Training Organisation News

Issue 4/2015 September 2015

Introduction

This is the fourth of what we anticipate will be an approximately bi-annual newsletter. It aims to keep everyone at clubs involved with glider pilot training informed about topical issues and developments. If you have anything that you would like to add to the newsletter or any comments please drop me a line – mike@gliding.co.uk . I might even start a letters page. This issue concentrates on some of the practical training issues that have been brought to my attention over the summer months. I hope you will enjoy the break from regulatory aspects.

Landing Lever and All That!

Ah – this old chestnut! Flying gliders is all about energy management. We have effectively two stores of energy – Kinetic (speed) and Potential (height). When we are flying the circuit and approach, the main aim of the whole operation is to continuously manage the energy to arrive safely at the reference point on the landing area. By safely, I mean with an appropriate amount of stored energy at all stages. And here we come to one of the largest problems (as indicated in accident and incident reports) – use of the airbrakes.

Problem one – a solo pupil perceives they are too high in the circuit and opens the airbrakes. Later they find that they are getting short of height and have to turn low or turn in early to rescue the situation. We should never prohibit a student from doing something that may be necessary to ensure a safe flying outcome. Opening the airbrakes in the circuit is fine, as long as it is done knowing the consequences. However, students should be taught to remember that there is normally no way to get that energy back!

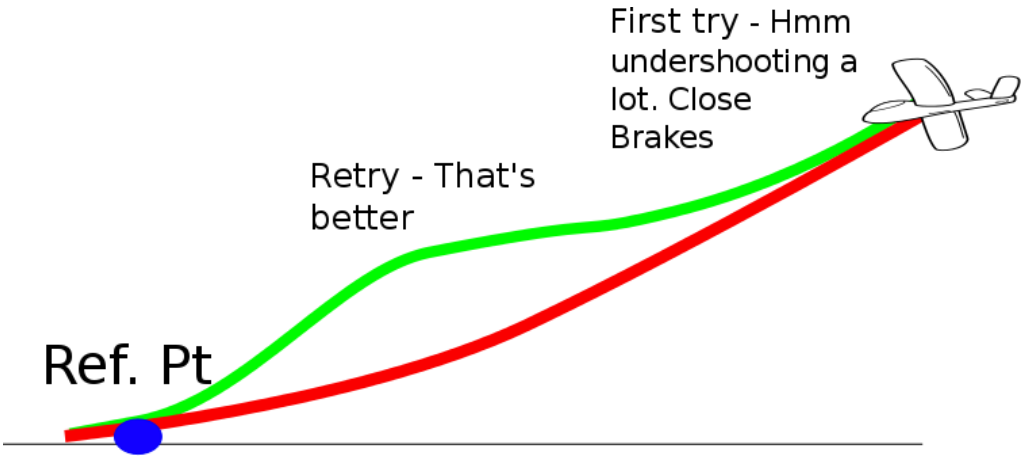
Problem two – Airbrakes are opened at the beginning of the approach and slowly closed to maintain the flight path to the Reference point. It seems to be very difficult to stop pupils from opening the airbrakes too early on the approach. Indeed, the judgement of a perfect half to two thirds airbrake approach is very difficult. I still don't get it right in my LS4. But the aim remains – to do at least the last bit of the approach with plenty of brake out so that it is fairly steep and therefore there is a reserve of energy. Of course maintaining an appropriate speed is important as well. In order to achieve the above, we sometimes need to experiment early in the approach. So the sequence of thoughts and events after turning final on the approach should be:

1. Turn final (preferably high enough to give us some time – 4-500'?) and identify the Ref Pt. Make sure it is descending in your field of vision. If it's remaining fairly stationary you had better not open the brakes!
2. Assuming you are overshooting with no brakes, wait until the angle down to it looks like you could get there with half to two thirds brake out (this is a judgement exercise and depends on wind and airbrake effectiveness). Open the brakes to half or two

thirds and assess the movement of the Ref Pt once everything has settled down. Maintain an appropriate speed.

3. It is likely that you have made a mistake – I often do! If your mistake is minor and you can adjust the brakes a little to attain the reference point, great. If you are undershooting a lot, and would have to close the brakes a great deal to maintain an accurate approach, shut them completely so that you can re-open them from a steeper angle to avoid the constantly shallowing approach. If you are overshooting open the brakes more. If you are still overshooting, can you sideslip?!

So we are aiming for the 'untidy' green line below (which depicts the 'experimenting' mentioned above), not the 'tidy' red one. I really hope this makes sense to everyone as there seems to be an approach control fail epidemic!



Raising the Nose to Take Out Slack in the Rope

I have heard this quite a lot lately. Try asking your students what to do if there is slack in the rope on aerotow. I bet a lot of them will say raise the nose to slow down. This is incorrect. Unfortunately the relationship between Kinetic and Potential energy focusses on speed (remember $E_k = ½mv^2$). This means that to remove a bit of speed we are going to gain quite a lot of height. This is something we really don't want to do behind a tug. The correct technique is to simply wait for the slack to be taken up by the tug. If the slack is getting worse, it is permissible to open the brakes, but only until the problem stops getting worse. No more. If you think the weak link will break when the slack comes out of the rope, release just before the rope goes tight. ***Do not release with significant slack in the rope!***

Time Limit for Completing the Bronze Badge

Ian Ashton from Bowland Forest GC contacted us to enquire what the reason behind the 12 month limit for completing all aspects of the Bronze badge was. We could not think of a reason not to make it longer, so we have extended it to 24 months which is an equivalent to EASA time–limits for aspects of the licence.

