind. This is the time of year that many of us are busy working on a future set of wings. I encourage you to share your project with your fellow members by hosting a weekend visit towards the end of winter. In the past we have been treated to Russ Robinson's RV-6, Stan Ironstone's Glasair III, and Bill Argue's Pegazair; who wants to be next?

Fatal Crash in Hull

It is with great sadness that I report the untimely loss of one of our members, Richard Crabbe. Richard perished, along with his brother in the unfortunate crash of his Zenith CH-601 Zodiac onto a downtown Hull street shortly after takeoff from RockCliffe airport. Fortunately, there were no injuries on the ground. Flowers and condolences were sent to the memorial service on behalf of the membership.

While the true cause of the accident may never be known, it seems that after some engine problems, the attempted forced landing ended with a stall from an unrecoverable altitude. This is an all too often occurrence when pilots are faced with a forced landing and it behooves us to try and learn from each and every one of these unfortunate accidents. I have always found the "I learned about flying from that.." series in Flying magazine, along with the accident reports in the Aviation Safety letter, and other sources a sobering reminder that aviation is inherently dangerous and demanding of proper action in emergency situations. As the saying goes, "a superior pilot is one who uses superior judgement to avoid situations where they must demonstrate their superior skill"; accident prevention is always the preferred antidote. Best to learn from the mistakes of others, you won't live long enough to make them all yourself!

Our training tries to instill an over-riding principle, **fly the airplane first** ; that means **all the way to the ground**. I know from my own experience that two thoughts were uppermost in my mind when faced with a propellor failure; make up my mind quickly on a landing site, and avoid a stall spin at all costs! On short final, it was don't stall it from 10 feet, but fly it all the way down to the vegetation (soy beans in my case). With homebuilt aircraft, speed control is generally more challenging than certified aircraft due to the light pitch control forces, and lack of stall warning systems. This forces you to be more aware of your speed on approach, and doubly so when faced with an emergency situation.

Duane Cole, the famed aerobatic pilot always emphasized the importance of remaining within reach of a safe landing site. That means a lot of different things depending on the circumstances; such as avoiding flight over dangerous terrain. Dangerous terrain includes heavily forested areas, mountainous terrain, water, and heavily populated areas. Clearly, we can't avoid all these risks, but it is in our interest to minimize exposure and ask ourselves, if the engine quits now, where would we head for? What is the safest departure path from an airport? When is it safe to attempt a turn-around to the departure airport? Far better to ask ourselves these questions in the comfort of an easy chair, than be left with rapidly diminishing altitude, and an alarming shortage of ideas. There are no easy answers to many of these questions; but the more you think about the possibilities in advance, the more likely you will make the right decision when the unthinkable occurs. Fly safely friends!

November Meeting

Our November 16th meeting featured a fascinating presentation by Curtis Hillier's brother, Glen on experimental rocketry. Members were introduced to perhaps a bit more math than they are used to, but all in all left the meeting with a good bit more knowledge than they started with. .

January 18th meeting @ NAM: Silver Dart Replica construction

Our January 18th meeting will feature **Bob Bell** who was heavily involved in the reconstruction of the **Silver Dart** replica you see on display at the museum. Meeting time as always will be 8:00 PM start. Join us for a glimpse into Canada's first flying machine.

See you there. **Gary**

GPS Training – The Personal Kind
by Lionel Robidoux

I learned a lot about "safe" navigation by GPS during a recent solo flight and I want to share it as I hear and read about more and more pilots relying on the handheld GPS in lieu of dead reckoning and map reading.

In June I had tentatively sold my Ercoupe to an American and I was required to ferry it to Michigan for a final pre-purchase inspection. The plan was for one-day flight – Smith Falls, Peterborough, Sarnia, Port Huron, Michigan, with the final destination being Alma, Michigan. The weather briefer had advised that there was some rain reported in SW Ontario but should be VFR within my flight envelope.

I enjoy X/C flying more than local flights so for this trip I thought I would borrow a Magellan 315 handheld GPS from a friend as an additional navigational aid, although my Ercoupe was well equipped with the usual gyro and avionics stuff. This model did not have any aviation database but had all the other great features of this current generation of portable GPS's. (the 315 is now available with an aviation database – imagine a worldwide database).

