

AGC Weekly News

The weekly newsletter of the Auckland Gliding Club at Drury, Auckland

From the CFI



As the days get shorter, the window for soaring opportunities is getting smaller. However, last weekend still provided about two hours of reasonable lift for those enthusiastic enough to give it a go.

The strip is starting to get a bit damp but is still in usable condition. A few more sustained rain events will eventually cause its winter closure but that is possibly still a few weeks off, so make the most of the good weather while you can.

That being said, the forecast for this weekend is not looking brilliant.

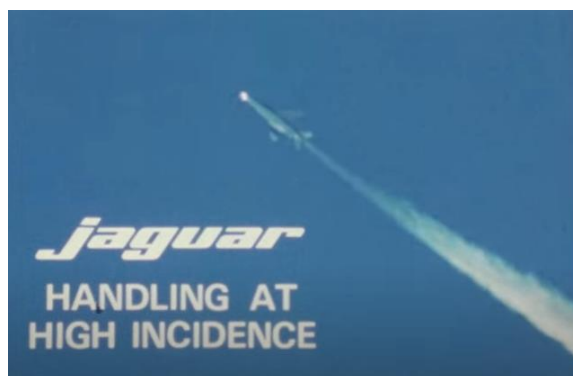
The first winter lecture (law) starts next Saturday the 1st June. I will send out reminders to all those who could be contenders to attend.

We welcome a new youth member, Rhys Dinnis.

Anton Lawrence
CFI Auckland Gliding Club
021 280 188

Two interesting videos from Gerard

This one is not for the faint-hearted!



<https://youtu.be/Ws6-YY3qhT4?si=57f5osrKU5dMV1Bm>



https://youtu.be/tc-KKzb64y0?si=T_PqN3SlpAhORmY

Auckland Gliding Club

Prize Giving Evening

Sat 29th June '24

All members, partners, and friends are invited to attend our yearly Prize Giving Evening at our clubhouse on Sat 29th June at approximately 6pm.



As normal we need numbers to ensure this a successful event!

Please send a confirmation email to either

rsgaddes@gmail.com – Ross

anton@scorpionprojects.co.nz - Anton

with your name and the number attending.

Flying With Water Ballast

By Adam Woolley
Courtesy Wings & Wheels

Flying with water ballast should be done with the utmost care and requires carefully assessing the conditions and what you're trying to achieve.



Photo by Sean Franke

In my last article, we discussed what wing-loading is and how it affects the glider. Essentially, it is the aircraft's weight divided by the wing area & is a crucial factor in the cross country performance. In this article, we'll delve into the intricacies of wing loading, addressing key considerations related to aerotow operations, communications between the parties involved, take-off and landing & the general overall impact of water ballast.

Aerotow with Water Ballast

When taking off with water ballast in your glider, there are several considerations to keep in mind to ensure a safe and efficient operation.

Communicate with the tow pilot

First of all, you'll need to inform them of the presence of water ballast in your glider; this allows them to adjust the tow speed and their low-

altitude handling appropriately. Forget to inform them, and you might see them trying to climb away while you're staggering to even get off the ground, dragging the combination down in a dangerous situation (a potential double stall) resulting in an accident into the end fence.

Calculate tow speed

It's a tough one to answer because the number of different glider types out there is wide and varied, but typically, you'll want to be about 10kts faster than your typical no-water-ballast tow speed. If you find the glider struggling to maintain station, then you can always ask the tow-pilot for "ABC, plus 5kts" or "ABC, 5kts less", why like this? Because they can adjust the tow speed relative to their own ASI.

Balance your wings

Communicate with your wing-runner too! Some gliders have tanks in their wings and will be completely full of water, requiring no balancing. Others will have internal bags and be partially filled, which require up to a minute to balance the water in the wings. Regardless of the above, it's important to equalise the water to a hands-off state. Why? Well, if you were to miss this step, when the wing runner lets go of your wing, it'll potentially slam into the ground, causing a ground loop or a scratched underwing while you try to pick up the wing with the opposite aileron.

