EXPERIMENTAL AIRCRAFT ASSOCIATION 245 OTTAWA

NEWSLETTER

Carb Heat

Hot Air and Flying Rumours

Published by EAA Chapter 245 (Ottawa) P.O. Box 24149 Hazeldean R.P.O., Kanata, Ontario, Canada, K2M 2C3
WEB SITE ADDRESS http://infoweb.magi.com/~birdman/eaa245.html

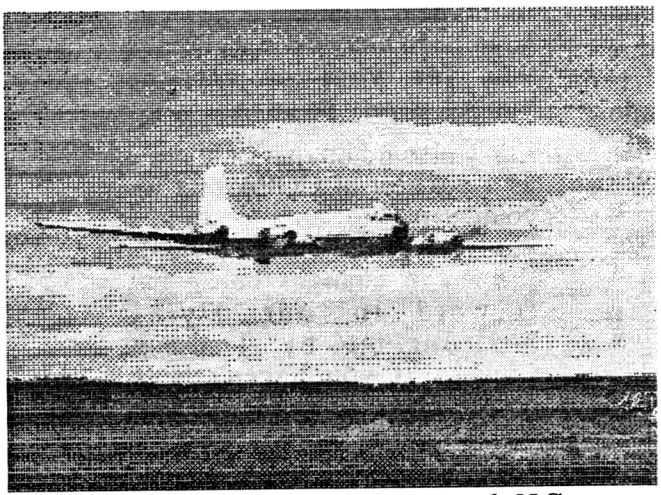
November 1996

Next Meeting: Thursday 21st November 2000hrs
Bush Theatre
National Aviation Museum

Program: Regular monthly business
Inside: Biennial Certs...Who Needs 'Em? Mike Busch editor@avweb.com

Guest Speakers: George Mayer relates his experiences flying the Coastal Patrol Argus aircraft

Jennifer Taylor from Transport Canada will enlighten us on recent new airspace changes in the Ottawa area



Argus landing at Greenwood, N.S.

President:	Gary Palmer	596-2172	Aircraft Ops:	Dick Moore	836-5554
Vice Pres:	L. DeSadeleer	727-0285	Membership:	Barney DeSchneider	225-6003
Secretary:	Luc Martin	744-5347	Tool Crib:	Dick Moore	836-5554
Treasurer:	George Elliott	592-8327	Classifieds:	Andy Douma	591-7622
Editor:	Andy Douma	591-7622	Publishing:	Dick Moore	836-5554

This past weekend saw our first wet snowfall; a sure sign that for many of us, the flying season is nearing an end. For some of us it is time to focus our efforts on construction projects. One of the latter is Les Staples, who has embarked on an ambitious Mazda Rotary Conversion project.

Les is following the same route pioneered by Tracy Crook in his RV-4 which has been chronicled in Kitplanes. A unique aspect of Les's project is the use of the manual transmission stripped down to provide the PSRU. This promises to be a significant cost reduction from the normal Ross Gear box. Les has promised to take lots of photos for a future presentation on his project. I must say I am very impressed with what I have seen so far. The Rotary is one robust engine.

Carp Airport Status

Work is nearing completion with the official opening date set for Tuesday November 19th. Most everything is complete except for the Runway lighting, an item which may be some weeks before all material is available for completion. While the construction has certainly disrupted all of us, and at times left our site in a bit of a quagmire, I am sure that next summer we will be marveling at how smooth our landings have become on our new "alighting surface" as the Brits call it.

October highlights

The October meeting was fuller than planned with **Lindsay Cadenhead** covering the new recency requirements in addition to our planned speakers. As they stand right now, the self study test published with the latest Flight Safety bulletin is certainly the easiest way to go. What the future holds remains to be seen, but don't be surprised to see a full blown bi-annual requirement similar to the U.S. before long.

Lorna DeBliquy. filled us in on the positive experiences of the Canadian Precision Flight Team, and also gave us all a chance to purchase the colorful T shirts sponsoring the team. She did a roaring business, and I want to thank everyone for their support.

