

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

# Sport Aviator

May 2022



# Committee 2021/22

## EXECUTIVE COMMITTEE

**President:** Peter Armstrong

**Vice President:** Gary Briggs

**Secretary:** Keith Weale

## COMMITTEE MEMBERS

**Bill Luther** Tony Payne

**Gavin Magill** David Campbell-  
**Treasurer** Morrison

## OPERATIONAL POSITIONS

**Newsletter Editor** Technical Library  
Gavin Magill TBA

**Safety Officer** Airspace Users Group  
TBA TBA

**Tool Library** Webmaster  
Manfred Scherbius Warren Sly

**Catering**  
Chris Wade

## TECHNICAL MENTORS

Wood & Fabric - Mike Tunnicliffe  
Composites - Alistair McLachlan  
Metal Skin - Kevin Paulsen  
Avionics - Liviu Filimon

### **FRONT PAGE**

The ultimate homebuilt toy. A 75% scale Jurca MJ-8 Fw 190 D-EZFW with a Russian built Vedeneyev M14-P radial engine (Yak52 engine). Great video here. Enjoy.

[https://www.youtube.com/watch?v=FH\\_3gWZ3wFc](https://www.youtube.com/watch?v=FH_3gWZ3wFc)

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## Next Meeting

**WHEN:** May 26<sup>th</sup> 2022

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

**WHAT:** AGM followed by regular meeting



From the Presidents corner

This is what Recreational Flying is all about, taking your plane and having the ability to land it at one of the many strips available to us throughout New Zealand, in this case- a farm strip on the Kaikoura Coast. We need to work hard to preserve our freedoms and privileges. As I depart my Presidency (report included) I am now learning the challenges that face General Aviation New Zealand through being appointed to the National Executive of AOPA. Did you know of ACAG (the Aviation Community Advisory Group), I didn't. A group created by the CAA in 2005 as a forum to facilitate and promote the participation of industry representatives in the rule development process. It has 9 permanent members (AOPA is one) and 3 elected members. SAANZ is not represented

I have asked Steve Horne VP AOPA to approach our SAA National Executive with an idea that it would be useful for the SAA views to be represented in the rule making progress with the CAA as the 2 organisations have much in common. Anything that can be done to facilitate better flying and understanding with the regulator is always useful.

Now on to my report.

Cheers Peter

# 4 Presidents AGM Report 2022

## Presidents AGM Report 2022

By Peter Armstrong

Upon reflection in the past year, we had 6 meetings only, 2 of which were normal and 4 were of reduced attendance due to Omicron. Due to this, my report is somewhat abbreviated versus one where normal activity occurs.

Thank you all for the opportunity to be your President for the past two years. I have thoroughly enjoyed the time and it has been a great experience. 2021 – 2022 has been trying as the Covid-19 situation played out, it will be great to get back to normal post 2022.

Membership is slightly up, we have new members with some very exciting aircraft, experiences, and projects.

### Thank you's

We must all thank Gavin Magill for his continued efforts as Treasurer and producing a fantastic monthly newsletter. This is really the backbone of the Chapter. Warren Sly for maintaining the Chapter's website. Keith Weale, thank you for your efforts as Chapter secretary. In David Wilkinson's words, you are highly organised (typical consulting engineer) and provide the Chapter with a great service. Chris Wade and Tom Goddard, thank you for organizing the tea and biscuits. Bill Luther for organizing and keeping us entertained with all the guest speakers you have found. Thank you also to the rest of the committee Gary, Gavin, Keith, Tony and DCM for their support and guidance. And of course, thank you to all the members, without them there would be no Chapter.

Let's reflect on some of the progress reports, functions, and visits over the last year (said with tongue in cheek). Due to Covid there was no Xmas BBQ

### Progress Reports

Thanks to those who have contributed, they keep our Chapter informed and are read with interest.

Gavin Magill	- Sopwith Camel Replica
Arjen Visser	- Sling TSI
Chris Wade	- Sonex VDB
Gerard Kent	- Vans RV12 ZK-RHO
Rosmini College	- Savanah S
Ken Watters	- Vans RV6

### Technical & Workshop Visits

There were no Technical or Workshop visits this year however the Chapter had an informal visit to Oskar Stielau's electric helicopter at Parakai.

### Guest speakers (sparse due to Covid)

Paul McSweeney & Jason Harris – Painting and Corrosion Protection

Matt McLaughlin – Flying the Knife Edge

Roger Warren – Human Powered Flight

### First Flights

Peter Walton – Vans RV-14 (ZK-LCW)

DCM – Vans RV-12 (ZK-SCM)

Keith Weale – Vans RV-12 (ZK-VLF)

Stephen Taylor – Vans RV-12 (ZK-TSP)

### Fly-ins

Very limited due to Covid

### Awards

David Wilkinson – Life Member

I would also like to acknowledge Jon Farmer's 90<sup>th</sup> and the passing of David Rose and Rhoda Kent.