I departed Smiths Falls in bright sunshine but thought I would warm up the GPS in case I needed it to supplement my dead reckoning and map reading. When I was about half way to Peterborough, the sunshine suddenly disappeared and light rain began to fall. I had never flown the Ercoupe in rain so I didn't know if the moisture would enter the cabin or stay outside. Visibility remained good and I remained dry – I guess there is more suction outside the Ercoupe cabin in flight than inside. The GPS was indicating 50 miles to Peterborough. At that point I was theoretically lost from a map-reading viewpoint. The decision I had to make was do I put more trust in the GPS than my limited experience with it said I should, or should I do a 180 and return to Smiths Falls.

I decided to continue to Peterborough and let the GPS help me to stay on the most direct path but it was a rather lonely 30 minutes. The light rain continued to fall so I called Peterborough Unicom frequently to report my position and get local weather but there were no responses – my first thought was that my Com radio had failed but it had never failed once during the past year!

When I was about 2 to 3 miles from Peterborough I saw that wonderful sight – the east-west runway straight ahead. I could have landed straight-in but decided to do a normal circuit and "continue" to report my position at all respective points. Upon landing I asked the attendant if he heard any of my position reports, etc., and he casually told me that he had heard them all! I was tempted to ask him why he didn't acknowledge any of them but quickly decided not to bring up the subject as it was continuing to rain and I needed fuel and other services before I could expect to get flying again. Incidentally, the importance of position reports whether acknowledged or not are vital to safe VFR or IFR flying and this was reinforced to me by the fact that a twin Comanche inbound IFR from Halifax came overhead as I was leaving my aircraft.

The unexpected rain that day did not clear until mid-afternoon so my trip to Michigan became a two-day trip, with an overnight in Brampton, which had been half-planned for. Brampton airport is hard to locate as it is located in some very flat country so again the GPS came in very handy with its DME feature. The balance of the trip to Michigan the next day was simply great VFR flying. I left the GPS "warmed up" on aircraft power and amused myself by locking onto the various enroute waypoints I had installed in the database in the comfort of my home the previous week.

RECOMMENDATIONS

1. If you enjoy X/C flying and want to make it as safe as possible with the aid of a non-certified GPS (or certified for that matter), be sure to master its basic functions – on the ground. When you are the pilot, navigator, and radio officer, and are past the point of no return on a long flight, you want to automatically, and with certainty, know what information is available to you from the GPS and what buttons to push to obtain the information you need most at that stage of the flight.

   As an example, I knew the little Magellan 315 could help me on this trip, even if I intended only to count on it for some additional navigational peace of mind. It did however, take me three evenings in my home to become comfortable enough with it to convince myself that it would be a "useful" tool to have aboard. It is a very powerful unit for its size but its operations are very robotic in nature. The manufacturer has tried to make it as user friendly as possible, even so you must be ready to make a concentrated effort to master its technology. As with all high technology devices, working from and through the manual is our quickest and most satisfying route to mastering its functions and the flying pleasures it can bring.
2. Always have a spare set of batteries with you. The manual states that a pair of AA's will give up to 15 hours of operation. My experience was that the new pair of AA's did not operate for 15 hours and I had to install a second new pair while I was still teaching myself to use the unit in my home. If you purchase one of these 315's and intend to use aircraft power as I did, you

should purchase the 12v adapter. That solves the enroute power supply; and you then have the unit with fresh batteries to install more fun waypoints for the next leg of your flight while "overnighting in Timbucktoo".

3. If you are purchasing a portable GPS, try to get a model like the 315, which has the control buttons below the screen. This design allows the screen to be in clear view while the unit is being operated. I have noted that a current, similar model by Garmin has the keyboard above the screen, which is less desirable when used for in-flight operations.
4. VFR flying is based on the important principle of see and be seen (or heard) so don't let your eyes get glued to that little GPS screen for long, particularly in high density areas around airports or VOR's.

Enjoy your GPS!

