

What the GNZ Operations Team is Talking About . . .

A summary of key items discussed at the Operations Team on-line meeting on 19 September 2023. David Moody (North), Wal Bethwaite (South) and Martyn Cook (NOO).

1. Incident Reports for August-September 2023

- very experienced tow pilot left carb heat ON after preflight checks, waved off glider at 500 ft
- winch launch attempted with tow-out weak-link in line, untrained visitors had been keen to help
- twin aero-towed in zero wind and light drizzle, wet wings, very low and slow over the trees
- motor glider began launch with propeller in coarse pitch, abandoned launch due to lower rpm
- drink bottle slipped through oxygen bottle hole, jammed right aileron, landed after 5 Nm final
- launch halted because tail ballast not removed after change from heavy pilot to lighter pilot
- towplane taxied into glider trolley - trolley was noticed but then preflight check was interrupted

Commentary on Selected Incidents

1.1 Untrained Visitors "Helping" with Winch Launch: The parachute was laid out at the launch point in such a way that it appeared connected to the winch cable. The club member connecting the cable to the glider didn't pick it up for a close inspection. The "all out" was called without the cable being properly reassembled. The glider started to move and stopped after about one meter. The nylon string (looped to the end of the cable and used to tow out) was connected to the parachute. The knot of the cord was pulled open, and the glider stopped. No harm done.

It appears that a visitor to the airfield laid out the parachute in front of the twin as he had seen it done for other gliders that day, and then did what nobody thought a visitor would do: he took it upon himself to hook on the yellow rope (weak link) to the parachute assembly the way he had seen it attached to the tow-out car down at the winch end.

The submitter commented that not separating those who know what to do and those who don't know what to do (but think they do!) led to the problem as described. The back-stop in this case would have been for the wing runner or other trained club member carefully checking the cable assembly at the glider end before attaching.

1.2 Launching With Wet Wings: The instructor briefed the student on the conditions of the day: zero wind and wet wings due to a drizzly shower, meaning a long take-off roll and likely low over the trees at the far end of the grass runway.

Submitter notes that, "Just before take-off the drizzle got a bit heavier and at that point we should have called it off and waited. However we unwisely proceeded and as expected the take-off roll was long with even poorer than expected acceleration (wet wings and wet grass, no wind). The combination didn't get airborne until towards the end of the roadside fence-line (decision point) and only got airborne at this point with both the tug and glider pulling off the ground, which is not an ideal way to do it."

"Continued pulling back, which created some height but this was in exchange for any acceleration, so we staggered over the trees at the far end doing 50kts in light rain. Not pretty and at the very bottom end of the possible take off performance envelope with little to no margin for things to have been any worse. The moral of the story is we should have not launched. We should have waited."

Item 2 in the recommended Eventualities review for aerotow launch (SASOB) is _____ ?

The question often asked by accident inspectors is, "How did this situation seem okay at the time - for both the instructor and the tow pilot?"

1.3 Drink Bottle Fouled Controls: Local flight in weak house thermals. I reached for my drink bottle and (accidentally) pushed it through the oxy bottle hole and into the control mixer. I found that 90% of my right aileron authority was gone but with enough force I could get a little more movement. I assessed my options, including baling out, as I was 2,500 feet AGL.

The worry was that if I committed to landing and the bottle jammed something more critical at a lower height then it could be all over. But I was close to the airfield and positioned perfectly on a long final approach path. I tested my airbrakes and ailerons for any change, then set up a 5-mile final and landed safely.

I see myself as extremely lucky that the bottle didn't slide into that hole while halfway up the winch launch, or while I was scratching away close to the ridge.

The oxygen bottle had been removed for testing. The pilot reported that for years he had always put his drink bottle behind and up under his right arm. He further commented that "either the oxy bottle is going back in or I will make a blank for the hole when I don't fly with it. I used to fly with a bladder for this very reason - that if it ever ended up in the controls at least they compress. A new bladder was purchased that night!"

1.4 Changing From Heavy Pilot to Lighter Pilot: The pilot had recently purchased the second-hand glider and after familiarising himself with it was about to tow onto the airfield for a winch launch.

The previous owner weighed almost 120 kg and the glider engineer had fitted tail ballast of 4.2 kg to bring the CG into the middle of the range for that pilot. In that configuration the minimum cockpit load was 87 kg, and this was clearly placarded.

The new owner had been told about this ballast, and advised to remove it before flying the glider. The ballast was visible as a steel plate fixed between the fuselage and the tail skid. But the owner estimated his weight (with parachute) as being very slightly above the placarded minimum cockpit load and decided that he was compliant (which technically he was).

What the intending pilot did not appreciate was the combination of pilot and winch driver not being very current after a long wet winter, his own first flight on type, a winch launch rather than aerotow, having the CG very close to the aft limit and having a glider with an all-flying tailplane . . . could have lined up a large number of holes in the "Swiss cheese" model and resulted in a sticky end.

In similar circumstances gliders have pitched up fiercely on a winch launch due to the aft CG, an all-flying tailplane (that can be ineffective at low speed), and a lack of pilot experience at controlling attitude by keeping the stick well forward until flying speed is reached. A stall or spin off a winch launch is easily possible, and this is always serious and sometimes fatal.

Fortunately a senior instructor (also a glider engineer) noticed the glider being towed out and stopped the pilot, insisted that the tail ballast be removed before flight, and provided assistance with doing so. With the tail ballast removed the CG was calculated to be 33% forward of the aft limit for this pilot's weight - a much more satisfactory arrangement.

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