During the year we gained the membership of Rosmini College who under the enthusiastic guidance of Steve Williams are building a Savanah S. We hope to have a visit with them soon.

Also built during the year by FlyInn Limited was their hangar at Ardmore which is off-grid solar powered.

I move that my report be accepted.

Peter Armstrong





Hi All

Another year and another AGM. It has certainly been another tough year with the ongoing interruptions to our

lives from Covid. Hopefully the end is now in sight with the country opening up and starting to shake off the worst of the pandemic restrictions.

Please do try and attend the AGM on Thursday as we will need the numbers to make a quorum so we can get the legal requirements of operating our Chapter as a Incorporated Society covered off.

You will have already received a copy of the Minutes from the previous AGM plus a copy of the Chapter Accounts for the 2021/2022 Financial Period so we would very much appreciate it if you could review these prior to the meeting so we can reduce the amount of time needed to get through the AGM. Many thanks in advance.

Given it is the AGM this month, I wanted to also express my thanks to everyone for the updates you have provided to me over the last year for the newsletter. Without your updates my job would be a whole lot more difficult so please accept my sincere thanks. I intend to continue as newsletter editor for the upcoming year if accepted at the AGM and I am very much looking forward to seeing the progress everyone is making on your various projects. Please keep the updates coming in.

On to other non-AGM matters. Delys and I were fortunate enough to be able to take advantage of the recently reduced travel restrictions to fly to Australia this past month. We went for my nieces wedding which was held in Geelong south of Melbourne. It was certainly tricky to navigate all the border and health requirements to get into Australia and back into New Zealand but at least we could travel. (I have Delys to thank for bashing her way through all the paperwork to get everything organised.) Sitting on a plane full of passengers wearing their masks is certainly a new experience but at least no one created a fuss or complained.

Travelling south out of Melbourne it was also refreshing to see the advertising signs along the M1 Princes Highway advertising the 2023 Avalon Airshow (3-5 March 2023). It is nice to see some semblance of normality returning to our shared interest / passion. Avalon has been on my to do list for a while so it might be worthwhile to start the planning to get there next year.

Not much else to report this month. The past few weeks have been way too hectic to make much progress on the Camel but I intend to make some headway in June.

Enjoy the newsletter. Hopefully I will see you on Thursday at the AGM

Cheers

Gavin

## SAFETY UPDATE

## Practice Your Emergencies

By John Ashman

We know the value of practicing engine failure techniques, and one of our own SAA pilots showed us how to do it properly at Whitianga recently.

Aerobatic pilots seem to practice "bail-out" procedure to memorise what to do if the unthinkable happens and they have to release belts, canopy, jump out and hopefully deploy their parachute.

But what about practicing for other not so major events? But which, if not properly executed may result in a huge embarrassment in the very least?

Last year in the middle of a PPL flight test the ASI stuck at 50kts after lift off. It was a great opportunity to show the candidate that one can fly without an airspeed indicator as long as you know the attitude and power setting for a given situation. Well worth practicing for straight and level, climb and descent.

What about radio failure? Total electrical failure? Flap failure? How to release canopy, minimise fire risk and get out of aircraft if it flips over in a field in an emergency? It is a challenge to open the canopy in some aircraft from the inverted position.

Have a plan at least.....



## MEMBER NEWS

## Projects For Sale

By John Farmer

For sale - R80 Tiger Moth



R80 Tiger Moth, 4/5th scale, 80hp Mikron engine less than 20hrs, 'As is, where is' in hanger at Mercer. Hasn't flown for over a year. Needs a wash, 'permit to fly' and some TLC. \$45,000 ono.

For Sale - Electric aircraft project.



Single seat 'Pelican' microlight, 20hp electric motor, ESC 100V 400A, 6 modules ex Leaf car (approx 50V 30Ahr), Rotax 508 40hp twin four stroke, pair 11ft Full Lotus floats, fully enclosed trailer with racks for wings includes bunk and table. \$12,000 ono.

Contact: Jon Farmer

Email: [jk.farmer@xtra.co.nz](mailto:jk.farmer@xtra.co.nz)

Mobile: 027 3490053.



## PROJECT NEWS

## Chris Wade – Sonex ZK-VDB

## By Chris Wade

After pricing an engine cowling from Sonex \$1000.00, I asked for an order and freight confirmation and got a staggering quote of Australian \$3600.00 for freight. After tax and conversion, it was going to cost over \$5000.00. More than my pocket could stand so over to plan B. I have borrowed the engine cowling from WYX to make plaster of Paris moulds. The existing cowl is split vertically but I prefer a horizontal split for easier top end access.