Maintenance Corner
by Olav Peterson

I have found a need to send in the oil from my engine for analysis for excessive contamination. It came as a bit of a 'shock' that after having used Shell W80 engine oil for the past 20 years and 2F inhibiting oil for winter storage and Shell Bronze for mogas, I was denied their oil-analysis service!!! The reason was vague and the request for clarification was never answered!? Odd! Thank goodness Canadians are not entirely dependent on the whims of the yanks, and there is a source for oil-analysis in Toronto from WearCheck. Garry Fancy has used their services and found them useful and capable. I have contacted them on e-mail for prices and here is the gist of it: 12 units in a carton, at $25 per unit or $300 per carton **plus GST.** I could use two; who would be interested in the remaining 10? I would go ahead if I got a commitment for the other 10. So let's see your 'bucks' and we will send off the order.

Upended
by Michael Maya Charles

A moment's inattentiveness or a judgment lapse is not usually fatal, unless it comes at the wrong time. It can be very embarrassing and humbling, however. AVweb's Michael Maya Charles recently learned this lesson the hard way when a friend's Piper Cub he was flying ended up on its nose. Michael's okay, and the plane will be soon, also. Here's his painful story.

This is going to be very painful ... so bear with me.

I write this from the western shore of Lake of the Cherokees, near Tulsa, Okla. It's been a long, tough day. This morning, I did something really stupid and I'd like to share it with you.

I was spending the weekend with friends at a grass strip near Memphis, Tenn. Each year, the owners of the strip, a graceful couple who fly for the airlines, open their bucolic surroundings to friends and family for the weekend. For those few days, it becomes playground and campground for a couple of dozen fliers, skydivers and even a few local farmers. Many of us fly our airplanes into the party and it's not uncommon to fly another's airplane during the weekend.

Dawn Patrol

Saturday's dawn couldn't have been more beautiful. A soft sunrise crept up over sweet gums and maples in misty 50-degree coolness. Jacket weather. I decided to take a friend's experimental Cub up for sunrise services, staying close to the couple's grass strip since there wasn't much gas aboard.

I flew around the area at between 300 and 500 feet, with both window and door open to the cool air, feeling fortunate that I was lucky enough to bring in the day like this. Other than a couple of deer hugging close to the woods just east of the strip, most of the area residents were still asleep. It was a great morning to be a pilot.

Day Ruined

After my low-altitude sortie, I landed the Cub on one wheel, rolled down the 3,000-foot runway to the turnoff, and gently lowered the other wheel. I don't think there were any witnesses to my landing; most had been up late the night before, partying and listening to a local band that fractured the night air with their rock music.

On the spur of the moment, I decided to make the turn into the parking area with the tail in the air. I had done this before uneventfully in my own Cub and didn't think much of it.

Perhaps I rolled into a soft area on the grass strip. Or perhaps at that moment I got a little tailwind. Regardless, as I began my turn,

the Cub's tail began to lift veeeeery slowly. I countered unconsciously with a little back stick and a bit more power to provide more elevator authority. That didn't help -- the tail continued to lift past horizontal in spite of my efforts. I suddenly realized with horror that I was along for the ride. We were going on our nose.

I pulled the stick full back and snapped the throttle to idle to minimize damage to the little Lycoming. Though I wasn't moving much faster than a brisk walk, the nose gently lowered to the ground. One prop blade dug into the soft earth and the engine stopped, spinner in the wet grass, tail high in the air. I'll never forget that view through the windscreen.

Damn, Damn, Damn!

As you might imagine, I said a few words that are best not printed in a family publication such as this. I unstrapped and leaped out onto the cool grass in my bare feet -- it was the easiest I've ever gotten out of a Cub. I then reached back inside the cockpit, turned off the mags and master switch, and uttered a few more unprintable words. Though I had hoped for no audience to this spectacle, within seconds, a few people came running up to me, flush with disbelief and adrenalin. There was no fire, no spectacular finish, only a very nice Cub standing on its nose in the soft early morning light. Damn.

When something happens like this it seems that we first try to deny it; it's so hard to believe. But there was the bent evidence. Several volunteers and I gently lowered the airplane to its tailwheel and walked it to a parking place near the hangar.

Bad News Travels Fast

The bad news traveled like herpes at a slumber party. Soon, it seemed, everybody was circled around the bent Cub, offering his or her suggestions on how to fix it. I sat nearby, going over those final few seconds in my mind. What the hell happened?

