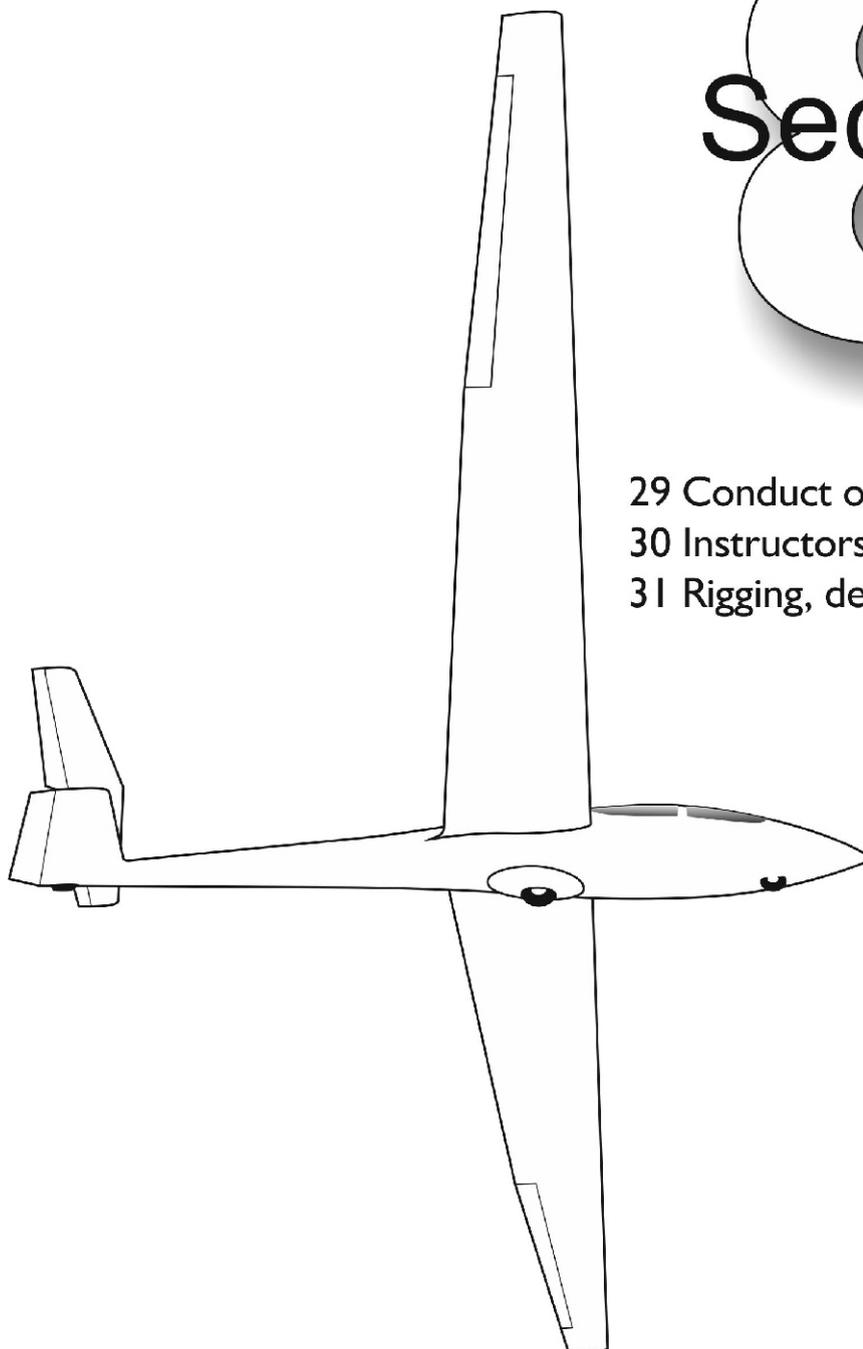
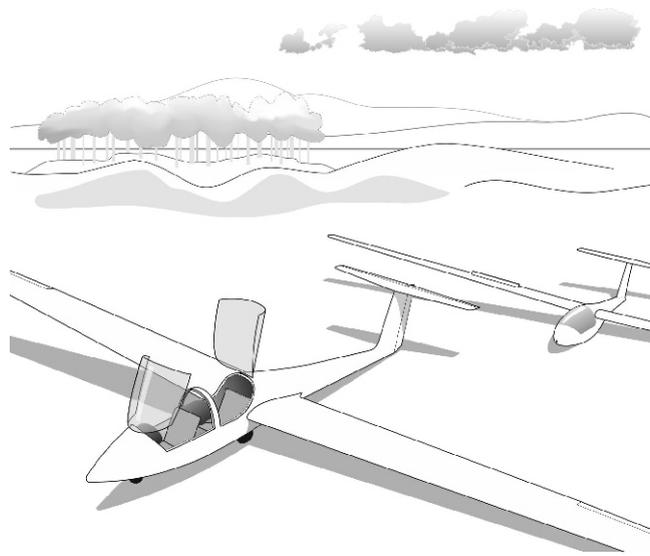


