

EAA 245

OTTAWA , ONTARIO

NEWSLETTER

REPLY TO: EAA CHAPER 245 , TERMINAL BOX 8412
OTTAWA , ONTARIO
K1G 3H8



CARB HEAT - Hot Air and Flying Rumours

Meetings - 3rd Friday at the National Research Council Building Auditorium
100 Sussex Drive, Ottawa, 8 pm

May '86

Friday, 18 April, 1986

About 40 people in attendance

Eric Taada announced work parties for Saturday and Sunday, 19/20 April,
including a worker's lunch at Bill Argue's farm.

Guests: Dick Adams
George McKenzie - partners in a Seawind Project
Daryl Bender NEW MEMBER
Kevin Caldwell
Don Creelman
Mike Crew
Kyle McCormick
Lynn Musik
Ray Pender
Andy Ricketts

NEXT MEETING

Date: May 15, 1986

Place: NRC Sussex Drive

Topic: Ted Chambers' Tri-Zenith
Gord Standing will bring in his tail feather of
his Fly Baby
Movie and/or Video

MEETING AFTER NEXT

Date: June 20, 1986

Place: Carp Airport EAA Hangar

Topic: Awards Night
Walkaround

Pres: Eric Taada	749-4264	Vice-Pres.: Roger Fowler	225-6070	Program Director:
Sec: Terry Peters	745-7466	Newsletter: Dick Moore	836-5554	Peter Plaunt
Aircraft Op.: Garry Fancy	225-0454	Treasurer: Gord Standing	224-2879	839-2283



NOTES ON TALK BY

DAVE MURRAY

on his Starlite Project

Dave is one very enthused builder and has been working steadily on his Starlite - about 350 hours worth so far, at the rate of about 20 hours per week. He is expecting the overall effort to take about six months (and a total of 650 hours). The kit comes complete with everything except the seat cushions and the paint.

The small size of this single-seat low-wing homebuilt basement construction relatively easy (21 ft span, 16 ft length, 26 in. cabin width). It's also very light - 250 lbs. Its wing loading is 8.4 psi (the same as a Cessna 150), so it doesn't bounce around like many ultralights. With a 40 HP Rotax its advertised cruising speed is 120 mph (150 mph top), max rate of climb is 1200 fpm, and supposedly it will still climb at 300 pm at 16 000 ft if you've managed to climb that far without passing out. It's also supposed to loop in 300 ft with a 90 mph entry. A range of 400 miles is claimed on 8 gals. U.S. (about 2-1/2 gph at 120 mph). At 90 mph, it's supposed to burn only 1 gph. Gas consumption is very good up to about 5800 rpm but beyond that it goes up drastically.

The Starlite was originally designed for 18 HP! In other words it now has twice as much power as originally intended. It can climb on one cylinder! Climb out is at 60 mph with a 40° angle. Apparently one has to get used to the difficulty in slowing the airplane down!

Dave said the service from the supplier is good. He needed to replace a damaged rudder and exchange a wrong part, and the supplier responded immediately. Total cost including shipping was \$11,000. A two-placer is apparently in the works using a 65 H.P. water cooled Rotax.

Since the 2-cycle engine gets about 40% of its cooling from the inflow of the air/flow mix, it can't be run lean. Carburetor heat is applied all the time - helps to cool the engine. The engine also doesn't like long descents - throttle needs to be applied to keep it cool. A major overhaul is required about every 400 hours (at a cost of between \$150-\$200). The overhaul can be done here in Canada or the engine can be sent to the U.S. in exchange for a replacement one. Dave recommends that you don't attempt to do the overhaul yourself.

