

What the Ops Team is Talking About

Memo to Club CFI's and other interested parties - Feb 2019 - *please forward to your instructors.*

A summary of the key items discussed at the Ops Team on-line meeting on 19 February 2019. David Moody (North), David Hirst (Central), Graham Erikson (South) and Martyn Cook (NOO).

1. Club Instructors and Contest Flying: It's been a busy contest season and the observation was made that pilots flying in contests can leave some Clubs short of instructors in the height of the soaring season. How to strike a balance between Club health and Contest Flying over summer? The question was asked whether there were too many contests, and maybe a 9-day limit on duration would be better.

Suggestions included training more instructors, using imported summer crews (many Clubs do this already) and appealing to experienced pilots to consider flying in 2-seaters and coaching post-QGP pilots into task flying. Also a more deliberate attempt to include coaching at contests.

2. Training Program Development - Moodle: A number of changes and new sections have been added. The approach to stalling has been revised - the "stalling" exercise includes stalling in different flight modes (wings level, turning, brakes, flaps, etc) to reinforce that there is no single "stall speed" for a glider. It changes . . . depending on several factors . . . and this is linked to a "safe margin" in each of these modes when flying close to ground.

Permission has been obtained for GNZ to use and adapt the BGA Instructor Training Manual (July 2017 edition). Thanks to Nigel Davy for negotiating this. The text is in raw form and does require minor editing to match NZ practice, but otherwise this is a very welcome opportunity to quickly upgrade our instructor resources. A section on C-Cat Instructor Training program has been added into moodle, into which IM sections are being posted after being edited.

The BGA has changed the pre-takeoff check list to place *canopy* as the final item. Gliding NZ will make the same change to the MOAP with the next round of revisions. The "Eventualities" part of the pre-takeoff check list has been fleshed out to specify the most serious things that can go wrong in the first part of a launch, especially with winch launching. Copies of both are appended.

3. Review of Incident Reports for Jan + Feb 2019:

- cable tow car and tow plane operating on ground on directly opposing headings
- wheel up landing after rapid descent with distraction of an airsick passenger
- ground loop after landing in gusty conditions, possibly too much landing flap
- downwind landing after engine failed to start at circuit height above airfield
- stick knocked aft when hand slipped off release knob, glider pitched up, tug released
- aerotow with brakes unlocked, disregarded rudder waggle, radio comms indecipherable
- winch launch transition to full climb at low airspeed, wing drop stall, recovered
- flat radio battery in controlled airspace, used cell phone to communicate with tower
- airbrake jammed open during aerotow in rough conditions, brakes had slammed open
- wing dropped on ground during rigging of 2-seat glider, not enough supervision
- ground loop after outlanding in long grass on farm airstrip, minor wheel damage
- gear up landing after 2-hr soaring flight, distracted by radio calls, missed checks
- damage to undercarriage area due to heavy landing on bumpy area of airfield
- strong gusty winds, unable to reach airfield due to heavy sink/rotor, outlanded safely
- wheel up landing, pre-landing check not done, distracted by tug plus a non-standard circuit
- airbrakes open on tow, combination did not climb, radio chatter, rudder waggle not used
- wheel up landing, wheel lowered at prelanding check, but retracted seconds before touchdown
- outlanding on golf course, terrain very undulating, heavy landing check required
- glider and tow plane near miss, glider circling and may not have seen tug, submitted by TP

Many of these incident reports have a strong "human factors" element, and act as a reminder that we humans are not natural aviators and we need to follow our training diligently. In some cases a good lookout was not maintained. The BGA IM has an excellent section on lookout, and it's clear that this is a systematic skill that needs to be continually practised to build situational awareness. A lookout that is adequate on the ground is not adequate in the air.

A second trend is wheel-up landings, often due to checks not being done when a distraction occurred in the circuit. The pre-landing check can be done much earlier than down-wind - some pilots do it at 2,000 feet, as soon as there is the intention to land. In the circuit the pilot can then deal with distractions without trying to do the checks as well. Finally, a visual check on the wheel position should always be done - check that placards are visible.

One suggestion was to fit 2-seat gliders with fixed undercarriage with a mock undercarriage lever, so that this gets actuated during early training even though the wheel stays down. Could use a gas strut to simulate the forces. Rather than reciting "not applicable". Some clubs have instituted a financial penalty for any wheel-up landing, because it does take the glider out of service pending an engineering inspection, and there may be damage to repair.

A third trend is brakes not closed and locked for takeoff. Hopefully putting this action earlier in the check list will reduce the incidence of these events. The airbrake jammed open was a serious occurrence, in which a section of the upper blade was forced over the lower blade. Contributing factors were strong and gusty wind, high aerotow speed (80 kts), wing flexing and the brakes slamming open against the stops. A perfect storm. Fortunately the pilot landed safely. A Technical Note is expected from the manufacturer on the adjustment of the end-of-travel stops.

