

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

Jan. '85

Meeting of Nov 16, 1984

- Eric Taada opened the meeting (approximately 30 in attendance) with the announcement that Canadian astronaut Dr. Bjarni Tryggvason will be the guest speaker at our Jan 18th 1985 meeting.

- The proposed fee structure for 1985 is:

Full Member - has full hangar, workshop, aircraft parking and clubhouse privileges with regular newsletter.
\$25 chapter clubhouse fee plus \$22 activity fee (plus one-time initiation fee of \$150)

Associate Member - has clubhouse privileges only.
\$25 (no initiation fee).

Junior (under 21) member - same privileges as Associate - \$5

Note - fees are pro-rated (\$2/mo) for new members.

Tie-down - \$18/mo or \$216/yr.

Hangar - \$36/mo or \$432/yr.

- Elections: Roger Fowler was elected to the position of Vice-President. Gary Fancy was acclaimed in the position of Operations Director.
- Some difficulty has been experienced by Henri Beaudoin in dealing with Wagaero - long delays in delivery and follow-up letters not responded to. Customer relations appear to be poor. Henri would appreciate comments, favourable or otherwise, from other members. Phone 749-9720 or write - 71 Glynn Ave. Ottawa, Ont. K1K 1S7.
- All members are requested to consider whether they may have information of general interest for the newsletter. If you do, the membership at large would appreciate benefitting from your knowledge and experience. Please give Dick Moore a call if you have something for the newsletter.
- Eric Taada announced that Bill Laundry has become a Vice President of EAAC.

President: Eric Taada 749-4264

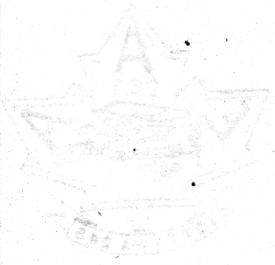
Secretary: Terry Peters 745-7466

Aircraft Operations: Gary Fancy 225-0454

Vice President: Jim Butler 829-5750

Newsletter: Dick Moore (home) 836-5554 (work) 231-4299

Treasurer: Gord Standing 224-2879



OTTAWA, ONTARIO
AAA 248
NEWSLETTER
REPLY TO: EAA CHAPTER 248, TERMINAL BOX 8412

Notes on talk by Jeff Bond - Dept. of Communications.

Demonstration of the Telidon Briefing System - TABS

Jeff Bond, Senior Telecom Specialist with DOC, brought with him to the meeting a terminal from which he dialed up a variety of area weather displays to demonstrate the usefulness and power of the new computerized aviation weather briefing system.

Twenty-five terminals have been installed so far at 15 airports in Ontario to offer pilots extensive weather information such as regional forecasts, radar maps and surface weather maps. The displays dialed up by Jeff included graphs which pictorially illustrated enroute clouds and precipitation at different elevations between selected points (such as Toronto and Ottawa), a 700 mb analysis, and wind direction, speed and temperature at different elevations for selected locations.

The Department wants eventually to expand the number of terminals to 75 (including Carp!). Four of the six regions across Canada look like they are going to adopt the Ontario system according to Jeff.

During bad weather it is usually difficult to get a telephone briefing so the system is becoming quite popular. There is apparently a package under development which will allow personal computers to hook into the Telidon system.

WANTED

Gear case from a roto-tiller to be used for hangar door opening mechanism. Or something similar.

Call Dick Moore at 231-4299 (work) or 836-5554 (home)

Eric Tadsa, President, 749-4284
Larry Peters, Secretary, 745-7466
Garry Fandy, Treasurer, 225-0424
Vice President: Jim Butler, 839-5730
Newsletter: Dick Moore (home), 836-5554 (work), 231-4299
Treasurer: Gord Standing, 836-5730

ENLIGHTENED SELF-INTEREST

Gogi Goguillot's sport aviation supply in Vancouver is offering free membership in either COPA or EAAC with every order greater than \$250. As well, chapters that assemble bulk orders will be eligible for a 10% discount. Gogi has been in this business long enough to realize that when the organizations flourish, so does he.

EAAC Pres. Lawrence Shaw is scheduled to be at the Brockville Skyline Hotel on Wed. 85/1/16. The cash bar opens at 19:00 and the 90-minute meeting commences at 20:00. For further information phone the Eastern Ontario EAAC Director, Barry Miller in Brockville at 613-342-3651.

The winter '84 issue of Canadian Sport Aviation magazine is quite substantial. The bad news is that Harmen Koffman has resigned as Editor. Though his views were controversial, his level of effort deserves recognition.

This being the beginning of a new year, I will refresh your memory about amateur-built organizations in Canada.

EAA Now resident in Oshkosh, Wisconsin, it costs \$25 U.S. per year. It offers a beautiful colour magazine and a designee program to advise homebuilders. Each of your Chapter executive is an EAA member (our Charter requires it). Most of our serious long-time builders also belong. That's why it says "EAA 245" on our Hangar roof.

