

What the GNZ Operations Team is Talking About . . .

A summary of key items discussed at the Operations Team on-line meeting on 9 April 2024.

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1. Incident Reports for March - April 2024

- ground loop on take-off, challenging cross-wind conditions, multiple contributing factors
- downwind landing due to wind gust from behind, ground loop initiated to avoid landed glider
- incorrect weak link used, broke at end of launch, distractions and impatience at launch point
- two-seat glider landed wheel-up with an instructor as pilot-in-command
- wheel-up landing on airfield after selector lever moved to wrong position, no damage
- turbo glider, fuel hose not reconnected after rigging, pilot was distracted during rigging
- near miss, submitter was monitoring first Flarm warning and failed to look for the second target
- undercarriage collapsed on landing roll, possibly not fully engaged or a mechanical fault
- glider forced to abort a contest start due to tow plane towing glider into the active start zone
- tug commenced descent before verifying that glider had released, visual verification needed

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

1.1 Ground Loop on Takeoff: This incident is a classic example of a chain of events which could have been stopped at any stage, but was allowed to continue. The so-called "Swiss Cheese" model.

- (a) The wind was gusting 15-23 knots at a 60° angle to the launching direction. Highly variable, with occasional calm patches. No cross runway was available.
- (b) Three very experienced and current pilots had launched prior to the incident flight. One of those airborne pilots (an instructor) had called by radio to warn those on the ground about the rough conditions, and questioned whether the incident pilot should launch.
- (c) The grid had been repositioned due to the cross-wind, and the incident pilot was "visibly agitated" by the change as he felt the change was not to his advantage.
- (d) The tow pilot considered cancelling further tows due to the rough conditions, but chose to continue, taking into account a plan made with the ground crew to "wait for a calm spot".
- (e) The Duty Instructor, who would normally be on the ground to make the call, was in the air from one of the earlier launches, but had not nominated a substitute person-in-charge.
- (f) The ground crew were experienced instructors from overseas, but were not familiar with the site, the local weather patterns or the proficiency of the pilot involved in the incident.
- (g) The ground crew were concerned about the conditions, and checked with the pilot - who expressed confidence in his ability to handle the conditions, referring to his experience as an aerobatic power pilot. The ground crew went with the pilot's decision.
- (h) When the glider was ready to launch the wing runner was struggling to hold the wing tip, with the into-wind wing slightly low, because the pilot was applying right aileron (visible in the video of the launch). The wing runner did not insist on correcting this imbalance.
- (i) As planned, the "all out" was given just as the wind was reducing in strength. However, the tug did not power up immediately, and when the combination finally began to roll a very strong gust arrived - just at the moment the wing runner released the wing tip.

The right wing immediately dropped to the ground and the glider began to pivot around it. The pilot released the rope and pushed the stick forward to keep the tail off the ground. The aircraft rotated around the wing tip for 120° but fortunately suffered no damage.

The pilot involved in the incident departed the site earlier than planned, claiming that he had been "mis-managed".

Some conclusions:

- (a) Protocols are to be developed for launching in cross-winds, to provide guidance to duty instructors, launch point controllers, tow pilots and glider pilots. (This airfield has a single runway, so launches cannot always be made directly into wind, or close to it).
- (b) In marginal conditions better briefings are needed when the choice is made to "proceed". The pilot needs to deliberately and accurately hold the controls in neutral even when the into-wind wing is lowered slightly to offset the expected effect of the cross-wind.
- (c) There needs to be a clear line of authority evident to everyone at any time. A single person on the ground needs to have the authority to call "STOP". In this way the expressed concerns of observers can be turned into decisive and responsible action.
- (d) We cannot assume that overseas-trained pilots, even if they are instructors, are competent to make judgement calls on some of the stronger conditions that prevail in New Zealand.
- (e) Many sites are known to be "nasty" when the wind is strong and gusty from a certain quarter. CFI's should highlight these nasty conditions to members and visitors on a periodic basis so we don't lose the memory of them and have to relearn the hard way.

During a recent weekend of wild weather Air New Zealand cancelled 52 commercial flights in a single day. Someone in that organisation had the authority, confidence and presence of mind to call, "STOP", despite causing serious inconvenience to hundreds of passengers. When we are running a gliding site we need to demonstrate the same capability.

To conclude on a positive note, the incident glider pilot released as soon as the wing was on the ground, as per the eventualities check.

1.2 Downwind Landing Aggravated by Gust From Behind: The pilot had called for the "wind on the ground". The reply from the ground was "light and variable but favouring from the north-east". A glider had recently landed in this direction, so this pilot set up a circuit to do the same. However, the prevailing upper-level wind was from the south-west, and the gliding site was in the lee for this wind direction. This meant that although lighter winds on the ground were variable, when a decent gust came through it was highly likely to be pushed along by the higher-level wind.

On the downwind leg the pilot encountered sink and turbulence and was forced to shorten and steepen the circuit, leading to a very short final with full airbrake applied. After touchdown the glider was rolling on a collision course towards a stationary landed glider, and the application of rudder combined with full wheel brake resulted in a ground loop through 180°. After landing the wind on the ground was reported to be 10-15 knots from the south-west - a direct tail wind.

Conclusion: If the wind is light and variable on the surface but stronger at higher altitudes then it could be prudent to land into the direction of the higher-level wind. A healthy height margin when returning from a cross-country flight would allow time to properly access conditions for landing.

1.3 Distractions and Impatience at the Launch Point: Easily leads to mistakes. In this case the only damage was a broken weak link and a shorter flight than expected. The submitter noted that plenty of time had been allowed to prepare for the flight and complete the checks, so there was no sense of urgency. All checks were completed except for those immediately prior to hooking on.

However, this all changed when a group of five power planes began to enter the circuit, land and taxi back along the runway. Gliders were also landing back. Grumblings were being heard from pilots waiting on the grid, to "speed up the launching".

As soon as there was an opportunity to launch this pilot took it, and reported, "I chose to go as quickly as possible because yet another power plane had just joined downwind. I did not at any stage confirm a <colour> weak link. I launched on the one that was on the cable from the previous launch . . . it broke in the last 1/3 of the launch".

The launch point controller added, "When we did proceed with the launch the cable was lying alongside the glider, and I must have assumed that the weak link check had already been done, and proceeded with the launch".

Conclusions:

- (a) Any sense of rush or urgency at the launch point should raise a red flag. Slow down, calm down and proceed in an un-hurried manner.
- (b) Whenever a change in circumstance or conditions interrupts a check sequence there needs to be a reset, or a complete rerun of the pre-takeoff checks. There should be no exceptions. There have been too many incidents in the past due to interrupted checks.

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