FLYING FARMERS ASSOCIATION LIMITED

WINTER RUMINATIONS

January is a time for looking back as well as forward to the New Year and over the past twelve months I am pleased to say our small organisation has grown from strength to strength. Membership now stands at 137 which must mean that despite all the huge increases in the costs of private flying plus the dreaded V.A.T. the growth of private flying amongst farmers at least is still flourishing.

Whether this is peculiar to the farming community is difficult to say but private flying in my part of the country anyway is not so popular as it was eighteen months ago. In those days summer evenings were always filled with the sound of Continentals and Lycomings droning across the sky. This year they were much less frequent. This must have something to do with the increased fixed cost of flying as well as the increase in running costs. Our nearby airfield charges a staggering £500 per year for hangarage and landing fees are three times what they were two years ago. Flying from our own farms must be the biggest way we as farmers can keep down the fixed cost of flying.

After a really magnificent summer, for flying anyway, we are all looking hopefully for a kind winter. I wonder though if mild winters are all that beneficial for farmers. Those of us with stock to feed look forward to at least a short winter but wet mild winters never break up the heavier ploughed land on my farm, and I'm sure we would have much less 'carry over' of foliar and soil born diseases if we had the occasional cold snap to kill off some of the 'bugs'. Perhaps even the Dutch Elm beetle would not be quite so energetic either. I'm afraid that in the South of the Country nearly every elm will die this year if it has not already done so.

However, to continue with flying, I have had various letters from some members who farm and fly close to Military Air Bases. Some of us are worried by the somewhat callous attitude that the Military have for the farmer aviator. This is not true in every case but I believe there must be some liason between both parties and I have been assured by the B.L.A.C. that the matter is being examined. Hopefully I shall soon have some information or a plan to provide these Bases with up to date maps showing the position of local farmers' airstrips.

This brings me to the next point. I hope to circulate an up to date list of all new members and strips sometime early this year.

The Smithfield meeting was successful. Our thanks to Col. Williams-Wynne for arranging the room and also for organising two excellent speakers to come from the C.A.A. archives to address us. If time had allowed we could have gone on asking questions for at least another hour, but unfortunately, both Mr. Pardoe and Mr. Guilbert are very busy men and reluctantly the meeting finished all too soon. Enclosed is a draft of Mr. Guilbert's paper. I'm sure all will find it interesting.

I'm also enclosing a copy of an Insurance Scheme devised by Chandler Hargraves Whittall, under the guidance of Adrian Pelley. Its worth looking at. The Committee would like to hear your opinion of the Scheme. There will probably be time at the next meeting to air your views. This meeting will be held by kind invitation of Mr. Wilkinson at his strip near Malton in Yorkshire. Both Mr. Wilkinson and Mr. Nutt have arranged a visit to High Mowlthorpe Experimental Farm. This Farm specialises in Sheep and Beef.

The Strip is situated 6 miles E. of Malton just south of the Railway line which runs to Scarborough. The strip is ½ mile E. of a Large Grain Silo which is just E. of the road junction shown on the ½ million Map.

The Time is 11.00 hrs. (local) Try and be early! A bus will take us to the farm. We return to a Small Hotel for lunch and an informal meeting at 14.00 hrs. We hope to be away by 15.30. hrs. The date is Thursday, April 15th.

If you want any more details phone Mr. Wilkinson at RILLINGTON 397 or Mr. Nutt at WEST HESLERTON 204.

PLEASE ALL TRY AND COME

I have now heard from Len Thurloe, of our Aviation department, who has had further consultations with Brian Beagley, of R.W S. Sturges of Lloyds, and the latter has come up with the following firm offer in respect of the premium that would be required to indemnify members of the Association, under a joint policy taken out in the name of the Flying Farmers Association:-

A. Third Party claims arising from the use of members' airstrips -

Indemnity	£250,000	- Premium	£600
"	£100,000	- "	£425
"	£50,000	- "	£325

B. Third Party claims arising from the use of members' hangers & fuel - Additional Premium £100

I understand from Mr. Thurloe that he has been unable to persuade any other underwriter to improve on these premiums and I think you will agree that Mr. Beagley now well understands the objectives and constitution of the F.F.A. and would be quite the best man to look after our interests.

The policy would include cover for the use of members' airstrips for F.F.A. meetings, thereby obviating the need to take out an airmeet policy on each occasion.

The F.F.A. would have to decide which level of indemnity to ask for and whether the premium should be paid by owners of airstrips only, or by all members. I would like to see cover taken out for the higher sum of £250,000 in view of the larges sums being awarded for damages nowadays, and, as a non-flying member myself, I would also like to suggest that <u>all</u> members, who inevitably make use of members' strips either as visitors or as passengers, should contribute towards the premium.

