



NEWSLETTER

Carb Heat

Hot Air and Flying Rumours

Vol 33 No. 01

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JANUARY 2003

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**Thursday, Jan 16 2003 8:00 PM
Canadian Aviation Museum**

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Feature Presentation

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By Bill Reed & Martin Poettcker

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**President's Page
by Gary Palmer**

I want to wish all members a very happy New Year, and trust you found a little time to spend on your favourite aviation project in addition to the usual gluttony and good cheer.

Chapter Lounge renewal:

Dick Moore and his merry band of helpers have pretty much completed the rebuild of the chapter lounge. Just a few small projects remain to be done, including a wall-mounted flight-planning map being spearheaded by Bill Reed.

The new carpet really improves the appearance of the lounge. It also means we will need to be extra vigilant to treat the lounge with the same **respect we would treat our own living rooms** to keep it looking ship shape. That is the best way we can thank Dick and his crew for all their hard work on our behalf.

Chapter Bylaw revisions planned for February 20th meeting.

As part of our annual EAA chapter status report, we took the time to revisit our chapter bylaws and noticed there were a couple of sections that could benefit from minor changes to reflect current realities, and the most recent EAA headquarters guidelines; as well as position us with more flexibility for the future. The bylaws require that we give the membership adequate notification of the meeting date at which the proposed changes will be discussed and voted upon. Details of the proposed changes will be included with the next newsletter. This should be a short prolog to the planned presentation.

Membership Renewals.

With the arrival of the new year, our 2003 membership drive moves into high gear. As a reminder, all Associate, and Full members are required to keep their **EAA national membership current**. This is particularly important in the new aviation insurance climate, as it is a condition to keep our chapter insurance in force; coverage that protects the chapter and members from any claims that might arise from any of our operations such as the fly-in breakfast, or Young Eagles flights.

Upcoming meetings.

Looking forward we have an interesting tentative slate of speakers and topics planned including:

Feb	Martin Poettcker will describe the overall design and fabrication issues for building a torsional resonance damper for his Subaru EA81 powered CH601.
March	Gary Loubert will provide an update on the design of his own custom Engine Instrumentation system for his Sonex project.
April	Martin Poettcker will describe the overall design and fabrication issues for building a planetary gear reduction drive for his Subaru EA81 powered CH601.

November meeting on Hangar Rebuild and Door Design

From all reports, **Charles Gregoire's** presentation on the reconstruction of his hangar and the design and construction of a wooden structure bi-fold door was a great success. While I missed this meeting, I would like to thank Charles for sharing his experiences with us.

Thursday Jan 16th meeting @ NAM: Navigating the homebuilt inspection process.

Bill Reed and **Martin Poettcker** represented the chapter at a Transport Canada and MD-RA sponsored seminar in Midland aimed at improving the overall inspection process. Bill will summarize the information gleaned from this meeting to help members navigate the oft times confusing maze of inspection requirements. Bill has also agreed to join the chapter leadership team as a focal point for this type of information; welcome aboard Bill.

I look forward to seeing you at the Aviation museum, at our normal start time of 8:00 PM.

Gary

ASTM TASK GROUP FORMED TO STUDY ETHANOL AV-FUEL

December 19, 2002 - At its recent (December 9-11) meeting held in Anaheim, California, the American Society of Testing and Materials (ASTM) Aviation Gasoline Subcommittee formed a Task Group to explore the development of specifications for ethanol-based fuels for piston aviation engines. It's part of the subcommittee's effort to find a viable alternative to 100 low-lead, which will eventually be phased out of production.

Earl Lawrence, EAA Vice President of Government and Industry Relations, who serves as secretary of the aviation gasoline subcommittee, said that the newly appointed group "establishes a forum to investigate the properties of an ethanol-based fuel to see if it can be safely used in aviation."

Fred Cornforth, Conoco-Phillips, will serve as Task Group Chairman. "It (ethanol-based aviation fuel) is just one of the many options out there to look at it, understand where its advantages are, where any problems might exist, and how we can get around those problems," he said. "We are currently examining ethanol-based fuels with the intent of eventually forming specifications if the testing supports that."