Dave intends to replace the composite firewall with a metal one. Another modification was promoted by the DOT. Dave had to discard the rudder cables provided, because DOT wanted 3/16" cables. In consultation with EAA experts however, he settled on 1/8" cables at an additional \$116. Also Dave has decided to use a gascolater which is not required in the U.S. DOT likes 3/8" gas lines versus the 1/4" (I.D.) lines provided.

see June '86 for rest of article

CHAPTER PROJECT REVIEW: Ted Chambers' Tri-Zenith

Four years ago, when Ted was looking around for a suitable homebuilt design, he narrowed his choices to a plane that had a good cruise and payload, that would lend itself to outdoor storage, that had been tested thoroughly, and that would allow good follow-up with the designer during the building process. Although he had never worked in metal before, Ted's criteria pointed him solidly to Chris Heintz and that's where the story begins.

Ted ordered the plans and stuck to them religiously. He admits that the various parts were not always easy to visualize, but by trusting the drawings and following them carefully, he managed to fabricate the necessary pieces without any real problems. A feature of the plans that was probably more of an irritation than a difficulty was Heintz's decision to translate the metric (European) specs into feet and tenths of a foot! If the recent Citizen account of Ted's building exploits is trustworthy, he ended up using a six-inch machinist's ruler.

As a history teacher at Sir Guy Carleton Secondary School, Ted had access to some pretty nifty machinery (including a tig welder) because the school is technically oriented. He also had the frustration of not being able to make much use of the equipment until the school year was over and his time was once again his own. By blazing away diligently every summer, however, he has now got the project to within a few weeks of its maiden flight.

Basically, the smaller parts and sheet panels were shaped and made by the builder. The heavier-gauge pieces, such as in the landing gear, and the leading-edge skins, as well as a few fiberglass parts and the canopy, were purchased directly from the Heintz factory. The greater cost of these concessions to a largely home-made plane was mostly offset by a huge savings in time.

Some of this saved time was used in a spirit of true independence. When riveting the spar of the wing, for

example, Ted placed an 18" length of rail on his workbench, and with the aid of his trusty 2 lb. hammer and a machined piece to guide the flattening of the rivet, he could slide the spar back and forth and manage the task alone. The mating of the wing panels to the fuselage was similarly performed in solo fashion. Ted rented the hangar at Rockliffe from 7 p.m. to 7 a.m. and got the job done to his satisfaction. He finds it difficult, like a great many other homebuilders, to get a job so well organized that there is no temptation to cut corners so as not to waste others' time.

The plane sports an O-320 A2D which was recently overhauled by the supplier in southern Ontario. The only snag was a mismatch between the bendix of the starter (which Ted talked the vendor into supplying afterwards) and the ring gear. Again, taking the fast rather than the cheapest course, Ted traded the starter in on a matching gear-reduction model and has been very happy with all aspects of the motor's performance thus far.

The 72 x 56 Sensenich propeller likewise posed a minor hitch by virtue of its bolt-hole size. Sensenich was able to supply the proper bolts, however,

What looked like a major problem--the fabrication of the ribs--turned out to be the customary bad end of the learning curve. The first attempt consumed most of a day and resulted in a reject. The final one took under ten minutes. The form was a 3/4" plywood sheet faced with 1/8" mild steel with filed edges and a 1/4" radius. The aluminum was beaten into shape with an 18" bar of hard solder. Worked like a charm. Similarly, the first try at welding the gas tank failed, because of a wrong brand of aluminum. The right material and tig welding by Ted soon corrected that.

No recent design has changed Ted's mind about the attractions of a sturdy, practical, flying-tail, low-wing, all-metal machine. He is also enthusiastic about the ease of working with metal, as we will hear at our next meeting.

SPECS:

Span:	26' 6"	Gross:	1850 lbs.	Vne	160 m.p.h.	Range	510	le
Length	22' 6"	Net	1100 lbs.	Cruise	145			
Wing	130 ft ²	Fuel	32 gal.	Stall	53			
Seats	3	Baggage	60 lbs.	Climb	1200 f.p.m.			

P.S. Flight test by Jay Hunt--SOON.

Roger Fowler.