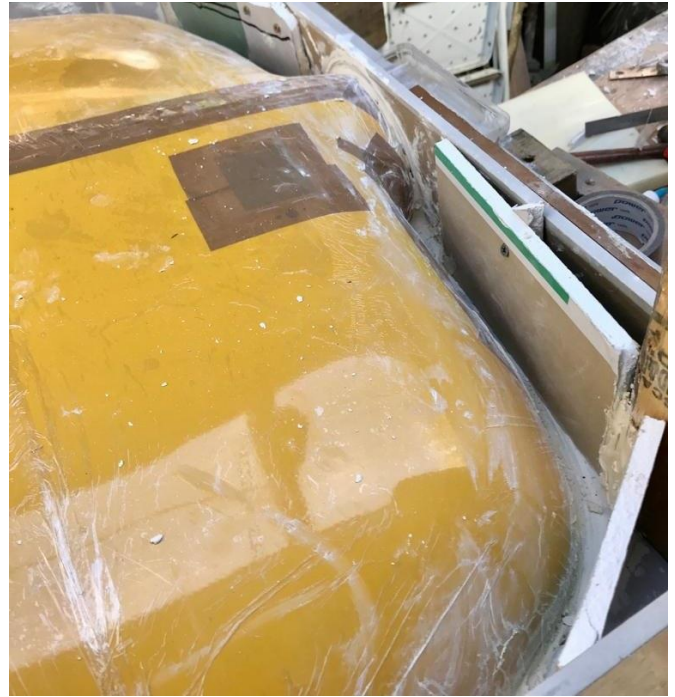
Costs to date \$120.00.



WYX cowl on my rebuilt cockpit



Gib sheet boxing



Cling wrap bond breaker



Hessian reinforcement



Gib sheet used for strengthening



## PROJECT NEWS CONTINUED

## Chris Wade – Sonex ZK-VDB



Ready for sanding



Starting the mould - bottom section.

## INDUSTRY NEWS

## Te Kowhai AirPark

## By Te Kowhai

Airpark Update May 2022

We are pleased to announce that we have been successful in rezoning the Te Kowhai Airfield land from Rural Zone to Air Park Zone.

We have also recently acquired part of the Readman property, which means the entire runway (all 983m) is now secured long term.

This means we can now proceed with the long awaited development of the Te Kowhai Airpark.

[https://tekowhaiairfield.rocketspark.co.nz/site\\_files/29694/upload\\_files/1702\\_019\\_Te\\_Kowhai\\_Airpark\\_Concept\\_Plan\\_Rev\\_B.pdf?dl=1](https://tekowhaiairfield.rocketspark.co.nz/site_files/29694/upload_files/1702_019_Te_Kowhai_Airpark_Concept_Plan_Rev_B.pdf?dl=1)

We are now seeking expressions of interest.

If you are interested in any of these sections, please advise what part of the development interests you by return email or feel free to call me on 021 341 261 and we will put your name on the list.

We will keep all interested parties up to date as development progresses.

Thanks & regards,

Paul @ Te Kowhai Airfield

[Paul@nzte.net.nz](mailto:Paul@nzte.net.nz)





## MEMBER NEWS

## The Case of the Missing Propeller

By Vic Syracuse (Provided by Nev Hay)



I received an interesting phone call a few weeks ago regarding an [RV-6A](#) that was in the process of being towed to our shop. It had recently been purchased in California and flown back to Falcon Field a day earlier. It was here for a final training flight for the new owner, who was going to fly home to Auburn, Alabama, once the lesson was completed. Obviously, a long cross-country trip doesn't allow many opportunities for air work, such as stalls and engine-out maneuvers, so this was the opportunity to complete the training.



During the flight from California, the pilots had noticed engine vibrations at varying rpm, usually most noticeable at startup and shutdown, but they seemed to smooth out at 2400 rpm. During the training flight, the vibrations got noticeably worse, and the decision was made to return to the airport ASAP. That was an excellent decision, as upon landing the propeller departed the aircraft!

I had left for the day, but my son, Nick, was still there. He remarked that he heard it making awful noises on final approach, sounds that he had never heard from an airplane. He lost sight of the aircraft behind some trees as it touched down, but another customer saw the propeller depart the aircraft. Luckily, the throttle was

immediately reduced, and the aircraft landed without any further issues.

I couldn't wait to get back to the shop in the morning to investigate, all the while thinking about how lucky they had been on the trip home. Surprisingly, the composite prop and spinner showed minor damage, and I was happy that the spinner was still attached as it meant the bolts should still be there.