The slow winch launch incident could have resulted in a stall/spin crash had the airspeed not slowly increased by 5 kts in the time between the uncommanded wing drop and the recovery action. The incident was recorded on cockpit video, and can be viewed here: <https://youtu.be/GJ5a3G40A2I> This provoked an immediate review of the "Eventualities" check list, with items now prioritised according to the seriousness of the consequences, and the speed with which things can go wrong.

4. Interaction Between Clubs: The observation was made that operating procedures at a Club can easily "drift" away from best practice and this is particularly likely for clubs that have little or no interaction with other clubs. It was therefore suggested that the Ops Team encourage more frequent interaction between different clubs, particularly if one club has put time and energy into developing best practice in a particular area.

A recent example is the training of the Wellington club in safe winch operations by a series of visiting BGA instructors (the visiting experts expressed alarm at some 'normal winching' practices in New Zealand). This inter-club training could take the form of sharing of instructors, weekend camps, or organised workshops but it must be two-way; it should not be the sole responsibility of the 'best practice' club to visit other clubs, nor should other clubs be always forced to travel to gain additional expertise.

5. Review of Trial Program: The revised Training Program hosted on moodle will be reviewed by the Regional Operations Officers as follows. The *To Solo* section has been reviewed many times already and is now fairly stable.

<i>To Soaring Pilot</i>	David Moody
<i>To Cross-Country Pilot</i>	David Hirst
<i>To Task Pilot</i>	Graham Erikson

Cockpit Check Lists

Pre-Boarding Checks:

A = Airworthy	If already flown today this could be a brief walk-around check. Before first flight of the day check maintenance release and DI signed. Seat cushions adequate and not compressible. Parachutes (if used).
B = Ballast	Glider loading is within placarded limitations and trim ballast, if required, is secure.
C = Controls	Check all controls, including airbrakes and flaps, for correct sense and full deflections.
D = Dollies	All dollies and ground handling equipment removed.
E = Expectations	What might be encountered in the first part of the flight? Wind speed and direction, likely turbulence or crosswind, where you want to be towed to (aerotow), or where you will fly to after release (winch).

Pre-Takeoff Checks:

C = Controls	Check flight controls (elevators, ailerons and rudder or equivalents) for full, free and correct movement.
B = Ballast	Ensure pilot weight(s) plus ballast are within placarded limits, and that any required ballast is fitted and secured.
S = Straps	Check harness(es) correctly fastened and adjusted.
I = Instruments	Altimeter set at QNH and other instruments and avionics (including, radio, nav systems, GPS and transponder if fitted) set and functioning.
F = Flaps	Check for full travel in both directions and then set for take-off.
T = Trim	Check for full travel in both directions and then set for take-off.
B = Brakes	Check fully open and even, then closed and locked.
E = Eventualities	Briefly review options and responsibilities for action in the event of a non-normal situation immediately after the launch commences.
C = Canopy	Check closed and locked.

Pre-Landing Checks

S = Straps	Check harness(es) correctly fastened and adjusted tightly.
U = Undercarriage	Check down and locked.
F = Flaps	Check set for landing.
B = Brakes	Check functioning (by brief full extension) then utilise as required.

Prior to conducting stalling, spinning or aerobatic manoeuvres:

H = Height	Check sufficient to enable recovery above approved height AGL.
A = Airframe	Check brake, flap and undercarriage positions are as required.
S = Security	Check harness secure, no loose articles in cockpit.
E = Engine	Not applicable or set as required (if motor-glider).
L = Locality	Check glider positioned so that manoeuvres will be performed clear of built-up areas, cloud, and controlled airspace if necessary.
L = Lookout	Ensure no other aircraft in immediate area, particularly below (Perform S turn, do not circle, as this could attract other gliders!)

Winch Launch “Eventualities”

1. If a **wing** starts to go down I will pull the release before the wing touches the ground.
2. I will control the pitch **attitude** of the glider on the ground roll and allow it to take off by itself when it is ready.
3. I will control the glider in a very gentle climb until the **speed** reaches ___ knots (best winch launch speed) and increasing. If it doesn't reach ___ knots I will lower the nose slightly, release the cable and land ahead.
4. If the speed goes **over** ___ kts (max winch launch speed) in the first part of the launch I will continue the launch and call/signal for "slow down". If the winch power is not reduced I will release at a safe altitude.
5. If the cable **breaks** I will immediately lower the nose to the recovery attitude, pull the release, and wait for the speed to build up to ___ knots. No turns. No air-brakes. Then decide where to land.

WASOB (What A Silly Old Bastard) = Wing - Attitude – Speed – Overspeed – Break

Aerotow Launch “Eventualities”

1. If I cannot keep the glider **straight** on the ground roll I will release and brake.
2. If the glider is not **accelerating** normally (eg airborne by half-way down the available runway) I will release and brake.
3. If the rope **breaks** at a very low altitude I will lower the nose and land directly ahead in the best available space.
4. If the tug **waggles** its rudder I will check airbrakes locked.
5. If the tug **rocks** its wings (wave off) I will release immediately.
6. If I cannot recover to **normal tow position** (either vertically or laterally) I will release immediately.