What the GNZ Operations Team is Talking About ...

A summary of key items discussed at the Operations Team on-line meeting on 22 April 2025. David Moody (North), Roy Innes (Auckland), David Hirst (Central), Wal Bethwaite (South), Craig Clapham (Omarama) and Martyn Cook (NOO).

1. Incident Reports for March - April 2025

- glider went high on aerotow, rope broke at low height, glider stalled and crashed
- low, steep diving turn onto final after failing to gain height from a contest launch
- winch-launching glider just missed colliding with a power plane flying overhead
- glider stalled while trying to land short, ground loop, significant damage
- shoe lace caught in canopy closure, prevented full rudder movement in flight
- instructional flight, airbrakes not fully locked by trainee, aerotow was low over fence
- aerotow launch with airbrakes unlocked unusually small pax, distracted closing canopy
- single-seater winch-launched with tail wind, slower air speed and lower launch height
- glider on ground tow by untrained member, wing tip contacted shrubs beside runway
- wheel would not stay retracted due faulty mechanism, pilot accidentally released canopy
- very experienced instructor landed wheel-up, distracted by radio traffic during checks
- wheel-up landing on remote airfield during contest, gear lowered but not locked down
- near miss between landing glider and tow-plane combo, glider had Flarm switched off
- towplane flaps not retracted at top of climb, maximum flap speed exceeded on descent
- forceful wing drop on aerotow ground run in crosswind, attributed to tug slipstream
- minor traffic conflict in controlled airspace, pilot under-estimated ability to stay airborne

Further Details on Selected Incidents (extracted from the original OPS-10 reports)

1.1 Fatal crash after aerotow upset: It's a sad duty to report a fatal glider crash. The true cause of this one is a mystery which hopefully the accident inspectors will unravel - so we can all learn.

The ground run was normal until the glider lifted off. After the glider was airborne a lack of full control became apparent to witnesses on the ground. The glider was not staying straight behind the tug. At this point the pilot could have released, as there was sufficient room to land on the runway ahead. The tow continued, however, and the glider seemed unstable in pitch. At about 200 feet AGL the glider pitched up violently and the rope broke, just as the tow pilot was preparing to release. The glider was seen to lower its nose to a level attitude and then enter a slow left turn. It appeared to have insufficient airspeed leading to a stall/spin from a low height.

The Ops Team discussed the need to be ready to abandon a launch at any time when things are not normal. This can be challenging - sometimes the decision to abandon (or not) needs to be made in an instant. The "Eventualities" check is intended to prepare the pilot to do this when necessary.

The cable break *Eventuality* for winch launch is "Adopt Recovery Attitude, Wait . . . for 60 knots". But the aero-tow launch only reads, "Wings Level, Approach Speed, Land Ahead". It doesn't envisage recovery from a violent pitch up, and doesn't specify the <u>recovery attitude</u> to recover the speed. The impulse to turn towards the airfield at low height and airspeed must be hard to resist.

The glider's belly hook was in use. There was no nose hook fitted. Aerotow on a belly hook is safe enough provided the glider does not fly higher than the tow-plane. But aerotowing from a belly hook can contribute to an uncontrollable pitch-up if the glider goes higher than the tow-plane.

There are several possible contributing causes in this instance but none of these are definitive, so we await the outcome of the investigation.

1.2 Low, steep diving turn onto final: This incident was reported by a contest director concerned that "it was a very poor example for less experienced pilots, and looked dangerous". The glider pilot had failed to climb away after launching on a contest flight. On returning low to the airfield he conducted a tight circuit that ended with a very low, steep diving turn from downwind onto final He completed the turn at about 30 feet above the ground and landed without further incident.

The flight trace was analysed and showed that the airspeed was never below 60 knots during the manoeuvre, and was 72 knots in the steep diving turn at 240 feet AGL. The Ops Team noted that diving to keep the speed up meant the glider did not stall or spin, and was able to land normally. It may have 'looked dangerous' - but it was far safer than flying at a lower speed to conserve height.

1.3 Near mid-air collision between glider and towplane combination: A mid-air collision is a serious event for all involved. In one reported incident the tow plane was climbing out in the same circuit as a glider descending to land. The glider had Flarm fitted but not switched on at the time. The instructor in the descending glider had noticed the tow plane combination earlier when it was well below, and was surprised when a short time later it came very close at the same height.