Teaching Cockpit Checks

When instructors are teaching the cockpit checks, it is important to include the 'other pilot' in these checks. In other words, when a student is checking the ballast, instruments, straps

and canopies, they need to be taught to ask the instructor if his or her instruments, straps etc are fit for flight as well as their own. When it comes to canopies on types where the canopies are separate, the student should be encouraged to check the other canopy themselves for security; visually or physically as appropriate. This will get the student into the habit of checking the other cockpit, so that when they fly solo, they will check to see if the back canopy is locked.

Do Something!!

There have been quite a few instances recently where students have released from an aerotow or the winch as a kneejerk reaction to something else happening. In one instance, with the student flying an aerotow, the rear canopy opened and the student released at about 150'. This led to the instructor dealing with his canopy and attempting to land back on the airfield from extreme low level (no – there wasn't anywhere to land ahead). He managed it (well done!), but I wonder why the student released? In another accident a solo student pulled the release on the winch because he heard a bang. I'm not sure what to do about these incidents, but if the launch is progressing well, despite distractions, the first thing to do is…….nothing; assess the situation. Pulling the release will often put you in a greater pickle!

Temporarily Unsure of My Position…

Perhaps it happens every year, but there seems to have been quite a few instances this summer of solo student pilots getting lost and landing out. Some of these are reported, some I hear about through the gliding grapevine. We need to improve our teaching of local landmarks for these sorts of pupils. Most sites have landmarks that can be used to direct a student to sometimes hard to find airfields. Make sure the student gets used to finding the airfield when it 'disappears'. Don't just tell them – help them work it out for themselves.

If the worst happens and the student still can't find the airfield and they are getting low, perhaps we should give them some very simple advice about landing out? We need to make the student aware which way the wind is blowing, related to some large local landmark, or perhaps even the direction of the Sun. Perhaps, depending on the time of year some advice about large fields that a cross country pilot wouldn't be happy to pick, but for an emergency would be fine. Maybe brown, ploughed fields at the beginning or end of summer, perhaps even crop if there is nothing better realistically during the middle of summer. I think that the above options, if a large field is picked would be far better than trying to get the glider down in some little grass field and running into the dry stone wall.

Hooker-Onners

One of the most under – valued jobs on the airfield is the guy that hooks the glider on to the winch or tug. We get countless incidents every year where a pilot has left the tail dolly on, or left a canopy open, perhaps airbrakes are unlocked etc. If ground crew were trained to simply look around for those three key things before launch, we could avoid these incidents and accidents. If I am hooking someone on, I will check myself from the outside that the brakes look locked as well as the canopy and that the tail dolly is off. Of course, it requires a little training to detect these problems. I wonder if you could help me to spread the word?

Is Everyone Home?

At the end of a weekend trip to a gliding club with my family, I noticed that a friend's trailer was still open. I looked inside. His glider was not there. I telephoned him, and received an answer – he had actually just landed, but this was at about 7.30 pm. I wondered who would have called out the big yellow helicopter if he had failed to return that evening.

What system do you have at your club to ensure that everyone is home by the end of the day? A simple look down the log by the duty instructor would probably suffice. I would hope my mates would not leave the airfield before I was accounted for…

IFPs and Converting BIs

If a BI wishes to convert to an IFP so that they can carry paying passengers using an EASA licence, they simply need to read the IFP training booklet which contains an appendix dedicated to converting. Within the page is the following statement 'Once you have read and understood the information on this page and pages three and four of this document, please ask that your CFI signs your log book to note that they are happy that you have understood the information and differences between the BI and IFP, and they are happy for you to continue as an IFP within the BGA system'.

Low-Powered Tug Take-Off Performance

During a recent international meeting, the subject of lower powered, lighter tugs was aired. It was thought that there should be a 'worst case' marker on the runway which depicts the last place that the glider can release and stop in nil wind if the tug was still on the ground or very slow. If this marker was reached and either pilot was unsure of the success of the tow, one or the other could release without fear of an accident. It sounded like a fine idea to me.

Spinning the K21

If you use the K21 for spinning training, there have been a few important amendments to the flight manual with reference to using the tail weights and spinning over the years. I urge **all** K21 pilots to read the flight manual supplement available from the Schleicher website: http://www.alexander-schleicher.de/wp-content/uploads/2015/02/210_TM04B_E_HB.pdf A specific issue is the surprise notion that moving the stick to the front stop to recover from a spin is not recommended. If you use the K21 for spin training you must read the flight manual supplement linked above.

Epilogue

I really hope the above is thought provoking. Just remember that despite any issues raised above, we are providing an inspiring and safe service to student pilots. I would like to wish all our instructors a great, safe autumn season. Keep up the good work!

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