

AGC Weekly News

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

From the CFI



The last week has provided some wonderful flying conditions with numerous flights to Tokoroa and return. BF was seen adjacent Titiraupenga Wednesday. Frank Excell made 300k declared the same day, well done.

QQ and DX have also been stretching their wings taking student pilots well into the Waikato region.

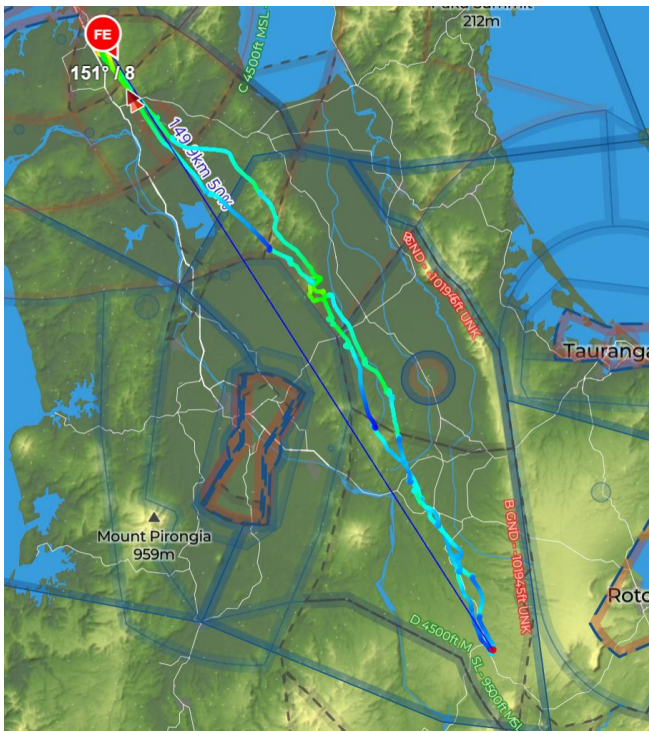
The Sailplane Grand Prix is due to start on the 2nd March finishing on the 10th. It would be great to see one of the Duo's entered in this event, even better if there are some front seat pilots who want a taste of Grand Prix flying. Please let me know if you wish to attend and possible dates.

Gerard is taking over the glider maintenance controller position, please email him via

maintenance@glidingauckland.co.nz with any found glider faults and write them up on the board in the club hanger.

Winch weak links: please ensure the weak link is as per that specified in the flight manual, you can easily check the Tost website if unsure what colour matches the specified daN rating for your glider. <https://www.tost.de/katalog/tost-weak-links/?lang=en>. Just in case here's the chart.

Colour	Breaking Load
Black	1000 + - 100
Brown	850 + - 100
Red	750 + - 75
Blue	600 + - 60
White	500 + - 50
Yellow	400 + - 40
Green	300 + - 30



Frank's 300km flight



Hadleigh and Ross G in BF Wednesday.



On Sunday a visiting Aussie, Jonty, had a great flight with Georg in QQ. His friends came out to see the club, so we put two small boys into a glider to show them what it's like.

In recognition of Glynn Powell

Peter Layne

Many club members will remember Glynn Powell of Drury fame and particularly so for starting the de Havilland Mosquito restoration project.

Avspecs have nearly got the next one ready to fly and in his honour they have registered it ZK-PWL.

You may consider putting these links in the next newsletter for interested readers.

<http://nzcivair.blogspot.com/2024/02/the-ex-glynn-powell-mosquito-registered.html>
<https://vintageaviationnews.com/warbird-restorations/avspects-latest-de-havilland-mosquito-project-report.html>



De Havilland Mosquito KA114 at the "Wings over Wairarapa" Airshow, Masterton, New Zealand (January 2013)
Wikimedia Commons

Watts vs. Fuel: A Duel in Soaring Evolution

Adam Woolley
Courtesy Wings & Wheels



Photo by Sean Franke

Electric sailplanes and combustion engine-powered aircraft represent two different approaches to aviation, each with its own set of advantages and disadvantages. Let's delve into the key aspects differentiating these two technologies.

Advantages of Electric Sailplanes

Environmental Impact. Electric sailplanes, being powered by electric motors, produce zero emissions during flight. This environmentally friendly aspect aligns with the growing global focus on sustainability and reduced carbon footprints in aviation.

Quiet Operation. Electric sailplanes are significantly quieter than their combustion engine counterparts. This reduced noise pollution is especially beneficial in gliding communities and areas where noise restrictions are in place.

Lower Operating Costs. Electric propulsion systems generally have fewer moving parts and require less maintenance than traditional combustion engines. This translates into lower operating costs over the lifespan of the aircraft, contributing to increased affordability for pilots and operators.