A second report of a near miss occurred when the tow pilot was looking in the mirror at top of tow, to check that the glider had released. When looking forward again another glider was seen about 100 metres dead ahead, circling. The tow plane had Flarm fitted but no warning was received.

Ops Team comment is that Flarm is a useful tool but cannot be relied on if it is not switched on, not updated, or if the signal is not strong enough due to an ineffective antenna installation. Pilots are urged to use the <u>Flarm range analyser</u> to verify that their glider is receiving signals from all directions. The analysis involves loading an IGC file from a flight where other Flarm-equipped gliders have been flying in close proximity. And we still need to maintain a consistent visual scan.

1.4 Shoelace caught in canopy restricted rudder movement: The shoelace from the pilot's right shoe was caught in the canopy closure. The pilot reports having "enough rudder authority for normal flight, but full rudder application (e.g. to recover from a spin) would have been difficult if not impossible".

"Pre-flight checks did not pick this up because the control check is done before the canopy is closed." An elegant trap for the inattentive! Maybe a final rudder wiggle for pilots of gliders with canopies that extend as far as the feet? Or avoid those floppy shoe laces.

1.5 Accidental canopy unlatch in flight: The club single-seater was being flown in a contest. While in flight the undercarriage would become unlatched and extend at the slightest bump or pull-up. The pilot - who had hired the glider - had already needed to retract the wheel many times.

While thermalling with two other gliders, and keeping a good lookout, the gear dropped again and the pilot reached down (while keeping his eyes outside) to retract it. In the process the canopy hinge pin was retracted - the two levers are close together. The pilot noticed the slight lifting of the canopy and held it down while flying back to the airfield, all the while attempting to re-engage the hinge pins. On landing the hinge reset.

During follow-up it was established that the person who flew the glider the previous day had experienced the same undercarriage defect, but had not noted it in the DI book nor reported it to an engineer. It's also possible that a dynamic check of the undercarriage up-latch was not made during the last annual inspection. The engineer (or a subsequent pilot) would rely on a report in the minor defects section of the DI book to identify such a fault. On this glider type the up-latch is prone to wear with use, and does need to be monitored.

2.0 Things to Do in Winter

It was reported that in one European gliding country there are 'mandatory' discussions held during the winter months, to discuss the latest incidents and accidents and learn from them. This led to a discussion on winter activities that clubs can engage in to keep pilots mentally in tune.

One suggested exercise is to practice field landings - perhaps landing in a field near the launch point, or flying from a farm strip if aerotow is available. Some pilots - particularly those who fly motor-gliders - may not be current in field landings, so a competency review could be in order.

Related to this is the recommendation that every landing - even those on long airstrips - should be set up as a simulated field landing. This means selecting the minimum safe airspeed for the conditions, selecting an aiming point and making the final part of the approach with 1/2 - 2/3 airbrake. Rather than a long float in ground effect until reaching the desired parking area.

3.0 The Mental Game

A key aspect of 'the mental game' is being able to direct one's attention to best effect. Several incident reports above identify simple omissions from check lists - airbrakes left unlocked or undercarriage not lowered are becoming too common. Even by experienced pilots! Distractions typically interrupt our attention, so if in doubt start the check list again. Sometimes a 'quick final check' is helpful - even after the normal checks have been done.

Another aspect of the mental game is the ability to quickly change your intention when change is required. The classic case is deciding to outland (or attempt an engine start) rather than carrying on, brushing aside any awareness of our low height or deteriorating lift. There's always a sense of disappointment at such a time, which - if we are not prepared for it - can cause us to avoid making a sound decision.

One pilot has adopted the practice of saying out loud, "I am now going to land" to emphasise that the decision has been made. This helps to refocus the mind. There are several moments during a launch when a decision to abort needs to be made. We need to be mentally prepared to do this.

Another theme involves being able to monitor our own stress level, and then stay rational even when under stress. One pilot reported that he 'pauses' in flight every 20 minutes, and reviews 'where he is in the moment'. Do I need to pee? How is the weather? Am I getting too low? Am I feeling well? How clear are my land-out options? Is it time to turn around and fly back? Am I feeling confident to continue? Am I becoming fatigued? Hungry? Dehydrated? And then decide what to do next.

A number of incidents arise in the contest environment. We appreciate that flying contests takes a pilot closer to their edge, and pushes us to fly further and faster than we might on a lazy Sunday afternoon jaunt. That's exactly the point of contest flying - to put us as pilots in a more demanding learning environment. Just be careful not to overload yourself or others you might be flying near to.

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