

Technical Officers Report 2017

I must apologise for the late submission of this report. In the latter days of my vacation in the US unexpectedly I only had internet connectivity via a mobile phone and this made it impossible/very expensive to compile this report.

Gliders

Single Seat

The usage on the single seat gliders took a bit of a downward turn in 2016 as many of the high usage members from 2015 moved into private ownership.

The following table summarises utilisation of the club single seater's over the period 1//1/16 → 1/1/17. The Income figure is based upon 34p/min* total duration and takes no account of discounted Junior rates or members on the Single Seat Scheme.

Glider

Days Flown

Launches

Hours

Annual Income (34p/min)

KEE

45

154

60

£1224

HKM

44

193

69

£1407

HSX (SF27)

47

200

68

£1387

DRD

28

102

29

£591

Its a little disappointing to see the total hours back in a range which is more akin to a privately owned glider. That said the number of launches is fairly high, reflecting that club members are flying these aircraft regularly and on the not only on the perfect days.

DRD came back into the fleet at the end of May 2016 and hence the figures above represent less than a full year for this aircraft. However when we consider the very wet spring we experienced it is likely that it would have flown little in April and May anyway.

During the course of 2016 both HKM and HSX have been equipped with a Ballast Option, enabling our lighter (mostly junior) members to meet the minimum cockpit load.

Overall I believe the single seat fleet is well matched to the needs of the club members for the next few years. The restoration of the K6 expands the fleet from 3 to 4 and the usage levels tends to suggest there is spare capacity to accommodate additional member flying as the club expands. Looking at the income as calculated above KEE, HKM and HSX are covering their annual maintenance, and inspection costs, with a small margin. However when we factor in the discounted flying (juniors, members on single seat scheme) it is clear that our two seat operations are subsidising the single seat fleet to a small degree.

Two Seater Fleet.

The following table summarises utilisation of the club two seater's over the period 1//1/16 → 1/11/16. Apologies this is the data prepared for the 5 year planning meeting and hence missed the last couple of months of 2016. The Income figure is based upon 44p/min* total duration and takes no account of discounted Junior rates, FPTS and Trial Lesson Flying.

Glider

Days Flown

Launches

Hours

Annual Income (44p/min)

DOA

116

1125

170

£4488

DVB
131
1204
208
£5491
GBN
134
1199
250
£6600
KMT
83
526
131
£3458

For the most part the usage figures for the two seat gliders are as expected. The Grob 103 which is a little on the low side, probably reflecting that it is not flown solo as much as the K21. DOA suffered some damage in April (see below) and was out of service for a month which probably explains it doing slightly less hours than DVB.

As the above figures cut off in November they do not show the effect of DOA being out of service at the end of January for repair to the warped trailing edge and associated ribs. The trailing edge warp has been present for many years and it was planned to address this as part of this years annual maintenance. However in January some of the associated ribs were found detached from the trailing edge and this accelerated the need to commence this repair. Having DOA out of service at the start of the soaring season caused some frustration to the membership. Fortunately the problem with the wing occurred during the winter and only just before the planned maintenance cycle, minimising the impact to the members.

During the course of the year we have also suffered 2 instances of metal fatigue in the K13 Rudder circuit, both of which were repaired with minimal impact to availability.

Expanding the Two Seater Fleet.

When I wrote my submission for the AGM in 2015 DVB had been out of service for some 4 months, whilst its fin was rebuilt. This caused a major impact on training operations during the first half of the soaring season. This year DOA was out of service at the start of the soaring season due to a minor accident and only by luck the repair to the trailing edge did not cause a similar impact as it failed in the winter.

Neither of these problems was directly associated with kavit glue failure which hangs over most wooden Schleicher aircraft to a greater or lesser degree.

I cite the above examples to highlight how the loss of one or other of the K13s has a major impact on the clubs training operation.

With the clubs membership expanding the solution is to expand the Two Seater fleet, this will provide us some redundancy should a two seater glider develop a defect. Unlike the current situation where the loss of any one two seater has a major impact on our operation. To be fully effective it

will require a change to the pre-solo training policy, allowing training to be performed on types other than K13s.

The committee has been convinced this is the right direction for the club for a while now (see minutes of 5 year planning meetings), the only stumbling block is the glider choice.

As reported at the last AGM initially our thoughts were to look for a second-hand 2 seat trainer, but the list of glass gliders capable of covering the complete training syllabus is extremely limited. To date none advertised for sale has warranted even a discussion with the vendors.

After a successful visit by the Perkoz demonstrator in April the thoughts of the committee have turned to this as a suitable extension to our two seater fleet.

As this would be a new purchase and with the recent devaluation of the pound the expected purchase price including a trailer but excluding instrumentation would be in the region of £100k - £110k depending on options.

Instruments

We have commenced the upgrading of the aircraft transceivers to comply with the new 8.33KHz channel separation.

To date the K21 is complete with the Grob and Astirs scheduled for the next couple of months.

The radio replacement will be part funded by a Grant from Sport England, together with a rebate from the CAA (who secured the funds from the EU).

Damage to Gliders

Overall not a bad year:-

In April DOA suffered damage when the lower air-brake paddle struck a pedestrian warning sign. This bent the air-brake, causing damage to the air-brake box and ribs behind. My thanks to John Gilbert and Richard Kimberly for their efforts to repair DOA, it being out of service for some 4 weeks.