Low-speed control of the glider

You'll want to be prepared for potential changes in the gliders handling characteristics during the aerotow, particularly in the low-speed region. The aforementioned point and the responsiveness of some glider ailerons are particularly poor at slow speeds. There are techniques where one can begin the take-off roll with the airbrakes half extended, thus spoiling the airflow over the ailerons & increasing their responsiveness. When you have positive control, then close & lock the airbrakes. What are the risks? That you forget to close and lock them! This can be because it's your first time using this technique or you're experienced, and something has distracted you, so use this with caution.

Ground Roll Length

It'll be slightly longer, as the glider requires more speed to generate the necessary lift. Add in wet and long grass, and it'll become even longer. So, the glider-tug combination should be aware of this and ensure a sufficient runway for a safe take-off.

Landing with Water Ballast

Typically, it's something you shouldn't do, but it's not something you can not do. For example, if you can't stay up and need another tow, you may want to land with water ballast. Many factors are involved when making this decision; let's talk about them!

Is it your glider, a club, or a borrowed glider? If you aren't the owner, what is their policy? Everyone has different opinions, and you should respect it. Landing with water ballast should be done with the utmost care and requires carefully assessing the conditions and what you're trying to achieve.

Only land with water ballast when:
Conditions are predictable, namely, wind
Smooth surface

The approach is without obstacles
You know what the AFM says regarding approach speed.

Jettison water ballast before landing when:

Unpredictable conditions, gusty winds

Rough surface

Challenging approach due to undulating terrain or trees on final approach, which could cause a wind shear

It's just a regular day of soaring, nothing to be gained

Reasons for landing dry:

Less chance of a gear collapse

Less fatigue on your gliders structure

Less chance of a ground-loop

Won't block operations due to your long landing
You don't know what the AFM says regarding stall or approach speed with water ballast still on.

If you choose to land with water ballast, you need to be aware of your increased stall speed & how this will affect your circuit operations. In the aircraft flight manual, you'll find information on the desired approach speed with water ballast – respect it & adjust your operations accordingly. You'll also want to land as smoothly as possible, so ensure you have adequate runway length. Ensure that you don't float so much that you cause a genuine stall onto the field, causing a gear collapse. Be aware that the handling characteristics will change, and you'll have more inertia and a higher ground speed when touching down than usual. Nothing to be feared, just something to be aware of.

When beginning to fly with water ballast, I always suggest that you start small and work your way up to the maximum take-off weight of the glider. So, start with 50 lts generally, then 100 lts, then potentially up to reach the MTOW. Each time, you'll see the handling and performance change, but your skill set will match it. It's a lot of fun, I definitely recommend you try it!

Adam Woolley was born into the gliding world, being the 3rd generation in his family. Going solo at 15, his thirst for efficiency in soaring flight & quest for a world championship title to his name has never wavered. One big passion is sharing his experiences & joy with other glider pilots all around the world. Adam is an airline pilot in Japan on the B767 & spends his off time chasing summer around the globe. He has now won 7 national Championships & represented Australia at 5 WGC's & 1 EGC.



Clearing out redundant files from my tablet, I came across an article written by Ian Williams describing his contribution to the XC course out of Matamata a couple of years ago. Ian was tasked with taking the participants in his Dimona for outlanding practice.

His account of the progress and confidence building for the group of aspiring XC pilots sparked an idea.

Would I have the gall to approach Ian and ask for a similar exercise from Drury? After considerable vacillation and a deep breath, I made the request. To my surprise he readily agreed. Serendipitously he had been planning on offering this opportunity to the Club's students, so for once my timing was perfect.

Inching towards my XCP certificate and with farmer's short paddocks in mind, I had practiced simulated outlandings on Jonathan's 200 metre noodle strip on the field. A daunting prospect but after three landings in XY and one in LW in quick succession onto what looked like a postage stamp from the air, I discovered it could be done. I felt ready for the next step.