One example of an ethanol-based aviation fuel is E-85, which does not have a current ASTM spec. Earlier this year Cessna warned against using E-85 in some of their aircraft because it can potentially cause problems with some of their aircraft.

"We'll take a look at a lot of fuel compositions and alternatives and try to understand where the benefits and the trade-offs and the best fuels compositions lie," said Cornforth.

COMING EVENTS

RAA Chapter 4928 Third Annual Ski Fly-In

Where? Kars Rideau Valley Airdrome N 45 06 W 75 38
Elev 286'
Rwy. 08 / 26 3,000' x 100'
Comm. 123.4
Driving in ? Go to Dilworth Road East off Hwy 416

When ? All day, weather permitting Saturday March 01, 2003

Food and beverages Mary's homemade Beans
Tom Bennet's Buns
Dave's World famous Irish Stew
Coffee, Hot Chocolate, Soft Drinks

No charge, donations accepted

More info ? Contact: Dave Stroud 613-226-7889

HOW WELL PREPARED ARE YOU?

Borrowed from EAA 266 Newsletter

A fellow pilot who ties down his fast single engine at Cedars told me about an unexpected CAF escort. So, here, unaltered, is what he e-mailed for your reading. " I left Guelph around noon on a very hazy day, 1st mistake of this day was made when I had no idea of what my heading should be, this was the 1st time I could not see Lake Ontario, I new it was South so on I went, I contacted Toronto Radio and they gave me a proper heading to Island Airport, Hummm, radio is a little quite after about 5 minutes, I was rite over the airport and I decided to see if the controller forgot about me, after receiving no reply I noticed the radio was dead, I checked the fuses then went for the handheld my partner left me and discovered the battery was dead, 2nd mistake of the day, never checked them, 3rd mistake was no spare battery. I decided to squawk 7600, Toronto airspace is busy, so I went at my 7500 ft. altitude I gave in my flight plan with no problems, around Cornwall I started my descent when this fighter plane (CF-18??) came from under the plane and straight up in front of me, he must have been doing 500mph, he sure got my attention, well about 30 seconds later about 500 ft to left another one was wagging his wings, these guys have missiles, my 4th mistake of the day was not remembering where the intercept instructions were, trust me, when you have guns looking at you the mind gets a little confused, did he want me to follow him?? or land at Cornwall? or keep on going, I decided to wag my wings and continue my descent to Cedars and hope I would not be shot down in the process, all went well and luckily no one was in the circuit when I landed, reaching the pumps I got the expected ' phone this number now' as we watched two of these fighters flying over the field making sure I landed safely. Well I made the call, expecting the worst from FSS, but all I got was a transfer to some Captain in our Airforce who questioned me about my intercept knowledge. Lesson learned?? Check battery, get a plug in adapter for the cigar lighter, and read the intercept orders once in a while." Peter Blatter wondered if the fighters could have slowed down enough to fly alongside some of our Aeronca Champs.

A GREAT RIDE IN A PBY

Twin-engine amphibian — unusual today, but not unknown. But one built in 1943 and still flying? Rarer still. Burns 150 gallons per hour, and maneuvers ponderously like a ship even when off the water. Flying one is probably a once-in-a-lifetime treat for most of us.

By J. B. Stokley as found on avweb.

There I was in the left seat, 1,500 feet, sweating buckets, searching the jungle below for anything unusual that should be reported. Well, OK, it wasn't a jungle, just the piney woods of western Georgia, and I didn't really need to report anything, I just needed to keep the airplane out of said piney woods and West Point Lake, and not make the folks in back feel too much like barfing in my attempts to make the airplane fly smoothly in the hot, bumpy air. Why was this unusual, you might ask. Living in east-central Alabama, I am forever flying around in hot bumpy air. This time was special though, because I was in the left seat of a converted PBY-5A Catalina with big old B-25 engines on it. Not my usual ride, fer sure.

The [airplane](#) belongs to Charlie Clements of Miami, and he was gracious enough to offer me not one but two shots at flying the airplane from the left seat in one day. Nothing like being in the right place at the right time.