Section 8

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29 - CONDUCT OF TRIAL LESSONS

Introduction

Flying with people who have perhaps never had their feet off the ground before is a great privilege, but also brings with it massive responsibility for all categories of instructors. No knowledge at all can be assumed of these individuals. Some have strange ideas picked up from all over the place, and as such need handling carefully. They are also expecting a very safe flight. Perhaps their perception of the risk in gliding is that it is the same as for commercial transport, which is emphatically not the case, and this perception should not be endorsed.

Equally, since the main purpose of the flight is for it to be safe and fun, it is important not to become obsessed with 'having to teach' them something in the air. Not everyone wants to 'have a go', and even for those that do, there's a limit to how much they can take in during the course of what may be quite a short flight.

There is a great deal of information and advice available for instructors within the basic instructor preparation notes, and some of the chapter is taken from those notes. In addition, the BGA has published guidelines for the supervision of flying taking place at its member clubs. All instructors carrying out trial lessons should refer to BGA Laws and Rules - Code of Practice for Gliding Lessons (CP5). These documents are available in full on the BGA website.

Common causes of mishaps we need to prevent

This chapter is based on the results of an analysis of trial lesson accidents. It was found that accidents with trial lessons on board were actually perpetrated by a roughly equal mix of basic, assistant and full rated instructors!

Most of these belong in the 'over ambitious' or 'trying too hard' category. This resulted in some pretty obvious accidents for less experienced BI's and much less obvious accidents for experienced pilots. The moral of the story is that if at any time as an instructor you wonder if you should be doing something, then the answer is probably that you should not!

It should always be remembered that a trial lesson trainee will probably be perfectly happy with a 'sled ride'; certainly for a first (and probably second and third) flight experience, no matter how boring you think that sounds. If easy lift is available, by all means take it. It will give a student a wider experience of gliding and an extended flight. If there is ANY question about the flight becoming sporty, the search for lift in whatever form should be abandoned. Sport gliding is something to enjoy perhaps in a single seater; but not with a member of the public on board.

Here is an example of an accident during a trial lesson where a very experienced fully rated instructor found himself in a corner from which he was unable to extract himself:

The instructor flying the low performance glider was very experienced, but used to higher performance gliders. He released at 800ft because of the excessive winch launch speed and attempted to reach a local source of lift. Finding it out of range he turned back to the airfield. He turned final, into a 10kt wind, at about 200ft but undershot into a fence.

Now, it's very easy to be wise after the event, but we can learn from this example (and there are many more). Before you read any further, how about identifying all the elements of the accident above and writing them down? See if you agree with the ones below:

- the instructor was flying a type with which he was not familiar
- the winch driver was perhaps not familiar with the particular glider either, as he gave the aircraft too much power
- the instructor released - probably quite correctly - but this introduced another factor -
- having released lower than intended he tried to soar (trying perhaps a bit hard and reverting to 'sport gliding' instead of 'as safe as possible with this trial lesson on board')
- notwithstanding his unfamiliarity with the type, he didn't modify his circuit to make it back safely onto the airfield.

With a different winch driver, the accident probably would not have occurred. If the instructor had kept closer than he did to the airfield, the accident might not have occurred, nor if he had chosen to fly an aircraft with which he was more familiar. If he'd accepted that he'd made a couple of mistakes and then made things easier for himself by turning in early, the accident wouldn't have occurred.

It's easy to analyse afterwards, but there are many more accidents having similar stories. How can we, as experienced pilots sat in our armchairs reading this, avoid such an accident? There is a well known saying that 'the superior pilot uses superior judgement to avoid those situations which may require their superior skill'. Never was a truer word spoken.

Early Flying Sensations

Sensitivity to flying sensations is normal, but in some cases may be extreme. Increased 'G' or a 'banked attitude in turns' can both be very unusual to a trainee when compared to life at ground level. It is a change of state which can be most disturbing to a trainee at first, (although turning can be compared to leaning a push bike when cycling round a corner). The trainee should be warned of the sensations, and given assurances that everyone adapts quite quickly to gentle turns and normal attitude changes.

Reduced 'G' and more extreme manoeuvres will always be disconcerting to some people. In extreme cases even small amounts of reduced 'G' may completely disorientate a trainee and result in irrational behaviour.