To make the alternatives easier for members to assess, the following table shows how the various rates would work out:-

Indemnity		Premium	Rate per member, if paid by 70 airstrip owners	Rate per member, if paid by all members (say 140)
£250,000 for A (airstrip) + B (Hanger & fuel)		£700	£10	£5
for A only		£600	£8. 57	£4. 28
£100,000	A + B	£525	£7. 50	£3. 75
	A only	£425	£6. 07	£3. 03
£50,000	A + B	£425	£6. 07	£3. 03
	A only	£325	£4. 64	£2. 32

I have further agreed with Chandler Hargreaves Whittall (Aviation) Ltd., that a 5% discount will be allowed to all members of the F.F.A. who place their aircraft insurance through Chandler Hargreaves. This would apply to all policies whether placed at Lloyds, or at the member's chosen company, or at whichever company or underwriter Chandler Hargreaves are able to obtain the best terms for a member at the time of renewing or taking out a policy. From this it will be seen that any members discount would more than cover his contribution to the block policy.

Talk to Flying Farmers Association

As a member of the Airworthiness Division of the C.A.A., I am pleased to have this opportunity of talking this afternoon on the light aircraft business in this country as we see it.

On matters of fact I hope I can claim to be speaking on behalf of the Division, on matters of opinion they will essentially be my own and not necessarily those of the Authority.

When your Chairman wrote to Mr. Pardoe he suggested that we might use this opportunity to talk about some practical examples of problems resulting from DIY maintenance and rectification work done on light aircraft by people not formally qualified to do such work. We do have, in our black museum, a number of examples which illustrate the hazards of do-it-yourself maintenance. On the other hand, many of these examples of technical failures are very similar to the failures which the professionals have committed. In any case, I think it would leave you with a false impression of our attitude if I used all my time this afternoon to give you details of some of these failures. I therefore propose to start with a little bit of history of the light aircraft maintenance business in this country and then explain what can and cannot be done by the private owner under existing legislation. I would also like to use the opportunity to say a little about proposed changes we have in mind which, hopefully, will prove to your advantage, then finally I will give a few examples of drop-offs that have been recorded by the do-it-yourself man over the past few years.

Until 1969, it was possible to have an aircraft under 6000 lb certificated in the special, Private, Aerial Work or Transport Category and as the law then stood an aircraft certificated in the Private Category was not required to be maintained to any recognised schedule unless the owner so wished; they were, however, required to have their Certificates of Airworthiness renewed every 12 months and the opportunity was taken at the time by the Surveyors of the then Air Registration Board to satisfy themselves that the aircraft was in a fit state to have its Certificate renewed which in practice meant a varying amount of opening up and dismantling in association with rectification work.

The Royal Aero Club and the Association of British Aero Clubs had, in addition, and with the co-operation of the ARB, produced maintenance schedules which, if applied, allowed for extended validity of Cs of A for private or club aircraft to 3 or 2 years respectively.

At about this time the light aircraft interests, in particular the BLAC, suggested that changes should be made to the legislation on two accounts:-

1 That the average private owner would like to have the opportunity of using, or allowing his aircraft to be used, for hire and reward on occasions in order to alleviate the costs of owning and maintaining such an aircraft, and

2. That these aircraft should be maintained to a recognised maintenance schedule so that at the time of C of A renewal it would not normally be necessary to carry out a major examination, dismantling or overhaul.

As a result, and after innumerable meetings, changes were made to the legislation which introduced two categories of Certificates of Airworthiness for these aircraft - the Special Category and the General Purpose. The Special Category (one year validity) was intended to be used for aircraft during development to full Transport Category standards and for aircraft not built to a recognised code; the General Purpose Category (2 year validity) was to be applied to all other aircraft that could be certificated to a recognised code within the top weight limit of 6000 lb and would allow for all types of operation, including public transport.

In practice and in some ways by default, the Special Category has taken the place of the old Permit to Fly and is used for most "home builts" and a further complication was the inclusion of crop sprayers into this Special Category, but with 2 years validity, on the basis of maintenance to an approved schedule.

Associated with these changes, the ARB, as it was then, devised, with the cooperation of the various interested parties, a maintenance schedule which would be suitable for any aircraft below 6000 lb in the General Purpose Category. It is perhaps unfortunate that so many interests were involved in the design of the schedule; inevitably it has developed into a rather lengthy document which on first sight is pretty frightening. However, provision was made for any owner or operator to submit his own maintenance schedule or the applicable manufacturer's schedule for our approval on the understanding that some owners might, because of their particular commitments, find the GPMS less than satisfactory.

In fact the term "maintenance schedule" is probably somewhat misleading, it would be more accurate, I believe, to define these schedules as inspection guides, as they do not, with the exception of lubrication, in themselves call up for any work other than inspection. Thus, if the inspection proves satisfactory there is no need for any further work. Incidentally this schedule does provide for the certifying engineer to waive all on any part of a check if he sees fit, on technical grounds.

Subsequently, in 1971, a further change in legislation introduced formal recognition for certification of certain maintenance by licensed pilots, including some minor repairs and replacements; the list is included in the Air Navigation Regulations.

In the meantime, many amendments have been made to the GPMS in response to proposals and nearly every amendment has added to the complexity of the schedule and the associated certification procedures. Last January, when we were half-way through another major amendment, the BLAC suggested further changes and rather than continue with these piecemeal amendments, we suggested and it was agreed, that we should do a complete review to see if a major change in the certification and maintenance of GP aircraft was justified on both safety and economic grounds.