How I Got There

My flying background is probably similar to a lot of people's, right up until I hooked a left and got into warbirds. I wasn't military or airline trained, and started flying while in college. After college I used my "graduation money" and

a gift from my Dad to buy a 172, and flew it for several years, earning an instrument rating in it. After the 172, I bought into a partnership in a straight-tailed Lance and flew it until I got bored with it, which resulted in pilot stupidity in the form of lower and lower flying. My wife, bless her, realized I needed a new challenge and bought me an aerobatic course at a nearby airport. Flying the Citabria, my first taildragger, was a hoot. I knew that a Citabria wouldn't meet my needs, but I wanted something that I could go somewhere in and still get upside down now and again. I shopped around, got a ride in a T-6, and was hooked. Fortunately for me, my bride liked it too. That was almost 15 years ago. I still have the T-6 — and the bride.

Along the way, business was kind to me, and I was able to supplement the T-6 with a Cessna 170 for a few years. Then that bug hit again and I decided I wanted a C-45, known in the civilian world as a Twin Beech, the ubiquitous BE-18. Problem was, I didn't have a multi-engine certificate. Well, a few weekends later I'd solved that problem and had a dripping wet new "Private Pilot, Multiengine" ticket in my pocket. I soon found the C-45 of my dreams (later to become nightmares, but that's another story), sold the 170, and bought it. I got about 250 hours of multiengine tailwheel time before we parted company, including a Cayman Caravan trip to Grand Cayman. Now I have a nice, quiet little Twin Comanche that burns hardly any gas, doesn't leak in the rain, has good radios and an autopilot, something I'd sorely missed since the Lance.

This is a long way of explaining how I got to fly a PBY. Sorry 'bout that. I've gone to airshows in the T-6 off and on ever since 1989. I don't have a low-level waiver, but I do have an FAA-recognized FAST (Formation and Safety Training) wingman formation card and keep it current as a member of the [Dixie Wing](#) of the Commemorative Air Force. I'd come to LaGrange to fly some formation with other T-6s at the behest of Joe Fagundes, a retired Delta pilot and SNJ owner who was putting the "talent" together for the LaGrange Air Fest which is sponsored by and benefits the [Delta Airlines Flight Museum](#). I'd no sooner shut the engine down upon arrival than Joe met me with the question, "You wanna go for a ride in the PBY?" Duh, like he even needed to ask. We sped to the airplane as fast as the golf cart would go, Joe introduced me to Charlie, and I joined the end of the line of those filing aboard.

First Flight

On the first flight, since I was a last-minute addition to the crew, I waited until last in the rotation of pilots on board to get behind the mammoth yoke. By doing that, I got to occupy the seat during the landing, and get a little taxi time in addition to some flying time and following Charlie on the yoke during the landing. Apparently I didn't scare him too badly, and he invited me to go again on a later flight when there would be only one other pilot on board. On the second flight, I occupied the seat during the startup and takeoff, and flew for about 20 minutes before swapping out with the other pilot for the landing.

The history of this aircraft is as long and varied as you'd expect of an airplane that joined the Navy in November of 1943. Then it was known as BUNO 48287. It served in the Pacific during WWII, then was sent back stateside and flew out of NAS Alameda until about 1946. Records indicate it then went to the Coast Guard, serving until 1948 or so. From there, it appears to have been decommissioned and sent to the Litchfield Park boneyard until July 1956, when it was struck from the Navy inventory and soon after acquired by Questor Surveys Ltd. of Toronto. It was while it was owned by this company that it was converted from a stock PBY-5A to a Super Catalina by the replacement of its original Pratt & Whitney R-1830 engines with Wright R-2600s. The airplane can attribute its survival into the 1990s to the Aerial Survey business, the only activity other than firefighting where these aircraft saw widespread use. This activity kept the airplane gainfully employed all over the world, though primarily with Canadian owners, until 1985. The airplane then moved to Florida where it was in storage for several years with a few different owners before being acquired by Charlie in 1989. It was slowly restored to flying condition and Black Cat appearance, while retaining the "Super Cat" mods. (The Black Cats were PBYs that patrolled the Pacific during WWII mostly at night, and were painted flat black.) Chalks, the seaplane airline, assisted with the restoration work. In March of 1998 the aircraft went on display at Kermit Weeks Air Museum at Tamiami Executive airport (now known as [Wings Over Miami Museum](#)) where it is still based and maintained.