In general, flights should be of limited duration. Prolonged soaring is seldom appreciated, especially if it entails lots of continuous circling. Even someone on a first short flight may be sufficiently disconcerted (or physically ill) to justify early abandonment of the lesson. Remember the 'Trial lesson' is supposed to be an enjoyable experience tailored to the individual.

The following signs are indicative of a trainee beginning to feel unhappy!

- silence
- inability to respond to questions
- tense neck muscles
- holding on
- leaning away from the turn
- white and perspiring.

Fresh air will help if they are feeling ill, and a rapid but smooth controlled descent (70kt and full airbrake) may be necessary. Be sympathetic and tactful; *Would you like to go down now, or if you're pretty certain that the trainee is not enjoying the flight, if you are happy, we will go down and land now*, should provoke a response.

Trainees should always be assured that they are being well looked after. Needless to say, the positive and decisive attitude of the instructor to flying reinforces the trainee's confidence and this confidence must not be abused.

The conduct of trial lessons from arrival to departure.

The following is an example of a structured approach to conducting trial lessons. It makes use of extracts taken from the BI course notes which apply to all trial lessons. The original course notes are available on the BGA website.

Greeting the trial lesson trainee

The motivation of the trainee will vary, and can depend on whether he has come as a member of a group or by himself. Within a visiting group there can be peer pressure; he will not want to miss out (or chicken out), when in company with the others. Whether as a member of the group, or as an individual, each of the following factors can apply:

- they have a genuine interest in taking up the sport. These people usually come on their own or as the only member of small group who is going to fly
- they are seeking a thrill
- they have always wanted to try gliding
- they are seeking status.

Students needs and content of flight(s)

The content of the trial lesson will depend on the background of the trainee. For example, consider the extremes of an aeromodeller, (or person with previous flying experience) against that of the adventurer who wishes to celebrate an '80th' birthday, or someone whose flight is a present. It is important to communicate at a level appropriate to the trainee's background and age. Whilst maximum intelligence and minimum knowledge should be assumed, the instructor should avoid "talking down" to a trainee, and take care not to confuse with technicalities or jargon.

What do they want from the experience?

Remember that there is no requirement to pack in as much as is humanly possible into a trial lesson. The name lesson refers to the whole experience, including the ground based briefing bits. Think back to your first few flights (if you can!). There is an awful lot to be taken in on a simple sled ride from a winch launch if your student has little prior experience of flying. A flight pointing out local landmarks and experiencing flying sensations plus the ground briefings certainly constitute a lesson. It is not compulsory for the trainee to actually handle the controls. What must be avoided is any pressure to pack 'value' into a flight. This often results in a rush and a possible cause of some accidents. Perhaps the student has paid for more than one launch. This is an opportunity to introduce the student to gliding in a very structured way.

To get maximum satisfaction, the holder of a PPL or other flying licence, should be flown with an assistant or fully rated instructor.

- do not push a trainee into anything (including having a go at the flying)
- do not let a friend push a trainee into anything
- do not let anyone push you into doing anything anywhere near your limits or experience.

Sortie/Flight Planning

The trial lesson has to be designed to meet the needs of the trainee and has to be modified to take account of the weather and organisational conditions of the day.

Safety

The safety of the trainee is paramount. In order to make the decision whether to fly or not the following factors need to be considered:

- are you current?
- are you familiar with the aircraft?
- are you current on the launch method to be used?
- Is the weather suitable (see Meteorological limits below)?
- are you easily capable of flying in today's conditions?
- Some other challenges for consideration:
 - low Sun?
 - misting canopy?
 - are there adequate options available should a launch failure occur and are you current in handling launch failures in these conditions (no wind and a short runway can be very challenging)?
 - is there time available for the flight?

Flight with these brand new members must be conducted so as to keep risk to the lowest possible level. If in doubt, keep it safe!

Briefing the trainee

Briefings should not be lengthy affairs and should be carried out outside the glider or before heading out to the launch point, so that face to face contact can be assured away from too many distractions. Briefings serve to prepare the trainee for the experience, make sure they understand what is going on and what is expected of them, including that they don't operate any inappropriate control. They also serve to prepare the instructor for the flight. Keep it simple. Points which may be covered might include:

- identify the main parts of the glider, and explain what happens when you move the controls
- ask your trainee's weight, and make your own assessment if they seem unsure. Note - If any doubt remains, organize to have them weighed. You may need to carry extra ballast to make sure that the minimum loading is exceeded. In the case of children or other very small/light trainees, they may have to be carried in the rear seat
- consideration should be given to small trainees and children as to whether the parachute fits sufficiently well to be effective in an emergency
- the instructor should consider younger trainees maturity and their ability to react confidently in the event of a bail out situation. The seating height governs the view the trainee has, and a good view reduces the possibility of motion sickness. Remember - you are flying illegally if outside the weight limits for the glider, and insurance may not payout in the event of a claim

- explain the importance of lookout and how you are expecting the trainee to help you with it.