Larry Lorretto of OAS filled us in on the new Grob advanced trainer which they will be using for IFR and unusual attitudes training. Larry was also kind enough to donate a certificate good for one hour's free training. I plan to make the presentation to the worthy recipient at the next meeting, so don't miss it.

Larry also noted that the Rotax 912 in the Katana's is working out extremely well, and the TBO is now up to 1200 hr's, and expected to reach 1500 hr's in the near future. Thus if you have been considering a Rotax 912 for your project, the outlook is very positive.

Larry also noted that in his role as a director of COPA that we could expect to see a return to a harder line from COPA towards the many changes being put forward in our flying environment by Transport Canada. If you haven't been reading the AIP carefully, you may be perturbed at some of the changes being quietly slipped in.

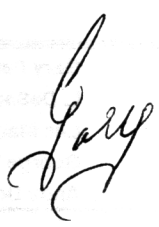
Regulation Changes.

The 4/96 AIP amendment contained a number of surprise packages from our friends? at TC. Perhaps most notorious was the humungous class D airspace surrounding Ottawa that had pilots and controllers alike short tempered as they tried to cope with this poorly planned and implemented change. Not only is it enormous in size, it is so irregularly shaped that no simple radius can be programmed into your GPS or Loran to warn you of an impending transgression.

Also hidden in section RAC 3.6.1 is a mandatory requirement for flight plans or itineraries for any flight more than 25 nm from the airport of departure. At the very least big brother is keeping ever closer tabs on us, or as the more cynical might note, little brother (AKA Nav Canada) is planning to keep their hand in our pockets to the tune of $$$ per mandatory flight plan. I for one will be glad to see COPA taking a more aggressive stance. This is probably a good time to ensure you renew your COPA memberships; you are members aren't you?

Nov. 21st Mtg. at NAM:

Our next meeting is Thursday November 21st at the **National Aviation Museum**, 8:00 PM start. Our featured speaker will be **George Mayer** who will be relating his experience flying an **Argus** in Coastal Patrol. In addition, **Jennifer Taylor** from Transport Canada has volunteered to stand in the firing line and field your questions on the massive new airspace changes in the Ottawa area. I look forward to seeing you there.

Gary 

Canadair CL 28 RCAF Designation CP-107 Type-name ARGUS "...in Greek mythology - endowed with a hundred eyes..."

The aircraft

The Argus retained the principal structural and aerodynamic feature of the Britannia but was re-engined and extensively modified to suit its specialized role.

As the principal requirement for this aircraft was long range operation at very low altitudes, the Britannia's Proteus turboprop engines were replaced by four 3700 bhp Wright Turbo Compound radial piston engines. With a maximum fuel load of no less than 24 hours and a range of more than 4000 miles at cruise speeds of 175 to 200 knots.

The fuselage was structurally altered to accommodate bomb-bays forward and aft of the wing centre-section. The front fuselage was also modified considerably to provide a nose observation station, a new forward crew compartment and a large "chin" radome for the search radar. Since operational flying was to be done at the lower altitudes, fuselage pressurization was not required. It was the first time that titanium was used in a Canadian aeroplane. More than 2700 lbs of titanium was employed; the weight saving was approximately 900 lbs compared with the minimum which could be achieved with aluminium alloy or stainless steel.

The first aircraft rolled out of the assembly line on December 21, 1956, and its first flight took place on March 28 the following year. In September 1957, the RCAF accepted its first Argus.

The flying

Anti-submarine Warfare (ASW) remained one of the major duties of the ARGUS; through the years its role was expanded to include Search and Rescue, Sovereignty, Fisheries, and Pollution patrols. These national requirements over the Atlantic, Arctic and Pacific oceans were often carried out in less than desirable conditions. These long and sometimes monotonous patrols were always flown at the lower altitudes where all the bad weather and turbulence is concentrated. Frequent deployments with extensive flying also imposed a heavy burden on aircrew and groundcrew alike. The stress associated with this type of flying, the boredom experienced on detachments away from home and family, the frustrations of having to live in substandard, hot and noisy quarters all contributed to make Argus flying a hazardous operation.

