



The newsletter of the Sport Aircraft Association (Auckland Chapter) Inc

Sport Aviator

June 2023



www.saaauckland.org.nz

Committee 2023/24

EXECUTIVE COMMITTEE

President: Gary Briggs

Vice President: Graham Smith

Secretary: Keith Weale

COMMITTEE MEMBERS

Arjen Visser Kal Rabarts-Small

Gavin Magill
Treasurer

OPERATIONAL POSITIONS

Newsletter Editor Technical Library
Gavin Magill TBA

Safety Officer Airspace Users Group
John Ashman Bill Luther

Tool Library Webmaster
Manfred Scherbius Warren Sly

Catering

All members to share this role.

TECHNICAL MENTORS

Wood & Fabric - Steve Chilcott
Composites - Alistair McLachlan
Metal Skin - Kevin Paulsen
Avionics - Liviu Filimon

FRONT PAGE

David Wilkinson procured Pitts Special ZK-MPM this past month. MPM is now back in David's hangar at Ardmore and he reckons it will be back in the air in four weeks. Watch this space.

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Next Meeting

WHEN: June 28th 2023

WHERE: Auckland Society of Model Engineers Club Rooms
Peterson Road, Panmure Basin
Mt Wellington

Speaker: Peter Armstrong

What: We have our past president onboard for Thursday meeting. Peter has recently returned from a flying Rotarians trip to Australia and will speak on that and other aviation developments. Always good to have our members first hand experiences.

3 President's Corner



Hello All

Welcome to a new committee year.

First off, I would like to extend a big thank you to Peter Armstrong for his services to the Chapter as President over the last three years. Also, to Keith Weale for his services as Chapter Secretary, Gavin Magill for the superb job on our newsletters and for running the books. Also Bill Luther for all the guest speakers he has organized. And all those who put their hands up to join the committee, Thank you.

My apologies for not making it to the AGM, I was in South Africa visiting my parents.

On the aviation side winter is upon us and so far the weather has been great for the odd fly away, hopefully it will give us some more good days. I managed to get a quick flight over to Pauanui last week and had a look at the big slip on the Kopu-Hikuai Road. Looks like no progress has been made yet and I don't think any work has even started.

See you all on Thursday.

Gary



Hi Everyone

We are past the shortest day and on our way to summer (he says hopefully). We still need to get through winter however and by the

looks of the forecast for this coming weekend we could be in for a bit of a blow. Time to batten down the hatches.

Many thanks to all the members who fronted up for the AGM last month. The AGM went very well and we were able to quickly dispense with the formalities and have a bit of a chat afterwards.

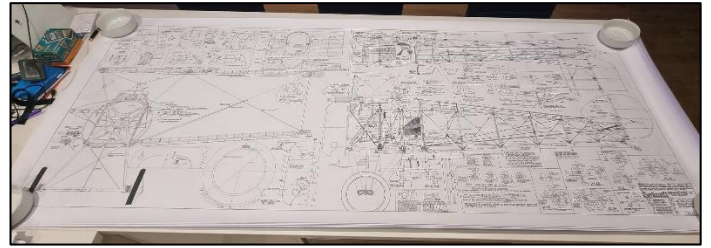
One item arising from the AGM is that member subs have been increased from \$20 to \$25 per year. You should have already received an email from myself asking that your subs be paid and I would like to thank all those who have already paid. I sent out another email over the weekend just gone to remind those from whom I had not yet received payment and I would be grateful if these could be actioned as soon as possible so I am not chasing subs throughout the rest of the year.

Many thanks to the new committee members who have stepped up for the new year. The 2023/24 committee are listed on the second page of the newsletter above. I would like to welcome Arjen Visser and Kal Rabarts-Small onto the committee and welcome back Gary Briggs as our President. I would also like to give a massive vote of thanks to Peter Armstrong for the three years he put in as our President.

In the discussion after the meeting, DCM raised the matter of who can and cannot fly a micro-light aircraft and on what licence and there was some lively debate on this matter. Teagle has kindly sent in an article from the CAA Vector magazine which will hopefully clarify who can and cannot fly a Microlight aircraft. I have included a copy of this in the newsletter. Thanks Teagle.