COPA Based in Ottawa, it is Canada's voice for general aviation. Its monthly newsletter "Canadian General Aviation News" covers news of legislation, enforcement, nav aids, want ads, along with sections covering ultra light and amateurbuilt factions. The amateurbuilt section has regular contributions from 3 well-informed builders and summaries of Chapter news letters across the country. This organization at \$25 per year is judged by me as a pilot's best buy.

EAAC Until recently this was the only organization that actually made presentations to DOT about amateurbuilt aircraft. Aerobatic and composite aircraft owe their existence in Canada to this organization. Rule changes presently "in progress" enabling higher gross weights and increased passenger carrying capability were initiated by this organization. A quarterly magazine is published. Though only with black and white photos, it is devoted to the builder and has had no fear of criticizing products. It now offers insurance policies for aircraft and is developing its own designee program. It costs \$25 per year. Note: The north side of our hangar roof says "EAAC".

Canadian Aerospace Tech Committee

Incorporated as a federal non-profit corporation in Jan. '84, its aims and objectives are "promotion, advancement and education with respect to homebuilt aircraft, sport aviation, and aviation safety". It obtained approval for the Seahawk amphibian and is presently involved in helicopters and the primary aircraft category. Their new phone number is 613-737-0457.

EAA Chapter 245

Chartered around 1966 and incorporated in Ontario in 1973, it has had as many as 100 members and as few as 10 (presently paid up 1985 members). Monthly meetings, newsletters and a club house at Carp Airport are our drawing cards. See membership form enclosed.

News

- Mylight aircraft at Carp rents a C150 for \$40/hr. Instruction is \$20. A PA 28, C172, as well as Falcons and Eippers are available.

- Materials have arrived for Mylight's 10 T-Hangars. Ground has been cleared and 6 of the hangars are spoken for.

- John Bell-Walker is back in town and working on microlight power plants with Powerair.

- Laurent Ruel has sent postcards from England, Versailles and Capetown. He rode in a DeHavilland Rapide and is having lots of fun.

- Andy Douma has erected a clever folding enclosure for the Jodel. I have asked him to make drawings available.

- Henry Beaudoin has painted his Cuby fuselage and is preparing for a builders' night in Feb.

- Cal Moodie's Cuby was featured in the Dec. issue of Sport Aviation.

- Gary Fancy has been able to continue working in the Hangar on his Skybolt this winter.

- Ken Cavers has commenced full-time amateur building after working 30 years for Simpson's.

- Gord Standing is taking a welding course at Algonquin.

- What are you going to accomplish in '85?

- Ted Slack's new phone number at Aerosport is 613-737-0457 most evenings and weekends.

- Ed Lubitz's Custom Built Aircraft in Waterloo is working on their Ford-powered, side-by-side, low wing, plywood and glass prototype. It has reverse tricycle gear, and they are aiming for Oshkosh.

- Do you think the Oshawa tech symposiums are worth continuing? If so, talk to me.

E. Taada

TECHNICAL TIPS

by

Garry Fancy

1. Fabric Work

The best reference book on Aircraft Fabric Work that I know of is the EAA "How To" Series Manual "Dope and Fabric". It is a must and contains much of the necessary information on this tricky subject. From my own experience I add the following tips.

2. Fabric

The fabric is DACRON. Gue it on with PLIOBOND. (Available from Pascals in quarts - you will need 2 quarts - one for the fabric and the other for your fingers. The adhesive powers of Pliobond are doubled when stuck to your fingers). It is put on with a small brush and can be thinned with Dope Thinner. Remember when cutting the fabric edges, cut them straight prior to gluing. Uneven cuts have a habit of showing through tapes and twelve coats of dope. When putting holes in the fabric (not the ones that are accidents) if they are small use a soldering iron and even if big sear the edges with a hot soldering iron. It is neater and prevents the fabric from tearing.

3. The Laying-On of Tapes (in church referred to as the Laying on of Hands)

This is a tricky business and remember neatness and precision are paramount. All tapes laid on must be perfectly straight. Lay them on a horizontal surface - not vertical. Otherwise gravity will cause the tapes to sag. The only way I know of to soak the tapes prior to laying them on is to put them in the clear dope and "squeegee" the tape through your fingers - horribly messy on your fingers but works well.

I find pink-edged cotton tapes the best (once stuck on they stay on like the proverbial), but also are the most expensive. Dacron tapes are cheaper, but do not stick as well as cotton tapes and will not go around curved surfaces unless you get the bias-cut tapes. Cut all tape ends at 90° (not 85° or 96°) because they tend to show and again neatness is important.

