13 – FIRST SOLO FLIGHT

SPL Syllabus: Exercise 13 1st Solo Flight			
(i)	**instructors briefing including limitations**	**(i)**	**Effects of the centre of gravity (CoG) on controllability of sailplane**
(ii)	**Awareness of the local area and restrictions**	**(iv)**	**Observation of flight and debriefing by instructor**
(iii)	**Use of required equipment**		

INTRODUCTION

At first sight the decision to send a trainee off on a first solo looks to be a tricky one. It isn't, because if you aren't sure, don't do it. Nevertheless, solo flying is an important step for trainees and once they are ready it shouldn't be delayed for too long. Done at the right time, it is a great boost to their confidence.

Particularly with the advent of part SFCL, first solo is not the finish of training or supervision. Of course, there will be a "pat on the back" after the event, before continuing the training syllabus.

The issue of when a trainee can, or should be sent solo, may be influenced by local club rules about who can authorise it. BGA rules allow any FI(s) who has completed the probation requirements to send someone solo, but advice inexperienced instructors often consult the nearest experienced instructor and may ask them to conduct the pre-solo check flight.

When the pilot is getting close to the stage of going solo, check that they are aware of, and meet the medical requirements in place at the time, in order to fly solo. Even a Pilot Medical Declaration cannot be processed instantaneously, so tell them to get it completed well before they need it for a solo flight. If the trainee is under 18, it is wise for the club to have a system in place for ensuring parental agreement for the trainee to do their first solo.

Before solo, the trainee's performance must have satisfactorily completed and been signed off for exercises 1-12 of the SFCL syllabus, with the exception of the solo spin. This means they will have the following essential minimum skills and knowledge:

- **basic rules of the air and good lookout** - a pre-solo quiz covering local airspace and the rules of the air is available from the BGA website under 'Bronze'.
- **speed and directional control** - should be good, particularly on approach.
- **circuit planning** - especially recognising getting low in the circuit and understand the need to turn in early if necessary.
- **approach control** - able to recognise and correct for an undershoot.
- **stalling** - must be able to recognise all types of stall and make consistent least height loss recoveries, including stall with a wing drop
- **spinning** – if the club does not have a spin-trainer glider it may be reasonable to send someone solo without having done a full spin in a glider. They must have been very thoroughly trained in stall training up to and including stall with a wing drop and spin avoidance. In the absence of real spinning, simulator training is better than no full spin training.

*If spin training **is** available locally then they should be to recognise a spin, take the correct recovery action, and recover with minimum loss of height. If a spin does not develop (a common occurrence), the trainee should be able to recognise and recover correctly from the ensuing spiral dive*.

- **satisfactory take-off and launch** - including a clean take-off avoiding PIOs. On the winch; adopting the correct climb attitudes at the correct moments. On aerotow: recovering from being 'out of position.'
- **launch failures** - satisfactorily handled by the trainee without any 'help' at all from the instructor.
- **finally** - you will have done some sort of check flights on the day and be confident that the trainee's performance is satisfactory. Ideally this will include some of the following:
  - a cable-break.
  - some stalls.
  - a single, low-pressure circuit during which you said and did nothing; just let the trainee get on with it. You want them to be relaxed and to repeat a simple uneventful solo circuit.

To establish all these points, you may have to rely on either the training card, a detailed syllabus sheet, and/or log-book entries, otherwise check flights can go on for ever.

If the conditions are not suitable for a first solo, wait until they are. Do not take a risk.

ADVICE TO INSTRUCTORS

If you haven't personally assessed the trainee's progress over a reasonably long period of time, and don't trust implicitly the judgement of the instructors who have flown with them and said they are OK, then it will take at least four launches for you to check through the essential exercises. If this is likely to be the case, it may be better to ask another instructor more familiar with the trainee's overall progress and who has flown with them recently, to consider sending them solo.

BRIEFING POINTS

Do not advertise to other individuals at the launch point that a first solo is imminent – a crowd of well-wishers will not help.

Check that the trainee answers satisfactorily the following:

- *Are you happy to go off on your own?*
- *What is your weight and are you at least thirty pounds above the minimum placard weight? If not, carry ballast - that will stop the elevator from being too twitchy.*
- *What approach speed is appropriate for today's conditions?* Encourage the trainee to specify an exact speed.
- *What will you do if the cable breaks at X feet?*
- *What will you do if you get low in the circuit?*
- *Soar if you can (or don't) but make sure you can see and are within gliding range of the airfield at all times.*
- *Any questions?*
- *Now, go and do another flight just like the last one.*

Briefing points:

Explain that with a lower weight and the CG further aft the glider will feel different when flown solo. The controls will feel lighter, and the minimum sink speed will be lower. The launch is likely to be higher.

Remind trainees about to go solo that in any two-seater, the rear cockpit is now their responsibility, even though there will not be anyone in it. i.e.

- check the straps are done up
- any lose items such as surplus cushions/parachute are removed.
- the rear canopy is locked shut and DV panel closed.

Keep an eye on the progress of the first flight but do not fret – you know they will be all right. If winching, pay particular attention to the launch and note the transition to full climb and the height achieved. If aerotowing, watch out for PIO's or other wobbles.

Note the circuit; was it too high/low or too close/far out or just right, and how it was handled. Check that the approach and the use of airbrakes was smooth, and that the flight ended with a good landing.

DE-BRIEFING

Well done! Any questions? Now I'd like you to go and do another one - if appropriate.

If the first solo was satisfactory then it is often helpful to do another flight straight away to build confidence. Give the minimum briefing, i. e. Did everything go well? Any issues or questions?

De-brief any significant points you noticed. If for any reason you feel that trainee should not do a second solo, then don't say so yet - just don't offer one. Say that you would like to do a long debrief on the day's flying so far. Go and have a cup of tea.

COMMON DIFFICULTIES

Circuit too close - being extra careful.

Ballooned landings. Good trainees may have learnt so fast that they never experience or even see a ballooned or heavy landing. This is very difficult for them if they are solo when they first encounter one. The fact that most two-seaters' elevator forces and general handling are lighter when the glider is flown solo, may contribute to ballooning.

Other (social) problems. All the trainee's mates (or 'relations') will want to rush around them both before and immediately after the flight. This is very distracting, sometimes misinforms and may stop the trainee from absorbing even the shortest of briefings.