On the home front, I have not completed much on the Camel build. I have however received a set of plans for the Camel from Replicraft Plans in the UK. These are amazing quality and I will be bringing them with me to

the meeting for members to look at them.



The mystery aircraft quiz last month was correctly guessed by Keith Weale. The aircraft was a Bellanca CH-300 Pacemaker. Well done Keith.

John King provided the photo and noted that the observant might identify the airframe as a Bellanca CH-300 Pacemaker, but the engine's a 9-cylinder Packard DR-980 diesel.

On 28 May 1931, a Bellanca CH-300 (presumably this one) fitted with a DR-980, piloted by Walter Edwin Lees and Frederic Brossy, set a record for staying aloft for 84 hours and 32 minutes without being refuelled. This record was not broken until 55 years later by the Rutan Voyager.

The engine was unpopular despite its economy and reliability due to the unpleasant nature of its diesel exhaust fumes and considerable vibration when running; approximately 100 were built.



That is about it from me. Enjoy the newsletter and I will hopefully see you tomorrow evening.

Regards

Gavin

PROJECT NEWS

Arjen Visser – Sling TSi

By Arjen Visser

Not a lot of progress since the last time but that is because of a tennis elbow and I had to give it a bit of rest. Too much fitting and removing Clecos did it I think!

I trial fitted the fibreglass canopy. There is quite a bit of sanding and fitting to do to make it flush with the aluminium fuselage. Once it is flush it will be riveted and bonded to the fuselage with Sika 295 UV. I will need to paint the inside of the canopy before I permanently attach it. Painting the inside once fixed to the fuselage will be tricky so best to do it now. I need to set up my paint booth to do this.



The parachute cables are bonded inside the fibreglass canopy so they are completely hidden and stick out at the bottom to attach to two anchor points near the rear passenger seats and two cables attach to the firewall. The two cables that attach near the rear passengers seat are too long and do not sit flush in the channel (see photo). This means there is a bulge in the cable but it does not really matter.



It will have no impact on the workings of the parachute. When the parachute deploys it is designed to break through the outer skin of the canopy.

I finally finished the second fuel tank. This is the one that had been leaking and I took it apart. Once apart it was a lot of work to clean off the old pro-seal. I reassembled it again and used a lot more Proseal this time. Proseal is a messy business. Now it is a matter of waiting for 1 week before the proseal has hardened and then I need to test it to make sure it is not leaking.



The completed fuel tank below and now waiting a week before the pressure test. The tank has to withstand a pressure of 0.1 bar for 1 hour. Then it is deemed leak free.



I am looking forward to going to Oshkosh in a couple of weeks. This will be my first time and I look forward to meeting the builders of other Sling TSi. Sling have recently sold a total of more than 1,000 aircraft across their entire range and they will have a big presence at Oshkosh. Cannot compare yet to Vans but Sling is gaining a lot of momentum, not only in the 4 seat aircraft category but also with their Sling 2 seat training aircraft.

PROJECT NEWS

David Wilkinson – Pitts Barn Find

By David Wilkinson

As can be seen from the front cover, David Wilkinson has been busy this past month increasing the size of his personal fleet of aerobatic aircraft. David has gone halves with Andrew Hope to buy Pitts Special ZK-MPM from Don MacMillan in Kaikohe. (Andrew is also apparently a bit of a collector of aircraft as he also owns Pitts S2E ZK-ELI).



David tells me the aircraft was going to be parted out with the engine heading for an RV project and David was asked if he wanted to buy the whole aircraft for the same amount the engine was going to be sold for.



The aircraft was originally built by ex-Auckland Chapter member Paul McGruer and is apparently in mint condition. The project was started in 1974 and first flew sometime around 2011 David believes. The engine and airframe only have 30 hours since new.



There is some minor damage to the tail post from a rabbit hole but David says MPM should be back flying within 4 weeks with any luck.

No doubt we will see MPM racing round the skies above Ardmore in the very near future.



PROJECT NEWS

Chris Wade – Sonex ZK-VDB

By Chris Wade

You could see in last month's newsletter that the exhaust muffler was going to be a tight fit. I had little option but to shorten the muffler from 17" to 14", to allow reasonable clearance. This meant opening both ends of the can and removing the guts which were in two separate parts.



