

What the GNZ Operations Team is Talking About . . .

A summary of key items discussed at the Operations Team on-line meeting on 12 October 2021. David Moody (North), David Hirst (Central), Gavin Wills (South) and Martyn Cook (NOO).

1. Incident Reports for August - October 2021

- glider rolled over protruding concrete threshold marker on aerotow launch, wiped off tail skid
- glider crash-landed just short of airfield after sustainer engine failed to start, minor injury to pilot
- undercarriage on two-seater retracted after landing, lever not fully locked in the down position
- undercarriage on single retracted after landing, handle worked its way out from locked position
- self-launching motor glider ground looped during takeoff roll after wing dropped into long grass
- glider turned away off aerotow with tow rope still attached, two incidents with same trainee
- heavy landing on instructional flight, sideslip on final, instructor failed to intervene in time
- winch launch, wing tip dragged on ground, no attempt to release, ailerons initially deflected
- winch driver was wearing gloves (OAT 2°C) and hand slipped off throttle seconds after all-out
- itinerant power plane landed on closed winching area, taxied across cable, pilot became abusive

Commentary on Selected Incidents:

Glider crash-landed after sustainer engine failed to start: The first two incident reports are from the same flight. The pilot was informed by radio that his tail skid had been torn off during the aerotow launch roll, so he knew that landing back would mean he couldn't take a relight until repaired. He released at a relatively low altitude, believing he was in lift, but failed to climb. A turn back towards the airfield was made within easy gliding range, but extending the motor and diving to start it eroded the height margin. The pilot attempted to land back on the airfield although there were other landable paddocks within reach. The low-level turn into a confined space just outside the airfield became a wing-drop stall. The glider was extensively damaged, but the pilot escaped injury. The pilot is known to be a cautious and responsible person, so the unfolding sequence of events is mystifying. The report identifies four possible contributing factors:

- post-vaccination 'brain fog' (pilot had received his second Covid shot the day before)
- pressure to 'get away' on this flight knowing that his tail skid had been ripped off
- pressure to climb away from low level in partly-broken thermals - released too low
- target fixation - get back into the normal airfield circuit and not consider other options

The Ops Team identified the need to self-assess when we are mentally overloaded, and take action to deal with the overload. When our stress levels exceed a certain threshold our ability to manage complex tasks deteriorates sharply. We may fail to recognise that a situation is "no longer normal" and be quite unable to apply our training for such events.

Once we enter the "fight or flight" state (SNS arousal) our actions become primal rather than rational. More bluntly, "We don't know why we do stuff sometimes". In some aviation environments piloting is contra-indicated for 48 hours after vaccination. Finally, an engine in a glider can get you into trouble almost as easily as it can get you out of it.

Undercarriage retracting on landing: This is a known issue on several glider types, particularly where the undercarriage knob needs to be pushed firmly against the sidewall of the cockpit. This locking action can be marginal. If the undercarriage is lowered with fingers around the knob then a further action may be required: the knob needs to be "banged" sideways against the cockpit wall. Vibration during the landing roll rapidly loads and unloads the undercarriage locking mechanism, so it can easily vibrate out of position. In some two-seaters (eg. Duo Discus) pushing the rear knob is not sufficient - the knob in the front cockpit also needs to be pushed firmly against the sidewall - a point for instructors. Any play in the over-centre down-lock mechanism can aggravate any tendency to unlock during a ground roll - something for engineers to periodically check.

Ground loop on self-launch: This is the second recent incident of this type, fortunately there was no damage or injury this time. The pilot aborted the launch and decided against a further attempt that day, preferring to wait until the grass had been mowed.

Attempting to take off with one wing on the ground is a definite no-no on a winch launch because of the risk of a lock-out and cartwheel. The practice seems to be tolerated on aerotow, especially when the grass is short and a nose-hook is being used. But a self-launching motor glider (SLMG) with engine aft of the main wheel has less directional stability on the takeoff roll. The high thrust line can lift the tail wheel off the ground, further reducing directional control. A dragging wing tip can be enough to provoke a ground loop at quite high speed. Operators of SLMG's are therefore advised to abandon a self-launch if the wing tip drops onto the ground.

Glider turned away off aerotow with tow rope still attached: This incident is unusual in that two similar incidents occurred one week apart with the same low-time trainee pilot. One possible contributing factor is pilot overload, which can arise from allowing the pilot to fly the launch too early in training. The advice in the training program is to defer launch training until the pilot can competently land the glider. This means the pilot can handle the aircraft competently without a cable attached, and is therefore better equipped to cope with the extra complexity of the launch.

Failure to observe this simple guideline can mean that the trainee is overloaded by the effort to control the glider during the launch, and performance (and confidence) deteriorates significantly. Mistakes can be made - and repeated. To make matters worse, the trainee may not recover quickly, so the rest of that flight is likely to be wasted in terms of teaching or practising anything useful.

2. Instructor Ratings - Current Requirements for Issue or Upgrade

Until the new Instructor Training Program has been "accepted" by CAA Gliding NZ can only issue ratings and upgrades to candidates who have met the requirements of the "[legacy IT syllabus](#)".

Copies of the completed legacy check lists do not need to be submitted with the OPS-07 but should be retained by the CFI or Instructor Trainer, and available for inspection if requested. Because of the large number of check boxes, retrospective block signing is acceptable. Instructor Trainers do not need to sign boxes they don't consider applicable to the rating being applied for.

In addition, the Instructor Trainer needs to certify that all new and upgrading instructors are fully conversant with the current "Pilot Training Program" which is on-line at training.gliding.co.nz because instructors are entirely responsible for assessment of pilot proficiency against this standard.

3. Survey of Instructors and Instructor Trainers

Brian Sharpe, in his Gliding NZ Membership Development role, has identified that the training of new glider pilots also requires the ongoing training of new Instructors, and (by implication) new Instructor Trainers, and that this is a significant factor leading to the possible demise of smaller Clubs and could be a limiting factor for the growth of all Clubs.

Information about the number of "current" instructors is not available on the Gliding NZ database because instructor ratings are life-long. So Brian is conducting a survey of all current and prospective instructors and instructor trainers through the CFI's of each club. This information will be valuable in planning future instructor training events.

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