Wednesday 10th April the day arrives. Weather had improved and Ian ready to fly. After an earlier, thorough pre-flight briefing, the DI complete, I slipped into , what proved to be, an ultra comfortable seat. We taxied out to the holding point, engine management protocols sorted, then 80 horses thrashed into full gallop and we were away.

Ian handed over control at about 400 ft, then some way out demonstrated the stall and the asymmetric perception of the horizon when banking in a side by side glider.

A quick cruise to Pukekohe East strip and the mild trepidation at the prospect of planning a

circuit and landing there turned to full blown chaos as my, typically, cramped circuit meant turning away from the field as a result losing sight of it. Struggling to identify it again, I found myself far too high to cross the threshold of the upward sloping strip. Lesson one: Don't lose sight of your paddock. I was quite perturbed at how difficult it was to quickly identify even an obvious landing strip from amongst the surrounding, unfamiliar landscape. Lesson two: Complacency born of comfortable familiarity with our thousand metre, smooth mown field surrounded by known landmarks is not the pilot's friend in hostile territory.

So on to Mercer airfield. This must be a piece of cake after the blue funk of Puke East, surely. Not so. Despite its size, it was still difficult to identify amongst the vast green matrix of featureless paddocks, unfamiliar radio calls, deciding which vector to use and how to execute the circuit to "land" on the chosen spot. Fortunately Ian talked through the whole exercise then, as he did at Puke East, demonstrated a proper circuit and landing. These outlandings {almost touch and goes} were proving a bigger challenge than I had anticipated.

Flying away north of Mercer, Ian suddenly killed the engine at 2000 ft, feathered the prop and said "Find a field and land over the fence, I'll remain silent". The moment of truth, from rather smug relaxation to intense concentration, trying desperately to sort out a suitable field, the seven s's suddenly taking on real relevance. Eliminating numerous paddocks for being too small, surrounded by trees, adjacent to a road and power lines, perfect but covered in cows, water troughs in awkward places {damn those farmers}, suddenly a stroke of pure luck. An almost airfield-like, mown paddock appeared directly ahead. Quick pre-landing checks, airbrakes out and a straight in approach for, what would have been a successful landing. Lesson three: Identify a likely field early, get pre-landing checks out of the way early so you can give full focus to circuit and landing.

In the farmland around Mercer it was now easier to see the potential of several generous sized paddocks and finally one that I managed to select, circuit and "land" on. This one had a couple of alternatives as well. Lesson Four: Keep the speed up, eyes out of the cockpit.

I noticed, at the last minute, one tempting field that had a power poles and lines running across its centre which merged with the light coloured surface. An uncomfortable surprise that might have come too late in a real outlanding. Traps abound for the novice.

The final test was a run out West to the badlands of Aka Aka, Otaua, at my request, to an area that had limited options for landouts. Here the conditions were dire in terms of landable paddocks. Small, hedges, buildings, wet areas. A disconcerting lack of options. Lesson Five: Keep landable terrain in sight even over rough country

In summary, those 90 minutes in Ian's Dimona, buoyed by his infectious enthusiasm for his pride and joy, were hugely valuable for this neophyte, wannabe XC pilot. An opportunity for multiple , consecutive outlandings, increased confidence to tackle an actual glider landout in an unfamiliar environment and Ian's useful commentary pointing out the critical factors to consider prior to

touchdown.

The chance to experience the raw reality of facing a landing away from home field. It was a massive confidence boost, in safe hands {instructor and aircraft}. A highly recommended opportunity for all of us budding XC hopefuls.



Member's Ads

H36 Dimona ZK-GPH for sale or syndication. Julian Elder is interested in either creating a syndicate or selling his Dimona GPH. It recently has had significant restorative work carried out. For any technical stuff contact Ian Williams (021980194 ian@agcon.co.nz or sales information contact Julian 0276924114 julian@elder.net.nz

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