In May 2016 KEE suffered minor damaged in a road traffic accident, which unfortunately wrote off the newly adapted AMF/Schofield trailer.

The damage to the glider was mostly confined to the starboard aileron and this was quickly repaired. KEE returned to service some 2 weeks latter.

Over the course of the year KEE has made 3 or more wheels up landings. We have been fortunate that all were on the grass of the airfield and have only resulted in minor damage to the undercarriage doors and some superficial scraps.

Trailers

As noted above back in May we damaged the newly converted Pegasus trailer in a road accident on the A12.

Over the course of the year I have actively pursued 5 possible replacements for this, but for one reason or another, none has come to fruition - my search continues.

Until a replacement is found we are forced back to using the old Astir Trailer, although this is capable of transporting either HKM or KEE, it is not ideal for club use as the glider is a very tight fit. The trailer also lacks secure stowage for trestles, dollies jacks et and needs a degree of knowledge before either of Astir can be transported in it without damage.

I've been promising to do a training course on this trailer since the accident but for one reason or another I've never got around to it – I'll try harder. In the mean time if you think you might have cause to use this trailer in the near future please ensure you do a practice load/unload at Wormingford first.

The new fittings for the Grob 103 trailer have been completed, and this makes loading and unloading the glider much easier. The tailplane fitting is still not perfect for club use as it involves a number of loose bolts and wing nuts which can be easily lost, please take care.

Work has commenced to refurbish the wooden back and front of the SF27 trailer (the remainder is aluminium), this should be completed in the next couple of months.

Log System

During the course of 2016 we have not made any major changes to the log system, just a few bug fixes. There is a more major update planned for latter this year mostly to cover changes to the membership classes and to offer more flexibility with discount charging.

We have removed the "Edit Member" dialogue from the Log Sheet program as this was being used to force charging to what appeared to be correct, quite often necessitating the creation of a full member which caused big issues in the charging and accounts system. The problems mostly centred on new members, especially if they were in some discount class e.g. FPTS or junior but the log sheet will calculate charges as an adult temporary. If you experience this situation do not try to force the calculation, allow the incorrect charge to be calculated for a day or so. Charges will be corrected once their membership is fully set up.

Work continues to replace the paper "record cards" with an electronic record system. To facilitate this we now have internet access across the whole airfield regardless of where the launch point is positioned. A beta version of the Electronic Record Card User Interface has been developed and I will be canvassing Instructors for feedback on the format information recorded over the coming weeks.

Website

We have continued to find problems with Calendar plug-in for Wordpress, a number have been evaluated but all had short comings. As an interim solution we have migrated the Trial Lesson booking Calendar to use Google Calendar and have linked this into the Website, This provides any member/Instructor the facility to see what trial lessons are booked on a given day, and removes most of the latency of the paper system John/Lynn were using.

We do not intend to extend Google to cover the other Calendars e.g.

- On-line Winch drivers rotors
- On-line Instructors rotors
- TMG booking
- Social Events Calendar

at this time as the access rights and number of logins becomes an administrative nightmare. In short we are still looking for an integrated Wordpress Calendar Plugin.

Technical Officers Gripes

Unfortunately many of these sound very familiar to past years:-

➤ Checking Tyre pressures is part of DI

Yes I know it can be awkward and time consuming to find a valve extension and fit a pressure gauge, but if a tyre looks flat then please make the effort to check and inflate if necessary.

In 2016 we wrecked 2 tail wheel rims and wrote off 6 inner tubes all because aircraft were flown with under inflated tyre(s).

Apart from the inconvenience of an aircraft out of service with the valve ripped from the inner tube, the pneumatic tyre acts as a major elastic component absorbing energy from a heavy landing. If we fly with under inflated tyres then we put the whole airframe at risk of significant damage

> Trailer fittings dumped in hanger

If you re-rig a club glider after a land out or competition, please ensure all of the trailer fittings are returned to the appropriate trailer.

> Tow-Out gear dumped in hanger

All of the club Tow-Out gear has storage hooks/fixings on the hanger wall, please return it to these after use. Don't just dump it on the Hanger floor, or leave it fitted to the glider. Please pay special attention to keep the yellow/black box by the door clear clear so as not to impede the Grob 103 as it rotates into the Hanger

> Canopies

In 2015 we cracked a K13 canopy by reaching through the DV panel, to operate the release. In my AGM submission for 2016 I wrote:-

“Please think before you reach in:-

i) K13s have external levers to operate the canopy catch on the outside. It should NEVER be necessary to reach in through the DV panel.

ii) K21 Why do we reach through the DV panel to lock the far side catch when the glider is just to be stored in the Hanger? I could take this further and ask why do we lock the canopies of any of the Glass gliders when they are in the Hanger? – there is no wind risk!”

> Unfortunately these notes seem to have gone largely unheeded, I still see members reaching through the DV panel of the K13s and regularly find the far side catches of the K21 latched when its in the Hanger.

Recently a couple of members have stepped up to clean Canopies on a semi regular basis to whom I offer my thanks. We still need more members to undertake this as part of the DI.

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> The cleaning materials and cloths to care for canopies are in the cupboard in the hanger and there are instructions on the cupboard door.

Thanks

To close I would like to send my thanks to all those club members who have helped with the various projects/jobs over the last year. The Technical Office has a pretty wide ranging scope and without your help it would not be possible to achieve what we have, without incurring significant additional costs.