My first impression was that this thing is huge, and everything happens slowly until it doesn't. I only *thought* the pitch on a Twin Beech was stiff. The largest airplane I've flown to date, this PBY is positively ponderous in its control response in pitch and roll. As Charlie said, "Remember, you don't turn a PBY, you 'Come about ... steady as she goes, lads.'" Elevator trim is definitely required. It probably would have helped if all the big guys in the back had not been wandering around from the nose to the tail, but hey, you can't have everything. Rolling into a turn requires you to lead with rudder, and be patient with the yoke. Turn it a bit and wait for something to happen, then adjust as necessary. I did get complimented on being the only pilot that flew it that day who used enough rudder, a legacy of a lot of tailwheel flying I suppose. The rudder is what you might call stiff, too. Concrete like might be another way to describe it. We were blazing along at about 135 kts., burning about 150 gph. Made me feel good about the economy of my T-6.

The cockpit layout is a tad different from anything else I've ever flown. Most of the switches are on a huge panel attached to the yoke bar — think dual control Baron with a massive bar between the yokes about a foot tall with a double row of switches mounted on it. The instrument panel itself is fairly stock, and has all the usual flight gauges, plus a few I didn't have time to figure out. The mixtures are behind you on the cockpit bulkhead, and the throttles and prop controls hang down from overhead. The throttle levers are about a foot long and hinged in the middle, presumably for pilot adjustment but I couldn't swear to that. On the ground, the rudder is locked via a horizontal bar on the left cockpit wall and you steer with brakes and differential power. The nose wheel is free to swivel.

As I lined up on the lake for a couple of low passes, Charlie lowered the electrically controlled wing tip floats using a switch on the yoke panel. That slowed us down about 10 knots, maybe a little less. You'd think the bass boats on the lake that saw this monster heading straight for them in landing configuration would get out of the way, but you'd be wrong. We passed over two that showed no inclination whatsoever to move. Good thing we weren't actually planning on landing. The plugs were out of the bilge and there are no bilge pumps installed currently, so water landings aren't a real good idea right now.

There are no flaps on this airplane, so the floats are used for extra drag with the crosswinds aren't too strong. I flew a wide downwind while pulling the power back to about 20", aiming for 85 kts. on long final. It was surprisingly hard to slow it down while coming downhill, too. After a long fairly flat final, Charlie got on the controls and we touched down at about 70 kts. It wasn't all that hard to control on the ground, though I was instructed to keep a tight hold on the yoke during taxi to keep the wind from grabbing the ailerons. As we turned off the runway, Charlie raised the floats to keep them from hitting anything on the ground like tall signs or airplanes parked too close to the taxiway. They don't even have to be real close; the wingspan is 104 feet. I pulled the lever to lock the rudder and taxied in using brakes and power to steer while keeping a two-handed grip on the yoke to control the ailerons.

Exiting the airplane, I found I was soaking wet. Flying this thing is work, but it's the kind of work a fellow doesn't mind doing, ya know? I have a whole new respect for the guys that flew'em in anger for hours and hours of patrol and survey work, as well as those who horsed the fire bombers around. They earned their pay!

The Second Flight

On my second flight, I got to observe the startup ritual. The pre-start checklist is not unduly long, and once crew chief Luis let us know everyone was aboard Charlie began to wake up the R-2600s. Like most big radials, it takes both hands to start 'em up. One hand tickles the primer, the other hits the starter, get off the primer and switch on the mags after turning around and looking way up there at the prop turning through 6 blades or so, then back on the primer until she fires. Repeat for the other engine. Starting is of course accompanied by snorts and great belches of white smoke and the lovely sound of a big radial coming to life. That's what airplane motors are *supposed* to sound like. Since the airplane with full fuel can fly for up to 24 hours, it needs *lots* of oil. The oil tanks hold 55 gallons each. Charlie keeps them at 25 to 30 gallons to keep the warm-up time down a little bit. He doesn't exactly top off the gas tanks when he gets to the fuel pump, either. As the engines warmed, he told me a little about the power settings, speeds and such.