When installing tapes around an edge such as a wing tip or trailing edge or corner of a fuselage mark the centre of the tape every foot or so, so that you can keep it centered about the edge or corner and produce a straight line. Long tapes require two people, one to install and another to hold the end and blame for the tape not being perfectly straight. When brushing on the clear dope afterwards always build up the edge of the tapes and tapes themselves so you can sand and eventually hide the edges of the tapes. Edges of tapes or corners that stick up can be neatly pressed into the fabric with an iron.

4. Doping

a) Number of Coats of Dope

I have found that one coat of "primer" such as "Dac-proofer" or Rando-Proof followed by 4 coats clear, 4 coats aluminized and 4 coats of final pigment works well. Remember when brushing on the first coat of "primer" have the surface vertical, otherwise the "Dac-Proofer" or "Rando-Proof" may drip through to the other surface. This will cause unsightly blemishes in the surface that cannot be removed - ever.

b) Clear

The four coats of clear can be brushed on with a large good quality brush and remember dope is slopped on quickly - don't try to work it in. Sand between every 2 or 3 coats with #240 wet and dry. This takes lots of elbow grease.

c) Aluminized

Mix your own by getting aluminum paste and clear dope; its cheaper than buying the premixed. The sanding goes easier now. The aluminized dope must be sprayed on after four or five coats the dope starts to "rope" as it is brushed on. For spraying, thin it well - up to 40% thinner must be added. The thinned dope must have the viscosity of water - thin water at that.

d) Pigmented Dope

Again thin well, good quality dope pays off. Sand only the first coat or so. Leave the last three or four coats unsanded and employ used #240 wet and dry - the used paper cuts less. Don't sand over the rib-stitching, or any other protrusions - they will wear soon enough.

I have had good success spraying outside in the summer. Pick days above 70° that are not windy and have what wind there is take the spray directly onto the surface (spray with the wind). Spraying dope is relatively simple, not like enamel at all. It dries quickly and doesn't stick to anything except the surface onto which it is sprayed.

MAINTENANCE AND PROJECTS

LES SEBALD

This month's guest columnist, Stan Hall, is well known to many of us as a real expert in designing and building sailplanes. In the two-part piece beginning here he has done an outstanding job of presenting practical tips on the use of Dacron fabric for coverings and repairs. In the second part next month Stan reviews the Stits and Ceconite procedures and how to handle them. —L.S.

TIPS ON THE USE OF DACRON COVERING

If you own a fabric-covered sailplane, particularly an older one, the chances are good that eventually you will need to recover it. The chances are even better that whether you re-cover or not, you will ultimately put a hole or ding in the fabric which will need to be patched.

The covering and patching of type certificated aircraft must be done by, or under the supervision of, a licensed A and P mechanic. No such restrictions apply to homebuilts and/or experimentals. Covering and patching are simple procedures provided you follow a few simple rules and are not all thumbs.

Although the general procedure for re-covering and patching is treated in the FAA's Advisory Circular number AC 43.13-1A, "Acceptable Methods, Techniques, and Practices, Aircraft Inspection and Repair," the publication doesn't say much about the peculiarities and procedures involved in the use of Dacron; it deals mostly with Grade "A" cotton, a standard in the industry until the early 1960's.

Grade "A" and nitrate dope, although still used in increasingly rare cases, suffer from a number of disadvantages. One, being organic in nature, the cotton tends to rot with age, even under the dope and paint. The sun and environmental pollutants get to it. Two, nitrate dope tends toward brittleness with age, and cracks and "ringworms" develop in the finish after a few years' service—although this depends considerably on workmanship and the kind of exposure the covering has experienced.

A third disadvantage, particularly when used over lightweight structures, is that tautness of the fabric is

controlled primarily by the amount of dope applied. It is very easy to apply too much dope and ultimately find that it has warped, distorted or even broken light structures. Butyrate dope is particularly guilty of this; it keeps on shrinking long after one would consider it "dry". Some mechanics swear that it *never* stops shrinking.

In combatting the tendency toward rotting in cotton, common practice is to apply two or more coats of clear dope in which is mixed aluminum powder or paste (about 4-6 ounces per gallon). This is applied over the first two coats of clear dope. The aluminum serves as a barrier to the ultraviolet rays of the sun and thus extends the life of the fabric. In tropical and other hot, high-humidity areas a special fungicide is often added to the mixture.

The tendency toward cracking in nitrate dope can be combatted by the use of butyrate dope, which is more flexible although, as described above, it has shrinking properties which have to be accounted for by controlling the amount used.

All of these disadvantages essentially disappeared in the early 1960's with the introduction of a specialized form of polyester Dacron. Nowadays, essentially all fabric-covered aircraft use it.

Although Dacron is very widely used in the manufacture of clothing and other apparel, the particular material used is preshrunk at the mill before use. What makes aircraft Dacron "special" is that it is *not* preshrunk.