However, the expertise, the training, and the professionalism of aircrews and groundcrews counteracted its menace. Over the years the Argus' maritime operation achieved one of the most impressive flight safety records. From September 1957 to July 1981 only two aircraft were lost. Although we regret the loss of eighteen crew members, when we consider the size of the crews and the factors previously mentioned, the record shows the Argus as having been a very safe and reliable aircraft.

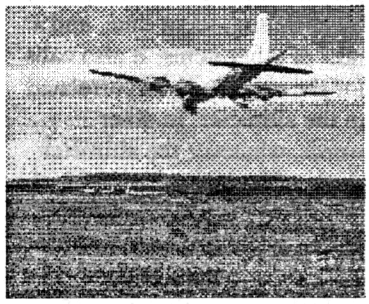
The DFS computer readout indicates over two thousand air occurrences. From forced/precautionary landings (total of 1349) to near wheels up on landing or take off (total of 1), some fifty types of air occurrences have been recorded through the years. These statistics are not important anymore, but they serve a purpose in accident/incident prevention through the service life of the Argus. They indicated trends to be corrected to ensure safer operation. The Argus' record speaks for itself.

The end

In July of this year the Argus flew its last flight from Greenwood N.S. to Summerside PEI, the "Garden of the Gulf" having been chosen as the final resting place. Our venerable aircraft fleet will remain there on an old abandoned runway until its fate is decided.

Former aircrew and groundcrew salute their old retired friend and bid their last farewell!

This article is reprinted from FLIGHT COMMENT, no. 4, 1981 and was written by Capt. Simon Picard of the Directorate of Flight Safety, DND.



AVNET NEWS

Biennial Certs...Who Needs 'Em?

Every two years, the A&P or radio shop tells us that it's time

for those pesky biennial altimeter and transponder certification tests. What exactly do they test, and what's the point?
This originally appeared in Cessna Pilots Association magazine.

by Tom Rogers, Ph.D. (trogers@avweb.com)

There are two FARs that dictate the biennial checks for most general aviation aircraft: FAR 91.413 for the transponder and encoder, and FAR 91.411 for the static system and altimeter.
First, notice that I didn't mention the pitot system. While any sane pilot would like to know that his airspeed indicator is reasonably accurate, the FARs do not require any test of the pitot system. Go figure.
An avionics shop worth its salt will check the pitot system and alert the owner if there is excessive error. My experience indicates that it is not at all unusual for airspeed indicators to have errors of 10 knots or more, particularly in the normal cruise speed range. We check the airspeed calibration at a number of points, especially at the stall and flap speeds.
Transponder/Encoder Certs
FAR 91.413 calls for the transponder to be tested for proper output power, frequency, bit encoding, ident time, and a host of other items. It also calls for the encoder to be correlated to the altimeter; in other words, whatever the altimeter reads when it is set at 29.92, the encoder must read the same within fairly close tolerances. This test is quite elaborate and takes some time to perform. FAR 91.413 must be complied with regardless if the aircraft is flown IFR or not. We call it the "VFR FAR" because even VFR-only aircraft must have it done. Even mechanics sometimes get confused about this. Recently, some maintenance people were fined by the FAA for returning an aircraft to service without this FAR being complied with.
Static & Altimeter Certs
FAR 91.411 applies only if the aircraft is to be flown in IMC or on an IFR flight plan. It requires that the static system be tested to make certain it doesn't have leaks greater than a certain threshold. The permissible leakage depends upon whether the aircraft is pressurized or not. In addition, the altimeter must be tested for friction, scale error, hysteresis, and accuracy at a whole series of altitudes from sea level up to the maximum altitude that the instrument is certified for (usually 20,000' for normally-aspirated aircraft or 35,000' for turbos.) Aircraft with air data computers require more elaborate testing.
If you are interested in seeing a "spec sheet" that shows just exactly what tests have to be run to comply with these FARs, give me a call at (805) 922-2580 and I'll send you a copy. The tests can get quite complex and time-consuming, particularly in pressurized aircraft.
Unpleasant Surprises
Frequently, an owner will taxi up to the shop for biennial certs and tell us that everything has been working great, only to discover later that we found problems during the tests. Common problems are weak transponder output, a Mode C report that differs from the altimeter, or a leaky static system.
This scenario is far more likely if the certification tests haven't been done for many years. In cases where the biennial certifications have been kept current, usually problems are few and any repairs are inexpensive. I recommend that these certifications be done religiously every two years. If the aircraft is not flown IFR, then you can save some money by complying only with FAR 91.413.
Transponder Tips
If ATC reports that you have a problem with your transponder or Mode C altitude, be sure to verify this with a couple of other ATC facilities before you panic. It could just as easily be a problem with the controller's equipment as with yours.
If your transponder is weak or intermittent, check your antenna. We often see these symptoms being caused by nothing more than an accumulation of oil or dirt on the transponder antenna, causing the signal to be attenuated. An intermittent DME can be caused by the same thing. These antennas are of the "stubby rod" or "shark fin" variety, and are usually mounted on the belly where they are prone to getting coated with oil, exhaust, and dirt. I recommend wiping down all belly-mounted antennas at every preflight. Your avionics shop will do the same thing, but they'll charge you fifty bucks.
Another frequent cause of intermittent transponder operation is poor cooling. The Cessna/ARC transponder must be cooled with forced air or it will fail. A good avionics cooling fan is a must. I've actually seen them catch fire and burn up the main printed circuit board! This destroys the transponder, of course, and maybe some other stuff as well.