The inside of the muffler



Parts separated

The inside is made up of three equal sections which meant reducing each section. The exhaust outlet came out on the end of the muffler. I decided to reroute it to a central outlet, blocking off the existing end openings. It will now exhaust centrally below the cowling.



Ready for assembly



Ready for welding

Next challenge is to run the exhaust pipes from the engine, leaving enough room for the oil tank, radiator and oil cooler.

PROJECT NEWS

Jon Farmer – Hillberg EH1 Rotormouse

By Jon Farmer

Two or three weeks ago, a friend who had helped me with my Choppy helicopter, rang to say he was interested in a helicopter for sale at Kerikeri and would I like to drive up with him to view it. We arrived early on a sunny afternoon to find this lovely machine which looked more like a real helicopter and much better than the Choppy which I'd purchased some weeks before.



After some 3 hours inspection during which my friend took numerous measurements and even stuck an endoscope up its exhaust pipe, he staggered the vendor, and myself, by announcing that he wasn't interested in buying it.

Once back home, I spent several days pondering on how the Rotormouse was such a better buy than the Choppy and persuaded myself that I should buy it and hope to sell Choppy after trying to fly it. So, I rang the vendor and offered to purchase it on condition he demonstrate the turbine running which he had been unable to do when we visited as the batteries were flat.

A week later he rang me to say that despite buying 2 new batteries at a cost of \$1,200, the turbine still refused to run and he offered a substantial reduction in price if I would take it 'as is'. The price was now such that I couldn't refuse so I made the trip to Kerikeri with trailer and loaded up the Rotormouse ready for the return trip in the morning.



The vendor put me up for the night and during the evening, whilst drinking his homemade rum, I got some of the story behind the Rotormouse and its builder. In his youth he had been a deer culler working out of his home town of Hokitika on the West Coast and this period of his life spanned the transition from hunters tramping many kilometres up hill and down to being lifted in by helicopter and having the shot deer airlifted out. This experience was the start of a lifelong love affair with helicopters.

Many years later, after working for an engineering firm in the Bay of Islands and building a small house with a large garage, he imported a 51% Hillberg EH1 helicopter kit with the intention of building it then flying it to Hokitika to do a bit of deer hunting.

The rotor head, and possibly the extruded aluminium blades, are said to be from a navel drone with the right angle drive being the diff from a 'muscle car'. All the information on the turbine is that it is a Solar Titan T62 intended for powering a 60kW generator which would require about 80 shaft hp however I believe it is rated at 160 hp. A belt drive from the horizontal shaft drives the tail rotor shaft and an alternator.

An indication of how the builder was in it for the long haul is that he threaded a spare belt onto the horizontal shaft and tied it back so that when required, the shaft didn't have to be unbolted. Output from the turbine gearbox goes through a centrifugal clutch, further gearing and a spragg clutch to the horizontal shaft.

The cockpit has a very comfortable race car seat and enough instruments for local flight.

MEMBER NEWS

Microlight Ops

By Teagle

This is the vector magazine that I read from at the AGM regarding Microlight operations.

Maybe worth including in the next newsletter as there seemed to be a bit of confusion.

I must admit I have flown into controlled airspace with a microlight but was unsure of the limitations / requirements.

Operations and Limitations

As mentioned before, Part 91 is critical to flight operations.

Microlight flying has many freedoms in New Zealand, but with these privileges there are also some limitations in the interest of safety.

You can fly microlights only under Visual Flight Rules (VFR) and during daytime.

You cannot fly microlights over a congested area.

You also cannot fly them in controlled airspace, or within 5.5 km of a certificated aerodrome, unless you have passed the air law examination, or are under the direct supervision of the holder of a microlight instructor certificate.

The air law exam refers to the Part 61 exam, or your organisation may have an air law exam approved by the Director.

You can do Flight Training

You can use a Class 2 microlight for flight training if you have the relevant type rating for the aircraft and hold a microlight instructor certificate.

If you hold a Part 61 Instructor Rating and wish to do flight training using a microlight, you should have a type rating and demonstrate your competence to a microlight instructor.

Adventure Aviation Operations

You can use Class 2 microlights in adventure aviation operations for hire or reward, only if your operation has been certificated under Part 115 Adventure Aviation – Certification and Operation.

