What the GNZ Operations Team is Talking About . . .
A summary of key items discussed at the Operations Team on-line meeting on 3 June 2025.
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1. Incident Reports for March - April 2025

- trainee in front seat did not fasten harness - head contacted canopy in turbulence
- hasty attempt to retract sustainer motor resulted in failure of propeller brake cable
- tow pilot requested glider release at low height while struggling with canopy latch

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

1.1 Glider Harness Not Fastened

The submitter (the instructor) reported that 'on descent from a wave flight I demonstrated a spin. After the pull-out we hit some turbulence and P2 (in the front seat) hit his head on the canopy. I asked him to check his straps, and he replied, "Yes, they are secure." On landing I looked into the front cockpit and none of his straps were engaged. P2 then realised that he had been commenting on the tightness of his parachute straps and had completely forgotten the cockpit straps.'

The instructor commented that, because the trainee had already done a few flights, he would not overlook something as basic as strapping himself into the glider. During pre-take-off checks the instructor could see the tops of P2's parachute straps and assumed that the cockpit straps were fastened as well. P2 verbally confirmed 'straps' but was referring to his parachute harness.

This incident was so startling that a deeper investigation was made. The trainee pilot in the front seat was in his late 70's and new to gliding. He had been working hard to learn and remember from previous lessons. At this club the instructors often share informal reports by email on the progress of trainees. A subsequent flying day with the same trainee (but a different instructor) was reported:

I was puzzled by a a couple of unpredictable actions - a wild pitch up at end of the winch launch, immediately after the cable released, followed by a flop to steep nose down and a slow but eventual pull-out at almost 100 kts. I asked, "What was that about?" No reply. Later, on the same flight, P2 was flying the base leg and trying to keep the speed between 55 and 60 knots. He let the speed drop off while holding the brakes half open, and flew right past the landing line . . . . towards a certain collision with terrain. I finally took control in the interest of self-preservation. It seemed that P2 was not 'paying attention to everything all at once' - a requirement which rather startled him when I suggested to him after the flight that this was always necessary.

On the second flight I made up an exercise around scanning - I gave a running commentary - every 2 seconds read the ASI - and in-between check something else - then glance back to the ASI . . . a deliberate shifting of attention every couple of seconds. He struggled to keep up at first, but eventually caught on. The circuit and landing was much improved. P2 mentioned afterwards that he felt ahead of the aircraft rather than behind it. I suggested he practice 'active scanning' even while driving, rather than just gorking dumbly at the road ahead. Habit of active scanning.

Ops Team comment is that while we recognise the need for good situational awareness, it's possible that some trainees have no idea exactly how to achieve this. The ability to focus attention on 'everything all at once' can only be developed by focusing on one thing at a time, rapidly assessing and responding to what is observed, then crisply shifting one's attention to another place.

This is balanced against the danger of students treating the focus item as a tick-box and not actually thinking about what they're supposed to focus on (e.g. airspeed, approach angle, or cockpit straps).

This incident further highlights another aspect of poor situational awareness - that we can completely forget something important while fixating on just one small thing (like airspeed, or a congested landing area when on downwind). An instructor's situational awareness can also suffer if, for example, they're going through their own check-lists while listening to the student.

2. Safety Education Program

The NZ Aviation Federation has been awarded significant funding for safety education programmes targeted at activities conducted at uncontrolled airports. The source of these funds is the Fuel Excise Tax charged on Mogas. Gliding NZ has been invited to apply for some of these funds, with the suggestion that initial priority should be to create podcasts and short videos. Further options include supporting travel costs for instructors to attend safety seminars to facilitate education.

The Ops Team was invited to identify the 'hot buttons' that could usefully be addressed. We briefly listed the incident types that are most frequently reported. These included failure to lock the canopy, undercarriage not lowered for landing, neglecting the last item of a check list, failure to keep a good lookout, unsafe speed near the ground and trying to start the engine when too low.

We summed these up as distraction management. Key sub-skills within this skill include:

- situational awareness - *paying attention to everything all at once*
- the ability to prioritise what is important - and give it the attention it deserves
- the ability to overcome task fixation - and keep the active scan going
- the insistence on a sterile environment when appropriate (during checks, for example)
- the ability to apply full attention when required (e.g. not fiddling with radio on aerotow)

This led onto *Threat and Error Management* - an important concept in aviation but one which can sometimes be presented in a dry and unpalatable way. Being aware of what threats and errors are possible is definitely part of the knowledge we acquire as glider pilots and tow pilots. How to 'manage' them in flight may require specific training. We should not assume that it is sufficient to know about the threats - and that being able to manage them is 'automatic'. Engaging with certain games could be an effective way to nurture this skill.