 Editor: Mike Busch editor@avweb.com Publisher: Carl Marbach publisher@avweb.com This page was last updated Sunday, July 30 1995.

PLEASE NOTE:

ADS DEADLINE IS THE 1st OF THE MONTH

PLACE YOUR ADS BY PHONING ANDY AT 591-7622
Classifieds Editor

CLASSIFIEDS

12 November 1996

AIRCRAFT FOR SALE:

Aeronca Chief, wheels & floats
Jim Robinson 830-4317 10/96

Taylorcraft BC-12D, 1946,
Jim Robinson
(613) 830-4317 95/4

PROJECTS FOR SALE:

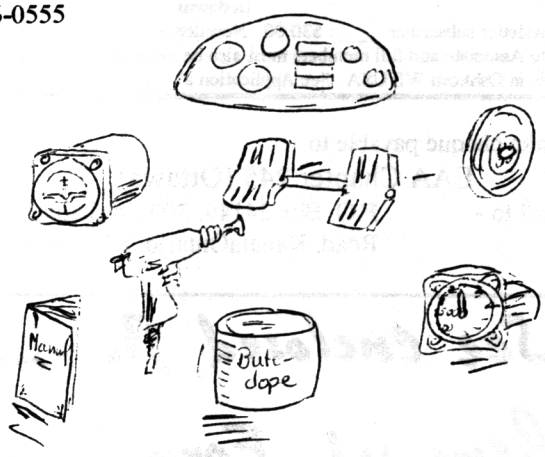
!!! NEWCOMERS !!! Looking to start or finish a project? These partial to nearly completed projects **will save you years of building time and barrels of money.**

CH701 Project, wings complete, one piece landing gear. $3200.00
Jim Robinson 830-4317 10/96

CA-61 Poject 60% completed. Low wing monoplane, all wood, takes an A-65 engine. Currently on gear and hangared at Carleton Place. Many extras $2500.00
Phone Ken Cavers 739-4225

Engine for above, Continental A-65 totally majored with log $2500.00

Tools Aircraft working Alex Clanner
736-0555



PARTS FOR SALE:
From Tim's parts bin

Wing tanks, 6 gallon, J-3 $300.00/ pr
KR-2 Canopy frame $50.00
Cleco pliers, USA, new. $10.00
Bute-dope, insig. white, gallon unopened. bahama blue $40.00
Automatic pilot gyro, Piper, horizon unit P/N 52R21 $100.00
Autopilot gyro, Tactair, horizon $100
Mach meter $50.00
.C. tach, 0-3500 rpm $30.00
ASI, hi-speed, 0-300 mph. $30.00
Control panel, three levers with bowden cables $20.00
Brake disks, chrome, C-150, for six hole 3 piece wheel. $200.00
Rudder pedals, Mooney, castings only $20.00
VSI, 0-6000 fpm $100
Operators handbook,Beech Sierra 200 B24R $20.00
Tim Robinson 824-5044 94/10