After the material is applied to the aircraft it is shrunk with the application of heat via a household iron or high temperature blower (one hotter than a hair dryer). Large, unsightly wrinkles simply vanish like magic with the application of heat. One simply applies the heat gently until the wrinkles are gone and the fabric reaches the desired degree of tautness.

Although Dacron, being a synthetic, is not supposed to be vulnerable to rotting, experience indicates that this is not necessarily the case. For added fabric life common practice calls for the same procedure used with cotton: applying two or more coats of aluminumized dope. In fact, it is preferable to apply as many coats as are required to make the inside of the surface nearly opaque to the eye, even in strong sunlight. A surface thus coated and reasonably protected (as in a hangar or trailer) can be expected to remain airworthy for upwards of 20 years.

Aircraft Dacron is sold under a

number of trade names. Stits Polyfiber and Ceconite are two. It is also sold (for example, by Aircraft Spruce and Specialty Co. of Fullerton, California) simply as "Dacron" or Dacron "greige," at a cost well below that of the two trade names indicated.

There is, apparently, little or no difference between "Dacron" as sold by Aircraft Spruce and Specialty and Stits Polyfiber or Ceconite. The material comes in the same weights (1.8, 2.7 and 3.7 ounces per sq. yd.) and has the same advertised strength.

However, type certificated aircraft must use an FAA approved material, and Stits Polyfiber, Ceconite and some others are so approved. The cost is higher than the "plain" Dacron because the distributors own the Supplemental Type Certificate (STC) for their material and the cost of obtaining an STC, which can be high, is recovered in the higher cost of the material.

Such FAA approved material is stamped with an FAA PMA (for Product Manufacturer Approval) number or other identification along one or both edges of the fabric. If you are recovering a type certificated aircraft the FAA will require that you show evidence of using the approved material. If you're recovering a homebuilt, you can use the plain Dacron. All you have to do is demonstrate the adequacy of your workmanship to the FAA. If you possess an Aircraft Repairman's Certificate you don't even have to do that.

It is recommended that the intermediate weight material (i.e., the 2.7 ounces per sq. yd. material) be used in lieu of other weights. Experience shows that the 1.7 ounce material, although having adequate strength for most sailplane applications, has so few threads per inch ("denier") that it is difficult to keep the dope from running through and down the inside of the surface (when doped in the vertical position) or dripping through to the opposite surface (when doping in the horizontal position). In either case an unsightly bump is created by the dried dope, and it never disappears. It will even show through the final coats of finish paint.

At the other end of the weight spectrum, the 3.7 ounce material should probably be avoided because, under heat, it has a very strong potential to over-tautening. However, it does yield a superior finish, better than that of the lighter weight fabrics. —STAN HALL

SOARING

January 1984

AIRCRAFT OPERATIONS

As those of you who attended the November meeting may recall I was elected to be responsible for aircraft parking, tie-downs and aircraft movements in and out of the hangar - DIRECTOR OF OPERATIONS (I always wanted to be director of something or other) as Eric said "lots of authority and not much responsibility - or was it the other way around? In any event I would like to publish some of my ideas.

Some time ago I did a bit of checking and drafted some rules and regulations regarding aircraft parking at the hangar and also on tie-downs. As someone said then "You can sure tell they were written by a military person". Well, they may sound so, but like any good set of procedures are only meant to be used as a guide or when people do not use common sense. For example, in the past few years we had instances of at least two people not tying their aircraft down. I don't want to have my aircraft around one of these birds nor am I sure do the majority of our members. Thus, we need some rules on aircraft tie-downs. Hopefully these regulations will be in final form and published soon.

A list of authorized aircraft parking sites and owners is now on display at the chapter club house. I hope to keep this updated and current.

On a related subject, I would ask that people refrain from driving their cars across the taxiway and to the club house unless necessary or you have an aircraft tied down. There are some good reasons for this:

- a) vehicles driving back and forth deposit FOD on the taxiway. This can easily be ingested by taxiing jet aircraft.
- b) increased vehicular traffic increases the risk of an aircraft/auto accident or close call.

If either of the above occur it wouldn't take Bradleys long (5 minutes or less) to prohibit all vehicular traffic and those of us that need to take our vehicles across will suffer. (They have the right to do this since Carp is officially an MCT airport).

- c) increased vehicular traffic around our aircraft parking area also increased the risk of damaging a chapter aircraft and is ruinous to the grass during the spring particularly.

Naturally, if you have to bring your vehicle across to the clubhouse for any good reason, please do. I bring mine across regularly because of the tools and parts I use when working on my aircraft. When coming to the taxiway stop and look in both directions - this should go without saying. Again, common sense prevails.

One final word, anyone wishing to park an aircraft at the tie-down area or change parking spots, please call me - Garry Fancy at 225-0454 - don't bother Eric Taada - he's busy enough.

Cheers,

Garry Fancy