Alongside and in the glider, the following is likely to be included in your ongoing briefing;

- wearing, adjusting and removing the parachute
- in the unlikely event of an emergency, how to use the parachute and how to exit the glider
- getting into and out of the glider before and after flight
- adjusting the seating. If used, foam must be firm and shock absorbing
- adjusting the harness. (Is it effective)?
- Loose articles
 - cameras etc. Extreme caution, or prohibition, depending on type of glider
- cockpit
 - areas in the cockpit for the trainee to hold on to if required
 - canopy operation, normal and emergency
 - use of air vents
 - controls to be avoided and when (eg., airbrake lever). Explain where to put hands and feet
 - operating the release. (Emphasise Not the trainee)!
 - summarise use of the controls
- handing over and taking control
- explain the basis of the launch and what to expect
 - reinforce hands and feet clear of controls

Airfield organization

Make sure that visitors are either escorted to and from the launch point, or accurately briefed on the following:

- how to get to the launch point
- potential hazards en route
- keeping behind the glider to be launched
- are aware of the approach paths in use
- the possibility that aircraft may land elsewhere than at the launch point
- powered aeroplanes and hazards such as propellers and trailing ropes.

Preparation for flight

It is most important that the instructor prepares him/herself and the glider for the flight. Many accidents are caused by poor pre flight preparation. Factors to focus on could include:

- aircraft serviceability and DI
- pilots' weights. Are they within limits?
- seating position
- control accessibility
- loose articles such as cameras mobile phones etc
- cockpit check
- eventualities
- cable position
- conflicting air traffic
- weather.

Recommended weather minima

Conditions are not always ideal for introductory lessons even if general club activity is continuing. Whilst there are always those who will enjoy being thrown about whilst flying, the majority

will not appreciate it. Situations best avoided are strong convection or turbulence, poor visibility, and any condition near the limits for flying. As you acclimatise to the flying conditions, it is all too easy to overlook a gradually deteriorating situation. If the first lessons are to be a pleasant experience, and value for money for the trainee, they must be conducted in appropriate weather conditions. A trial lesson by any category of instructor should be carried out whilst maintaining the lowest risk possible. The following conditions are considered inappropriate for 'Trial Lessons'.

DO NOT LAUNCH:

- into cloud
- in rain, or if the flight is likely to be in flown in rain
- with rain/snow/ice on the glider
- with a misted canopy.

SEEK ADVICE FROM THE INSTRUCTOR IN-CHARGE BEFORE LAUNCHING IF:

- the wind is turbulent. (Varying by more than 10 kts)
- the wind is strong (20 kts), or there is a significant crosswind
- cloudbase is less than 1200'
- in-flight visibility is less than 5km
- launching above more than 4/8th cloud.

NOTE: All flights must be completed before the time of official night.

Pre-Flight Checks and the Flight

Having strapped in, briefly explain your actions as you carry out your pre-flight checks. Once the checks are complete (including EVENTUALITIES), keep the interest of your trainee whilst the final preparations are being made. If for any reason there will be a long delay, it may be best to exit the glider until flying recommences. Hot cockpits = uncomfortable or nauseous pilots. Ballast - do you believe your student? See above.

Objectives of the Trial Lesson

- to perform a flight with the least risk possible
- to introduce the trainee to the sport of gliding
- to demonstrate safe accurate flying techniques and planning
- to convince a trainee when appropriate that they could easily learn to fly.

In-Flight

Use appropriate elements according to type of trial lesson. Remember to keep the flight simple and as safe and risk free as possible. This is not a normal 'sporting' flight.

- general chat, keeping interest focussed outside the glider
- demonstration
- trainee attempts exercise - but only if they would like to do so
- decision between further attempt with patten, re-teach, or just look at the view!
- careful choice of words to avoid "jargon", or disconcerting language!

- advice “just in advance” of typical areas of flight which are potentially upsetting:
 - bumpy ground run
 - noise
 - high nose attitude on winch launch
 - noise of cable release
 - lowering the nose
 - opening of airbrakes
 - level of turbulence to be expected.

If the flying gets difficult, KEEP QUIET AND CONCENTRATE!
REMEMBER: AVIATE NAVIGATE COMMUNICATE (in that order of priority)

Post flight Discussion

Answer any questions that arise about the flight, or gliding in general. (How to become a member!) After the flight, ensure the trainee is not abandoned. If you are unable to look after them, make sure an enthusiastic colleague continues the good work already achieved, and that they don't walk into the path of a landing glider! Make sure that the trainee and their entourage are escorted, or know how to safely get off the airfield.

Remember, all 'Trial Lessons' trainees are potential members!