

What the GNZ Operations Team is Talking About . . .

A summary of key items discussed at the Operations Team on-line meeting on 6 December 2023. Attended by David Moody (North), David Hirst (Central) and Martyn Cook (NOO).

1. Incident Reports for October-November 2023

- winch cable draped over canopy during launch failure exercise while instructor training
- undercarriage collapsed during the ground roll while outlanding on a bumpy paddock
- landing glider steered off runway at speed and clipped wingtip of a stationary glider
- several instances of a winch cable being handled at launch point while winch still running
- abandoned take-off after sudden loss of speed on aerotow ground roll due to soft ground
- wing wheel encountered very high grass, tow coupling broke, glider rolled into tow car
- winch hook failed manual release during instructor training flight, hook not adjusted correctly
- driver unfamiliar with ATV reversed into the field caravan, which then rolled down a bank
- connecting shackle near end of winch cable end failed on initial ground roll
- at start of pre-takeoff checks the wing runner advised pilot that tail dolly was still attached
- during a contest the pilot omitted to sign the DI book after completing the pre-flight inspection
- cargo door on tow plane not secured before takeoff, glider pilot noticed and abandoned launch
- pilot lowered undercarriage to land, then raised it to try and thermal - then landed with gear up
- entered controlled airspace without clearance - radio clutter, not allowing enough time (2x)
- aerotow rope damaged after hitting fence on landing, tug encountered sink over the threshold
- glider belly-landed, retractable tailwheel jammed closed and prevented main wheel lowering

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

1.1 Winch cable draped over canopy: An instructor was being trained on how to teach and monitor a cable break during a winch launch. The trainee in the back seat reports, "At about 500 feet I pulled the cable release twice to simulate a rope break. The instructor trainer (IT) in the front seat pitched the nose down immediately, as a student would be trained to react. However, instead of holding the pitch at the recovery attitude (an attitude slightly lower than that required for the approach speed required), the IT continued to pitch the nose down slightly lower to simulate how an inexperienced student might react. I recognised this and, since I judged us to have sufficient height to recover and land ahead despite the lower nose attitude and increasing airspeed, I let the IT continue in this attitude until the speed reached around 80 knots. At this point, I took control and stated "I have control", before beginning to raise the nose to reduce the airspeed for a suitable approach. The speed peaked at around 100 knots. Almost immediately after I took control, I heard a loud bang on my (rear) canopy followed by a flapping/fluttering noise, and the left side of the canopy was obscured by a blue discolouration. A loud buzzing noise followed."

The IT in the front seat landed the glider straight ahead in the space available. After landing it became clear that "the winch cable had wrapped itself over the top of the rear canopy and been dragged into the gap between the left wing root and the fuselage. The canopy would not open more than a few millimetres until freed."

"There was severe marking to the rear canopy where the winch cable had rubbed across it, with a single deep gouge running left to right in line with the leading edge of the wings. This gouge looked to be most of the way through the plexiglass across the top of the canopy."



It appears that the glider had dived below the falling winch cable, then the nose of the glider snagged the cable as it slowed down. The dyneema cable ended up lying across the rear canopy and under each wing, and was dragged across the canopy by the tension from the opened parachute. This heated and deformed the plastic.

1.2 Undercarriage collapsed during ground roll: Outlanding. The pilot reports that "at about 1000ft AGL I selected a large level paddock with into wind landing, conducted down-wind checks and proceeded with approach. At 50ft I realised the paddock was undulating and held off for some metres, touching down smoothly but rolling through a hollow and bouncing. At this point the undercarriage collapsed and the glider came to a halt."

Collapse can occur on a bumpy landing when the folding strut holding the wheel down is adjusted too far over-centre. As the weight comes off, this strut can straighten, then if the weight goes on again at just the wrong moment the strut can move over-centre on the other side, and the wheel collapses. The key is to have the folding strut as straight as possible when down, and held stiffly.

1.3 Landing glider breaks winglet off a glider parked on side of runway: On approach the landing glider was quite high and close in, with a possible tail-wind component. The pilot intended to stop near his hangar location, and started to steer off the runway centre-line while the glider was still moving quite fast on the ground. The wing of the landing glider clipped and broke the winglet off a stationary glider recently landed and parked on the edge of the runway. The landing glider overshot the pilot's intended stopping point by 80-100 metres. The OPS-10 report concluded that the main mistake for the PIC of the landing glider was not rolling straight down the runway until the ground-speed had decayed before turning off to the side.

1.4 Winch cable handled at launch point while winch is still running: There are several reports on this theme from two different clubs. In one case the yellow rotating beacon on the winch was switched by engaging the "Drive" lever. This lever would be shifted to neutral as the cable was landing, but then re-engaged to draw the cable along the ground to park at the winch. At the launch point the second cable was being handled after the beacon stopped flashing, but then the beacon would start flashing again, causing some confusion. The winch wiring has since been changed so that the beacon is now switched by the "Drum Selector". The beacon now flashes whenever a drum is engaged, and this has removed the interruption to the warning signal.

In the second club there is no clear signal when the first launch is complete and it is safe to handle the second cable at the launch point. The submitter of this OPS-10 writes that "the problem has been recurring for a long time and action needs to be taken."

1.5 Abandoned take-off after sudden loss of speed on ground roll: The ground was firm on the launch centre-line but there were soft patches off to the side. The tow plane was slightly off the centre-line. The speed increase was initially normal, but prior to lift-off the glider went through a soft patch, slowing the combination and causing the tail of the tug to lift up noticeably. A surge was felt in the glider. This happened a second time, causing a further loss of speed. Then the towplane ran across a soft patch and the tow rope went slack. The glider instructor released at this point. A good application of the SASOB eventualities check, where A = Accelerate.

1.6 Wing wheel towed into long grass: A club glider was being towed to the launch point using tow-out gear behind a car. The wing wheel was not being watched closely enough, and was allowed to roll into an area of dense, long grass. This created so much drag on the wing tip that the tow bar was wrenched off the glider's tail dolly. The glider broke free of the car and rolled backwards into it. The trailing edge of the wing put a severe dent in the boot lid of the car, but fortunately very little damage was done to the glider. The club is putting in place tighter procedures around ground towing of club gliders when using tow-out gear.

2. Type Ratings

Following up from the previous meeting the Ops Team is continuing to investigate the thoroughness with which type conversions onto different single-seat gliders are being carried out. There can be a lot of new things to learn, particularly when moving to a larger or more complex aircraft, such as a flapped glider, an open class glider or a powered glider.

A useful source document is the "Pilot Manual - Type Conversions" which can be found in the PTP at the end of the "To Soaring Pilot" section.

3. Instructing for Hire or Reward

If a glider pilot wants to be remunerated for either taking a person for a joyride or providing flight instruction then they will need to obtain a Commercial Pilot Licence (Glider). A guide to the requirements and application procedure has been compiled by Max Stevens and is available on the Gliding NZ web site [here](#).

4. Flight Simulators Using Virtual Reality (VR) Headsets

There is ongoing interest in the development of glider flight simulators. These have the potential to greatly reduce the cost and time required to achieve a given level of proficiency in both pilot and instructor training, particularly in tasks and exercises that demand lots of mental activity.

The availability of VR headsets overcomes a limitation of earlier versions where the screen in front of the pilot contained all the available information, so the habit of continually looking out in all directions was not required or developed.

Clubs making effective use of this technology for training purposes are invited to share their findings with their ROO.

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