HANGAR LOG 85/4

SAT 12

Attendance: Bill Argue, Henry Beaudoin, Jim Bradley, Jack Dods, Steven Fogar
Ken Martin, Dick Moore, George Reid, Gord Standing, Ted Slack, Eric Taada

SUN 13

: Bill, Henry, Ken Cavers, Jack, Harvey Halverson, Dick, Gord, Er
Par Tate

Wed 16

: Gord showed up to paint the truss.

Sat 19

Sun 20

: Henry Welded by himself.

SAT 26

: Bill Argue, Henry Beaudoin, Daryl Bender, Ted Chambers, Jim Brad
Jim Butler, Bill Butler,
Durwin Hunt, Gerry McGrath, Dick Moore, Peter Plaunt,
Laurent Ruel, Irving Slone, Gord Standing, Eric Taada, Par Tate

Henry joined both ends of the 12" high truss. The rest of the day was spent hoisting the rebuilt roof truss up into position. Holes were drilled to hold the pillow blocks on to the truss. Durwin Hunt (ex Manitoba Farm Boy) selected the grass seed for our adjacent lot at the Carp CO-OP. Our new crop will be Timothy Alsak and Rye. Neville Johnson graciously harrowed our new lot and Bill Argue promptly planted our \$70 investment.

Sun 27

Irving Slone and Jim Bradley started welding the top half of the door together. This chapter is blessed with lots of good welders. Despite the talent the 6'*37' ft door had a 3/4" wov in it. So we cut 4 of the diagonals and Peter Plaunt and Dick Moore rewelded the to bring the tolerance to less than 1/4". Gerry McGrath painted the 2" angle iron.

86/5/3 SAT Beaudoin, Bradley, Fowler, Ruel, Standing, Taada

Started the 18" truss of the lower door. Removed siding over the present hangar opening. Painted the upper door with primer. Erected the rented scaffold (\$4/day)

Sun 4 Beaudoin, Hunt, Ruel, Standing, Taada

Opened the clubhouse side of the hangar opening by 12"
Finished welding the truss of the lower door
Drilled clamp holes in the hingeline angleiron.
Cut the hay on the growing portion of our new adjacent lot.

Like my neice says. "I Tired" I also know I ain't alone. Please help us minimize the cost of our scaffolding.

It appears that the Patrouille de France aerobatic team may be appearing at the Wet Carleton airshow. I say wet because the civic administration is asking the Aerobatics Canada group to have \$10 meg insurance for their competition on the previous Sat. Although this figure is justified for a public event like the airshow the competitors have to foot the bill for Sat.

The PATROUILLE by the way consist of 12 alphajets on their way to Abbotsford and should give us quite a show.

E.T.

SHOW and TELL

1. We are inaugurating a new feature at our Chapter meetings. For want of a better name - call it "Show and Tell".
2. During this Show and Tell portion of the meeting members are invited to take a couple of minutes (max. five!) to describe some item they are making, perhaps a source of supply of some material, a cheaper way of doing things, a problem they might or even mention an upcoming aviation event.
3. This is quite informal, all you need do is advise the President preferably before the meeting starts.

WANTED

- about one cup of White Dope
- 600 x 6 wheels and brakes
- tail wheel assembly
- 5-6 chromoly tubing 7/8" dia. x .035
or .049 wall

PROJECT PICTURE BOARD

I am assembling a large photo collection of all completed Chapter 245 aircraft projects. This will include both past and present members aircraft as well as a photo of the builder. These photos are being placed in a 2' x 3' frame to hang in the Hangar Lounge, hopefully this month.

I have contacted most of our present members regarding projects (both completed and under construction), but have missed some members and obviously past members. Therefore, if anyone has photos of early Ottawa Chapter projects (such as Norm Hayes "Sportsman", etc.) and they can spare such photos, would they please deposit them in the envelope provided on the Lounge Bulletin Board or bring them to the May meeting.

The data I require for each project is:

- date commenced
- date first flight
- aircraft name and rig marks
- horsepower and engine make/type
- name of builder

Thanks

Garry Fancy