Throughout the morning, people would come by my Cessna 185 or find me wherever I was, offering their condolences. The women, many of them friends for years, just hugged me, knowing how miserable I felt. The men, a bit less emotionally complex, slapped me on the back or shoulders, offered their condolences and support, and told me "Hey, it's no big deal."

But it is.

"We can fix airplanes; are you all right?" one friend asked.

Not really.

"Damn, Michael ... what happened?" one asked.

I screwed up.

"Jeez, Michael, if this can happen to you, it can certainly happen to anyone here...." Then he added, "...it probably should have happened to some of these other pilots."

Thanks. It could happen to any of us, but that doesn't help me right now.

"This should have been me, with my limited experiences -- not you."

Hey, airplanes can't read logbooks.

"You are one of the most experienced and qualified pilots here; why this?"

I'd like to have a clear answer for that myself....

"I'm so sorry, Michael. I know how you must feel...."

No ... no you don't, really. It's worse than that.

"I tore up the prop while taxing a Cessna 182 some years ago," one lady told me. "I had to sleep with the owner to make it right." The owner was her husband. I didn't volunteer.

Judgment

If I can get past that horrible picture of green grass in the windscreen for a moment, perhaps I can see the reason for this unfortunate incident. Let's look at the basis for my decision to turn off the runway with the tail still in the air.

Currency

I was comfortable in the Cub because I own one and have flown many others. The FAA and insurance companies make a big thing of "currency." I'm very current in Cubs. Since May, I have flown my Cub 60 hours, probably more than the average Cub pilot flies in a year -- or in some cases, two. But that familiarity both decreases the risk -- and increases it. With currency comes familiarity -- and

even complacency if we allow it. In all things, a balance is needed between familiar and too familiar. We need this to maintain the awareness needed to see those often-subtle things that could make a difference.

The tail-up turn is a no-brainer in my own Cub. But I usually solo from the rear seat or have someone in the front seat. The center of gravity (CG) in my Cub is a bit forward because of a metal prop and its C-85 engine, but it certainly doesn't have a forward CG problem.

Experimental Airplanes

Another issue in this incident is the fact that this is an experimental airplane. I've got a fair slug of time in experimental aircraft and am well aware that when we climb into one of these airplanes it says near the entrance, "EXPERIMENTAL." That reminds us that every one of these airplanes is unique. If you don't know all those differences then you can make mistakes like I did with this Cub.

What I really didn't know about this Cub is how far forward the CG is. Though the airplane looks like a Cub, it really isn't. Rather, it's a collection of parts from a J-3/PA-11, a Super Cub, and others; a questionable lineage at best. The final result is not good or bad, particularly ... just different.

One of my friends came up to me after this incident and told me "I don't fly that airplane because it flies like crap; it has never flown right."

Well, this airplane doesn't fly like a Cub. It is different. It's a lot heavier in the ailerons and perhaps a bit lighter in the pitch than either a Super Cub or a J-3. But I knew that.

Weight And Balance

I learned a lot about weight and balance of the airplane I was flying -- after this incident. This airframe was never intended for the heavier Lycoming O-320; it was designed for 37 horsepower. The CG is always well forward on this airplane; in fact, on a recent annual, a mechanic added 40 pounds of weight to the aft fuselage to attempt to move the CG into a more normal range. If I'd known HOW far forward the CG was on my solo flight with very little fuel, I know that I would not have tried a turn with the tail in the air.

Weight and balance is an area in which all experimental aircraft are different; do you know where the CG is when you fly an unfamiliar experimental aircraft? Do you know how the builder changed things from "standard," adding this and removing that, to suit his or her individual preferences?

The Owner Listens

Penny was as sweet as any airplane owner could be when discussing bent metal. When she came out to see her broken airplane an hour later, she just smiled and hugged me while I told her how sorry I was to bend it. Then she ceremoniously handed me a Styrofoam cup with the words, "Michael's Flying Lessons" penned crudely on the side. Inside the cup were the offerings of several of my "friends." It included some change, mostly pennies, a few candy wrappers, a Tums and the best of all, a tampon. I didn't know exactly how I'd use that, but it was obvious my friends were telling me, "It's all right; we still love ya."