3. Altimeter Settings Near Controlled Airspace

The attention of the Ops Team has been drawn to a concern expressed by Air New Zealand pilots that some gliders may not keep their altimeters correctly set with the current area QNH, particularly when operating within or near to airspace which has heavy aircraft operating overhead - and when both aircraft are close to their respective airspace boundaries.

The situation appears most pressing in the South Island, where international passenger flights into Christchurch and Queenstown descend over the Southern Alps while gliders are flying in the same area. To clarify the Civil Aviation Rules (CAR 91.239):

* Set altimeter to 1013.2 hPa when operating above FL150
* Below 13,000 ft use the appropriate area or aerodrome QNH
* If flying for an extended period between 13,000 ft and FL150 use the current area QNH

When climbing or descending:
* Change to 1013.2 when climbing through 13,000 ft
* Change to area/aerodrome QNH when descending through FL150

These issues are being further investigated and it's possible that additional information will be added to the Pilot Training Program in the near future. The consistent use of ADS-B by pilots when near controlled airspace or within GAA's could address the concern. A useful summary follows.

2.2.2 The pilot of an aircraft must:

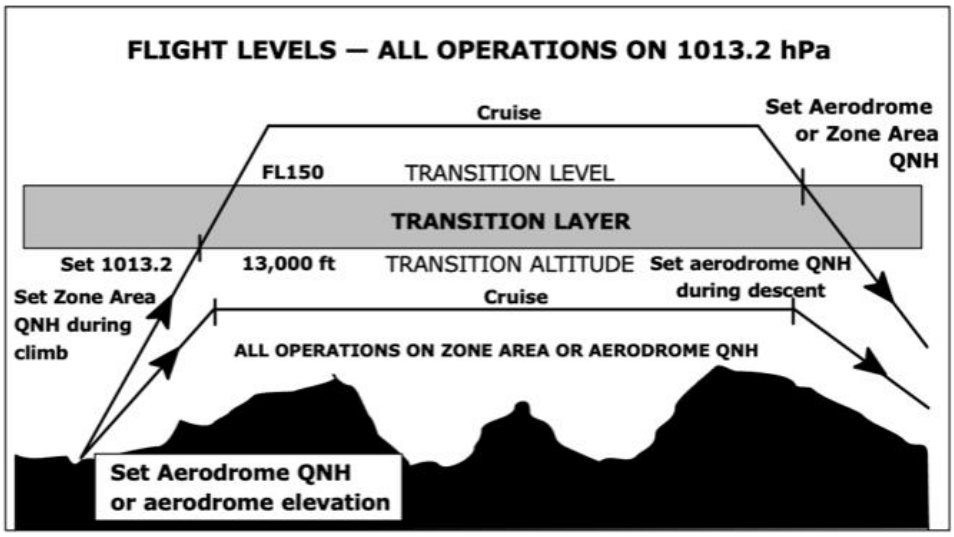
(a) when climbing above 13,000 ft, set the altimeter to 1013.2 hPa; and

(b) when descending through FL150, set the altimeter to the appropriate zone area or aerodrome QNH.

2.2.3 The transition layer, between 13,000 ft and FL150, can only be used for ascending or descending, or for cruising provided the aircraft has ATS approval.

2.2.4 Altimeter setting procedures are summarised in Figure 1.7-1.

Figure ENR 1.7-1
Altimeter Setting Procedures



2.2.5 When the Zone Area QNH is above 980 hPa the transition layer provides adequate separation between aircraft using the QNH setting and aircraft operating on the standard pressure value.

2.2.6 When a Zone Area QNH is 980 hPa or less the minimum usable flight level for that zone increases to FL160.

Terrain Clearance

2.2.7 The transition level FL150 is designed to provide terrain clearance throughout New Zealand under all conditions of temperature and pressure. The exception is that within the area of a circle of 20 NM radius centred on 43°36'S 170°09'E, which includes Mount Cook (12,316 ft), IFR flights in level flight in IMC must maintain at least FL160 in order to ensure adequate terrain clearance.

The above seems to assume that the transition layer is mostly unoccupied, and that aircraft are either climbing or descending. But at least in the Wairarapa the middle of the transition layer (14,000 feet) is often a sweet spot height-wise when flying in wave. However, the Wairarapa doesn't have international flights descending above it to land at an airport on the East Coast, so the possibility of a conflict in this location is greatly reduced.

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