

## Turbo Gliders

*BGGC Notes are articles produced by experienced Club instructors and pundits. The articles provide topical and informed views on a particular feature of the flying at Nympsfield. They are not intended as substitutes for formal training or detailed instructor briefings. These notes should be read in conjunction with a similar paper on turbo gliders produced by the BGA and available on the BGA website and the Turbo requirements documented in the BGGC – Flying and Information Manual.*

- A turbo<sup>1</sup> is not intended as a means of touring the countryside. A turbo can provide a more flexible approach to cross-country flying by reducing the reliance on a retrieve crew or as a means of placing yourself in a unique soaring location which would otherwise mean a long aero tow (e.g. Black Mountains).
- A turbo will not improve your flying or cross-country performance or prevent you from landing out. On the contrary a turbo can increase the accident risk if the pilot is not equipped to manage the high workload associated with a turbo operation.
- Engines cannot be guaranteed to start, whether through pilot or mechanical error. Relying on the engine to start while you are over unlandable country is a recipe for disaster. Always have a field selected where you can land if the engine fails to start.
- Engines are much keener to start the second time in a day. It is very good practice (for both pilot and engine) to do a brief run before setting off on a task
- The engine start and stopping procedures are quite complex, most people need a written checklist for both. Remember to keep a good lookout during these procedures.
- When ridge soaring below 1,000 feet AGL you have a glider, not a turbo. If you fail to soar you must land in a field, you won't have time or height to start the engine.
- When getting low cross-country the turbo pilot must select a field when higher than with a conventional glider. Heights vary with experience and conditions but soaring should definitely be abandoned by 1,000 feet, put the wheel down and put your brain into field landing mode. If the engine does not start it is very common to forget the wheel in the ensuing panic. Start the engine on the down wind leg to your field, once the engine is raised the sink rate is roughly that of half airbrake. If the engine doesn't start the ground comes up to meet you very fast. If it has not started by 600 feet it probably isn't going to, ignore the engine, but remember its drag. Keep the nose down to maintain speed and keep monitoring the ASI in this unusual situation and land the glider safely in the field. If you continue fiddling with the knobs and levers wondering why the engine has not started you may well crash – see BGA accident reports. Europe's largest glider insurer doubles the excess for Turbo landouts.
- If you have got low, selected a field and deployed the engine there is always a sense of relief when it starts. Do not fly away from your chosen field until you are at a height to land in another one if the engine stops. This fairly often happens.

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<sup>1</sup> "Turbo" is the term used by Schempp-Hirth for their self-sustaining gliders the Discus, Ventus, Nimbus and Duo Discus. The above notes generally apply to other manufacturer's self-sustainers and self-launching 2-stroke petrol engined gliders. The electric ones are said to be much easier to operate but are incredibly expensive.