Penny told me not to worry about the damage; I told her I'd make it right. "Oh, I always wanted to repaint that cowling," she said good-naturedly. "The paint never really matched, anyway." She also told me that after it was fixed, I would be expected to fly it again at next year's party, taking her friends and kids who came to the party for rides, as I always did. She couldn't have been more understanding or nicer -- though she said she was really going to enjoy flying my 185 while her airplane was down. I told her we might want to pass the Styrofoam cup around again, so that I could get bus fare to Colorado.

Painful Hours

As the morning hours stretched on, every partygoer walked up the nose of the Cub, hands on hips or arms folded in front of their chest, getting the whole story from whomever was close. It was a pitiful-looking, broken Cub; prop twisted, oil dripping from its chin. I watched from a distance, and had a chance to think a lot about this incident. Yes, my ego was bruised; any of us who works hard and takes pride in our flying would have been bruised. But an even bigger issue for me was that I had betrayed the trust of a friend who had open-handedly loaned me her airplane. The list of pilots whom Penny trusts is very short. I take that trust very seriously and in a hastily-made decision, I had betrayed that special privilege.

Going Home

When the procession of well-wishers began to slow, I checked the weather and decided to leave the party a day early. There was a low-pressure system forecast to move into the northern Rockies and I couldn't face a challenging weather situation in my state of

mind. I told several people that I was leaving to catch the weather window presented to me. But those who knew me well were on to my real reason for leaving: I wanted to be -- needed to be -- alone.

As I flew west in my "borrowed" 185, headed for Colorado, I began looking for a grass strip to alight for a bit; it was still early with plenty of daylight and I wanted to just get out of the airplane for a while and sit quietly. I found the perfect place as I made my way into eastern Oklahoma: Teramiranda.

My landing in Oklahoma was the worst I've ever made in my 185; the first touchdown on the grass runway was very sweet: upwind wheel brushing the grass. But a gust of crosswind (it was gusting to about 18 knots) caught my left wing and lifted my lightly-loaded airplane off the runway. I bounced the second landing ... and the third ... and finally three-pointed it with the end of the runway coming up rapidly. With that display of poor airmanship, I decided to stay put and spend the night. I didn't belong in the cockpit; my head obviously wasn't in the ballgame.

Cleaning Up After The Party

Fixing the Cub won't be a big deal; one prop blade is bent, but easily straightened; the spinner and lower cowl will have to be replaced, as will the oil cooler, which looked to be cracked. The carburetor bowl might be cracked, and the cowl will need some paint, too. This could have been much worse.

My pride, ego, and sense of ease that I enjoy in most airplanes will take a bit longer to fix. It is often said that we learn more from our mistakes than our triumphs, and I've found this to be true. But this is one hell of a way to learn. I'm still smarting from the sting of this event, though it will eventually heal, and I'll get my groove back one day.

My Gift To You

So I sit here on these quiet shores, alone, bruised and wiser. I humbly hold myself as an example here for all to see. Yup, I screwed up. If you can learn from my mistakes here, take that knowledge and prevent a similar event in your own flying. We don't personally have to make every mistake to learn every lesson. And if there's one universal lesson in all this, it's that experience, currency and good hands are not the only prophylactics needed to prevent an accident or incident. Judgment is a key ingredient, too. I made a hasty, bad decision this day and the result was a bent airplane -- my first such poor judgment in nearly 19,000 hours of flying. I will try mightily to make it my last.

Articles Wanted

I am always interested in receiving submissions for this, your, Newsletter. You may bring articles to the monthly meetings or mail information to the post office box or send me an e-mail attachment at:

cbgregoire@sympatico.ca

Classifieds

Place your ads by phone with Charles Gregoire @ 828-7493 or e-mail to cbgregoire@sympatico.ca Deadline is first of the month. Ads will run for three months with a renewal option of two more months.

Looking for a Drum Buffer to Buff aluminum. Looking to buy, rent or borrow. Anyone with information contact:
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Wanted:
Set of Cleveland 500x5 wheels and brakes (have set of 600x6 Cleveland wheels, brakes and tires to trade for the 500x5's
Lionel Robidoux 613-738-1066 10/2000

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