I am not able to give you details of the changes we now believe possible, because our new proposals are only in the very broadest terms. I can say, however, that the changes we will be offering for discussion are based on our understanding that the original 1969 assumption - that most private owners wished to have the opportunity to use their aircraft for hire and reward, is no longer true. We will be suggesting therefore a new Private Category C of A available for all aircraft used exclusively for private purposes valid for 3 years, with the owner or operator able to take personal responsibility for much of the intermediate maintenance. The C of A renewal would be based on recommendations made to the Authority following an inspection with associated rectification work certified by appropriately licensed engineers working in a CAA approved facility.

There would also be a C of A in Public Transport and Aerial Work Categories providing for some owner/operator responsibility for minor maintenance but the validity would be limited to one year with a similar renewal procedure proposed for Private Category.

Finally, the Special Category would be restricted to "special" aircraft and we will re-introduce the Permit to Fly on the assumption that present negotiations between the interested parties in Europe will provide for a Permit that will allow international flight.

Thus, we have accepted that the procedures and practices used over the past six years can and should be improved; in the meantime, may I remind you that there is nothing in the legislation or our requirements that bars any owner or operator doing any work on his aircraft provided he can get a qualified person to sign for it subsequently. I recall many such arrangements between private owners and engineers in my days in the field and I have no reason to believe that this practice is no longer viable.

The key to such arrangements and realistic standards and costs at C of A renewal is confidence and continuity - confidence in the ability of the parties concerned with the subject aircraft, maintained ideally by the same engineer over a number of years.

Before I go on to do-it-yourself failures, I would like to quote a few statistics to put the record straight.

How many and what sort of aircraft am I talking about - over 3½ thousand, approx 27% club charter and taxi, approx 59% private with the balance defined as "others". Who uses the GPMS -

2½ thousand are on the GPMS and some 300 on their own schedules, the remainder, Special Category, not on any schedule.

Why don't we use the American manufacturer's schedules - because nearly all the UK aircraft are American - there are over 1000 Pipers, some 600 Cessnas and 120 Beech, but there are also over 300 French Aircraft and 120 odd DH Moths, for example.

There are not enough engineers to cope with the business - there ars some 350 engaged on general aircraft including over 70 free lancing; there are also over 30 firms approved by CAA for this class of work.

Incidentally, we have plotted the geographic distribution of these engineers and firms and it shows a surprisingly good balance, although there are some poorly served areas - North Wales and Scotland, for example.

The evidence we have of bad practices by DIY enthusiasts is not excessive on the basis of numbers of aircraft and persons involved but the existing legislation and practices which provide for direct Authority involvement in the renewal of Cs of A, and the almost traditional involvement of the AIB in the majority of general aircraft accidents does make us particularly sensitive to these failures.

We can divide these failures into 4 classes:-

First the 'Sillies', not in themselves necessarily dangerous but indicating that the individual responsible has a pretty casual approach and is also weak on engineering 'know how'.

1. Battery box reduced in size (sample)
2. A Baker's wooden tray to close off cabin from rear fuselage and literally nailed into position.
3. Mum's inflammable curtains used to brighten up the cabin.
4. Sole and heel repairs to Perspex windscreens.
5. Wire nails used as hinge pins.

Second, the "Potentially dangerous", probably through lack of understanding of engineering practices, in particular aeronautical engineering - aircraft are built down to a weight and a price.

1. Liberal use of paint stripper without pre-protection of control surface hinges and the application of wire brushes in Black & Deckers to remove the more stubborn bits of the old finish.
2. Undercarriage indicator lights with leads clipped with pliers.
3. Repaired fuses with bit of cable (example).
4. Nose wheel tyres replaced without due regard to balancing marks.
5. Garden hose used for oil feed and return lines.
6. Butchered battery terminals through using mole grips or stilsons instead of spanners to disconnect/connect leads.

Thirdly, the "more immediately dangerous" again showing a lack of understanding of aeronautical engineering practices and no concern for manufacturer's recommendations.

1. Many cases of propeller trimming straightening and buffing (example).
2. Improper torquing of sparking plugs leading to blow outs and partial engine failure.
3. A taper fuel cock assembly with stop and retention spring missing leading to fuel starvation.
4. Long range tank fitted without proper check for cleanliness or subsequent checks over very many flight hours of fuel filter and again an engine failure leading in this case to a fatal accident.
5. Repairs and filling to control surfaces (example).

Finally, the "Positively absurd" which suggest a degree of personal self confidence leading to a disregard for the value of life.

1. A fuel filter bowl fitted with defective washers, broken retaining lugs and anti-lock so that air was drawn across the filter leading to fuel starvation at max engine demand.
2. Exhaust valve switched with inlet valve, leading to valve seat failure.
3. Major rework on a magneto.

If you are intending to do your own maintenance work, or even if you are not, I commend you to read the pink ARB Notices, now the Airworthiness Notices, in particular No 12, which lists some of the failures resulting from the less obvious malpractices; No 32, which emphasises the need to study the manufacturer's advice before embarking on a task; and Nos 13, 19 and 71, which deal with specific problems, 19 being the old favourite of bogus parts.

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