PROPELLERS:

McCauley 70-38 $600.00 no logs
Jim Robinson 830-4317 11/96

Propeller, Hartzell HC82XL-2C constant speed plus governor for 320-360 Lycomings
Gary Fancy (613) 836-2829

From Gary's Parts Bin

Oil - break-in, 12 litres, Shell, Esso
Tubing - 4130, various lenghths and diameters.
Shoulder harness, inertia reels, seat belts, metal to metal, like new, NACA air inlets, Elevator trim assembly, Primer, Fuel pump, Pesco, Voltage regulator, Aluminum tank, 5 gallons, CHT guage & probe, Engine VW 1600cc rebuilt Fuel selector valves, Parking brake valve, Accelerometer (G-meter) 2 ¼ inch.

Randolph butyrate dope in unopened gallon containers; 1 gallons clear;
1 gallon Piper Lockhaven yellow (Maule yellow); 1 gallon insignia blue.
- Oil cooler Continental 6cyl
- 1 hydraulic pump
- 1 vacuum pump

1 **accessory case**,Lycoming dual adapter for above pumps.
- **Spinner**, pointed,. C-172
- **piston rings** for Continental E-185-3.

Cylinders, four, Lycoming IO/HIO-360, wide deck, fresh chrome

Garry Fancy (613) 836-2829

Propeller, Hartzell HC82XL-2C constant speed plus governor
for 320 - 360 Lycoming engines.
Gary Fancy (613) 836-2829

AIRCRAFT SUPPLIES:

Steel, Aluminum, Plastic, Wood and Hardware.
Available from Grass Roots Aviation
648 Adelaide Ave West, Oshawa, Ontario
Dave Drain (905) 434-4651

PVC-pipe, valves & fittings
Fiberglass- Resin, cloth, etc.
Plastics- Tubing, bottles& bags.
29-174 Colonnade Rd. S.
Nepean, Ont. K2E 7J4
228-3295

INSTRUMENTS:

Guages
-Altimeter $50.00. -ASI $50.00
-Mach meter $75.00
Autopilot, Federal, new, 2-axis, STC included for installation in C-172 A.B.C., $250.00.
Tim Robinson (613)824-5044 evngs.

Control wheel yoke assembly from Piper Tomahawk
Garry Fancy (613) 836-2829
10/95

WANTED:

Propeller 74/42 for a Continental A-75
Luc Martin 744-5347 **02/96**

OTHER

Services:

Oxygen/acetylene welding, brazing and silver soldering available from Lionel Robidoux, 195 Crestview Rd., Ottawa (613) 738-1066 (9/96)

CHAPTER CRESTS:
Sew-on, $6.50 each. **Luc 744-5347**

All kinds of **aviation magazines** going back some 30 years
Ron MacMillan 837-6865

Commercial ads

WORLD OF MAPS
for all your map needs including aeronautical charts. 118 Holland Ave, Ottawa, Ont.
724-6776

AVIATION ART
CREATIVE CUSTOM FRAMING
NUTHATCH ENTERPRISES
Custom picture faming, very large catalogue of Aviation Art 19 Westfield Cres., Nepean
596-2715 call for appointment

EAA Chapter 245 Membership Application

NEW:___ RENEWAL:___ DATE:__/__/__
EAA NUMBER:.....EXP Date:__/__/__
NAME:.....
ADDRESS:.....
CITY/TOWN:.....
PROV:.....PC:.....
PHONE:(.....).....H (.....).....W
AIRCRAFT & 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
Newsletter subscriber ____: $30.00 Newsletter
Note Associate and full members must also be members of EAA's parent body in Oshkosh WI, USA See Application above.

Make cheque payable to:
EAA Chapter 245 (Ottawa)
Mail to - P.O. Box 24149, 300 Eagleson Road, KanataOntario, K2M 2C3

See enclosed, Personalized Renewal Form