Energy Efficiency. Electric motors are known for their high efficiency, converting a larger percentage of the electrical energy into propulsion compared to combustion engines. This efficiency can result in longer flight times or extended range, depending on the design and capacity of the electric power system.

Disadvantages of Electric Sailplanes

Limited Range. One significant drawback of electric sailplanes is their limited range compared to combustion engine aircraft. Electric batteries currently struggle to match the energy density of

conventional aviation fuels, restricting the distance electric sailplanes can cover on a single charge. Often the pilot has a choice of a self-launch & limited recovery distance, or getting a traditional tow, but has an extended range for self-recovering.

Charging Infrastructure. Unlike traditional refueling for combustion engines, electric sailplanes require charging infrastructure or systems in place to charge the system. The availability of charging can be a limiting factor if traveling, especially in remote or less developed areas.

Weight. Batteries, which are essential components of electric sailplanes, tend to be heavy. This added weight can impact the overall performance and efficiency of the aircraft, affecting factors like climb rate and gliding capabilities. Where these batteries are housed within the glider is also a consideration, it can be a pro or a con.

Advantages of Combustion Engine Sailplanes

Extended Range. Combustion engines benefit from well-established and energy-dense fuels, allowing aircraft to cover long distances without frequent refueling. This extended range makes combustion engine aircraft suitable for cross-country flights and missions requiring substantial endurance.

Existing Infrastructure. The aviation industry has a robust infrastructure for traditional combustion engine aircraft, including a well-established network of refueling stations. This infrastructure simplifies operations and facilitates easy access to fuel for pilots should they want to travel with their glider.

Proven Technology. Combustion engines have been the primary power source for aircraft for decades, and the technology is mature and well-understood. This results in reliable and proven performance, instilling confidence in pilots and operators.

Disadvantages of Combustion Engine Sailplanes

Emissions. The combustion of aviation fuels produces greenhouse gas emissions, contributing to environmental pollution. This drawback is a significant concern as the aviation industry seeks more sustainable alternatives.

Higher Operating Costs. Combustion engines typically require more maintenance due to the complexity of their components. This results in higher operating costs over time than simpler electric propulsion systems.

Noise Pollution. Traditional aircraft with combustion engines generate more noise, impacting both the environment and local communities. Noise restrictions near airports and residential areas are common concerns associated with these engines.

The choice between electric sailplanes and combustion engine aircraft involves a trade-off between environmental sustainability, operational practicality, and infrastructure considerations. While electric sailplanes shine in terms of environmental impact and operating costs, challenges like limited range and charging infrastructure must be addressed for widespread adoption. Combustion engines, with their proven technology and extended range, continue to dominate in scenarios where existing infrastructure and range are critical factors. The future of aviation is shaped by innovations that bridge the gap between these two technologies, creating a harmonious balance between sustainability and practicality in the skies.

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.

Member's Ads



Mini Nimbus C, ZK-GKS Well cared for by present owner since 1990. Serial number 91, approx 1600 hours TT, no history of damage or repair. Carbon fibre (flapped) wing with 180L water capacity. Up-to-date panel includes Trig TT22 transponder (ADS-B out), LX-NAV Flarm Power Mouse, Flarm LED display, LX-NAV S80 vario-flight computer, Ilec extended length TE probe, panel-mounted Oudie 2, new Winter altimeter, Winter mechanical vario, twin LiFePO batteries with twin chargers on a portable base, new Mountain High Ox system, reliable and clear Dittel FSG40S radio. Well-made tow-out gear, full set of outdoor covers, full set of indoor dust covers, set

of spiral tie downs, set of straight tie down stakes, digital water meter, two light weight wooden rigging trestles. Spare wheel doors, spare Tost wheel hub/ drum brake assembly, spare nylon tail wheel. GQ parachute, Gadringer harness with EASA certificate, Tost belly release reconditioned with new parts by Tost with EASA certificate. Maintained in NZ by Sailplane Services and all documents on file since new. All AD's have been complied with. Imported Karl Pheifer factory-built tunnel-type glass fibre covered trailer (came new with glider) has been kept under cover since 1990, completely rebuilt in 2013 (body off, sand blast chassis, epoxy prime & paint chassis, new axle, brakes & wheels, new marine ply floor. Licenced with current WOF. Excellent tyres, DataDot identification, LED lights, spare wheel & hydraulic jack. \$45 500.00. Peter Wooley 021 170 2009; wooleypeter@gmail.com

IMI Power Rigger: Remote controlled battery powered one-man rigger for single-seater glider. New. \$3100.00. Peter Wooley 021 170 2009; wooleypeter@gmail.com

This edition of the newsletter was compiled by Peter Wooley – wooleypeter@gmail.com – 021 170 2009