To quote Charlie, "Max T.O. power is 44.5"/2600 rpm, METO is 39"/2400 rpm. Most all our takeoffs are at 39-40" MAP and 2600 rpm, reducing just the rpm at the first power reduction to 2400, giving us true METO at that point. Enroute cruise power is 29-30" MAP @ 1850 rpm, giving us 135 kts. IAS. I use 150 gals per hour as a flight plan burn and it comes close on short legs, getting better than that on 1.5+ hour legs. To start it up cold, warm up, taxi out, runup, takeoff retract the gear requires 60 gals of gas." Wow.

After taxiing to the runway, Charlie performed the runup and I followed through on the controls during the takeoff roll. He got off the yoke at a couple hundred feet AGL, and we climbed out over the city of LaGrange to let the firefighters and EMTs aboard have a look at the city they protect. Again, I was struck by the stiffness of the controls, but I was slowly beginning to feel like I was in control rather than along for the ride. During the climb, I was a bit surprised at the good visibility over the nose. The cockpit sits high on the fuselage and both forward and side visibility is quite good. It would have been easy to pull the nose too high after being used to the sight picture from the cockpit of the T-6. The PBY is much better. After 20 minutes or so of circling LaGrange, I climbed out of the seat and let the other pilot aboard take a turn.

Formation Flight

After the my second flight, the airplane departed again with some airport officials on board, so I beat it back to my T-6 and launched for a little formation time. It was pretty easy to catch, and when I tucked in to what I thought was the proper place, I looked up and realized I was inside the wingspan of this beast. Time to ease out a little! I followed along for another pass over the lake, deciding it was a good time to stack up rather than down. I figured he'd bounce off the water with a lot fewer consequences than I would have if we dipped a little. I did try to avoid being on the inside of his turns after the first time, since I got a tad slow for my tastes, and the PBY is *sooooo* ponderous I had a little trouble judging his turn-rate. Just because the airplane banked over didn't necessarily mean it was going to start turning right this minute. Outside the turn was definitely easier. After a final pass down the runway at LaGrange, Ga., I broke out of the formation and headed on home with a big grin on my face, thinking hard about whether or not to tell my wife about the "For Sale" sign in the window of the PBY. Wonder if I could get it into my 2400-foot airstrip?

Place your ads by phone with Rodney Stead
 @ 836-1410 or e-mail to sttstmp@sympatico.ca
 Deadline is first of the month. Ads will run for three
 months with a renewal option of two more months.

TCM Starter (zero time) for Continental 0-200
 Airborne Dry Vacuum Pump #211CC
 Sensenich M69CK Prop, 52" pitch
 Vernier Control 120" cable, .063" wire
 Vernier Control 48" cable, 10-32 thread end
 AC Tach 3 1/8", CCW
 Spinner with 6-hole, 10 1/2" dia. backing plate
 EDO 1320 Float Caps- set of 8.
 Contact Bob at robert.schmidt@jdsu.com
 or call @ 613-843-3000, Ext 1028, leave message.

11/02 Bob Schmidt

For Sale: 15 lbs. Aluminum 6061 T6 Very small pieces.
 Some pieces partially annealed, a very labour intensive
 process.

01/03 Martin @ 613-271 6113

For Sale: new easy-lift 2000 amphibious aluminum floats
 Electric /hydraulic operated.

01/03 Paul Sicard @ 613-487-2614 or 613-715-0575

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

e-mail sttstmp@sympatico.ca



EAA Chapter 245 Membership Application

NEW:___ RENEWAL:___ DATE: __/__/__
 EAA NUMBER:.....
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 ADDRESS:.....
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 REGISTRATION:.....

OTHER AVIATION AFFILIATIONS:

COPA:___ RAAC:___
 OTHER:_____

Annual Dues: January 1st to December 31st. (porated after March31st
 for new members/subscribers).

Associate Member ___: \$30.00 Newsletter plus Chapter facilities
 Full Member: ___: \$55.00 Newsletter, hangar, workshop,
 tiedowns. (Note: there is a one time \$200 initiation fee when you become a
 Full Member)
 Newsletter subscriber ___: \$30.00 Newsletter
 Note Associate and full members must also be members of EAA's parent
 body in Oshkosh WI, USA

Make cheque payable to:

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