Aircraft Requirements

The definition of a microlight is in Part 1 and is "a basic low performance aircraft designed to carry not more than two persons which meets low momentum parameters that are acceptable to the Director".

The parameters that are acceptable to the Director are in Advisory Circular AC103-1 Microlight Aircraft – Operating Rules.

A single-place microlight is called a Class 1 and a two-place, Class 2.

In brief, an aircraft defined as a microlight by some other States qualifies as a microlight in New Zealand.

Or some weight and stall speed specifications need to be met. For a two-place land aeroplane, for example, it must not exceed 600 kg and must have a stall speed no greater than 45 knots.

MEMBER NEWS

Peter Jackson

By Peter Jackson

I don't think I sent this to you for the last letter. A photo of Mt Egmont that my wife took recently.



My wife Maria and I were flying to Aotea Harbour to look at a property that potentially could have an airfield on it. It was such a good day that I decided to fly Maria around Mt Egmont beforehand as I hadn't taken her there before. On the return journey the landing on Okapu Sheep and Cattle Station was interesting in that it had so many Californian thistles that I found it difficult to discern where the precise landing area was. I had spoken to the local top dressing pilot beforehand as well as the station manager. It had a manure bin at the top end for me to work with also. After a circuit I put the Foxbat down shortening quite a few thistles with the propeller. It was a good rural strip. It was 3KM from the property we were looking at so we had a good workout and unfortunately the land did not have an area suitable for an airfield.

Peter Jackson

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ON THE WEB

12 Habits to Fly Like a Pro

Gavin Magill

Flying like a professional doesn't mean you get paid to fly, it doesn't mean you wear epaulets, and it doesn't mean you burn Jet A. More than anything, it means you understand the responsibility you have as a pilot and you take pride in how you conduct every flight.



<https://airfactsjournal.com/2023/05/what-it-means-to-fly-like-a-pro-12-habits>

ON THE WEB

The Battle of Sydney

Gavin Magill

Sabres, Meteors, Sea Furies And Two Blokes With A Bren Gun Battle a runaway Auster Archer.

The events depicted in this video took place in Sydney, NSW on August 30th 1955.



<https://www.youtube.com/watch?v=2Rj7B47F9Xs>

ON THE WEB

Weird gimbaled-cabin eVTOL

Gavin Magill

Weird gimbaled-cabin eVTOL "flying car" receives limited FAA approval.



<https://newatlas.com/aircraft/alef-evtol-airworthiness/>

Chapter Events

2023

Jun 29	Chapter Monthly Meeting 7.30pm at the Auckland Society of Model Engineers clubrooms, Petersen Dr, Panmure Basin
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Aviation Calendar

2023

Every Sat	Dargaville Aero Club – Catered Lunch The place is buzzing every Sat, wet or fine, windy or calm, and the catered lunch at 12.30 is good value, just don't be late! Club website is http://dargavilleac.weebly.com/ . If going as a group, please ring in advance so the cook expects you. Ph. Murray 027-478 4308 or club house on 09-439 8024. The Dargaville Aero Club has advised that their famous catered lunches are back on from this Saturday 23 April. The lunch starts at 12.30 and the cost is \$15 per person.
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Every Sun	Whangarei Flying Club Sunday Lunch Penny burgers every Sunday \$7. Contact Rusty 021 173 8942 Penny burgers are now back on!
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Jul 24-30	Airventure 2023 – Oshkosh Airshow Oshkosh Wisconsin For 51 weeks a year, EAA is an international community of more than 240,000 members that nurtures the spirit of flight through a worldwide network of chapters, outreach programs, and other events. But for one week each summer, EAA members and aviation enthusiasts totalling more than 500,000 from 80 countries attend EAA AirVenture at Wittman Regional Airport in Oshkosh, Wisconsin, where they rekindle friendships and celebrate the past, present, and future in the world of flight. https://www.eaa.org/airventure
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Nov 24-26	Wings Over Wairarapa Hood Aerodrome – Masterton Wings Over Wairarapa Air Festival has a new date, the Masterton based festival that attracts tens of thousands from across Aotearoa as well as international visitors will now take place from 24-26 November 2023. https://www.facebook.com/wingswairarapa
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Aviation Calendar

2023