All of the bolts remained captive inside the spinner, allowing good assessment of the cause. Three of the bolts were sheared, and three were stripped of their threads (left). They had been safety wired. It was clear that at one time the composite prop had been installed without a crush plate, which is mandatory for wood or composite propellers. Here you can see the damage caused by the bolt washers when tightened directly against the prop hub (right).

## What Happened?

My initial thinking was that the prop bolts had not been properly torqued when it was installed. There is no logbook entry for the composite propeller installation. At some point we know there was a metal Sensenich propeller installed. Twenty hours prior to the sale, there is a logbook entry stating that a Sam James cowl was installed, along with a metal propeller crush plate "for W&B." Allowing for the 10-hour flight since purchase, it had been flying for about 20 hours with the new prop prior to the sale. Every [accident](#) has a chain, and this one started here.

All the prop bolts were still inside the spinner. The safety wires had all been broken, and three of the bolts were sheared, with the remaining three all having been stripped of their threads. The aluminum spacer had severe fretting in multiple places, which is caused from the

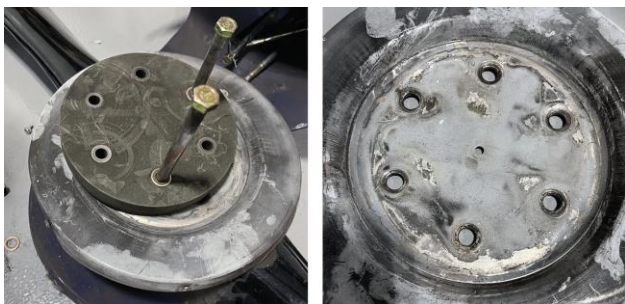
propeller being loose.

The drive lugs on the spacer had "oblong" holes in the propeller. Clearly, this propeller had been loose for quite some time.



The propeller had been loose for some time, as evidenced by the severe fretting on the spacer front face and the oblong holes in the propeller. The fretting is caused by the aluminum spinner backplate rubbing back and forth against the spacer during the engine power pulses.

Careful inspection of the front of the propeller showed evidence of washer indentations into the propeller hub, indicating that the propeller had been installed at one time without a crush plate. Wooden and composite propellers require a crush plate! Keep in mind that a metal propeller had been removed, so there was no crush plate. I could also see that the forward spinner bulkhead was deformed from the bolts and washers, plus it was not an entirely flat bulkhead as is common on RVs. It had a little ridge on it, which I think came into play to set up the eventual failure.



A 7-inch crush plate was eventually installed, but it should have been a 6-inch crush plate. The larger diameter of the 7-inch crush plate, coupled with the bulkhead deformation, did not allow it to fully seat against the forward spinner bulkhead, so even with proper bolt torque, the propeller was never really tight against the engine spacer adapter.

The installed crush plate for "W&B" was central to the failure. The problem here is that it was a 7-inch diameter crush plate,

now sat on that ridgeline I mentioned, keeping it slightly above the propeller. Even with proper torque applied to the mounting bolts, there was no way this crush plate was going to fit tight against the propeller hub and properly secure the propeller to the flange. After 30 hours, it all finally let go.



The prop bolt on the bottom has been stripped of its threads. Propeller bolts are supposed to have rolled threads like the bolt on the top, not cut threads. Rolled threads are up to 35% stronger.

#### The Takeaway

There's a big lesson here for new owners, whether you built the airplane or not. Yes, one of the attractions to amateur-built aviation is that we get to do our own maintenance and modifications without a lot of oversight. But we must remind ourselves that with that freedom also comes responsibility. Some changes and modifications have the potential to cause severe injury or death, and perhaps it's wise to get some help or advice occasionally. Luckily, nobody got hurt here, but it is still going to be expensive as Lycoming has a mandatory engine teardown for propeller separation. The teardown and rebuild, along with labor to remove and install, will be close to \$15,000.





I have some concerns as to the quality of the bolts. The middle F911 bolt is the short bolt attaching the spacer to the engine flange. The logo, threads and overall appearance look to be of high quality. The longer prop bolts were of poorer quality in terms of logo, metal plating and color.

I also have some concerns with the bolts that were used. They are F911 bolts, such as are used in the auto racing circuits. The shorter bolts holding the spacer to the engine flange appear to be high-quality F911 bolts. The longer propeller bolts look to be cheap, even though they are stamped quite poorly with the F911 logo, and the plating is a different color and is flaking off. There is some noise out there that there are bogus F911 bolts being made in China. Propeller bolts usually have rolled threads, not cut threads. Rolled threads are much stronger, up to 35%. Look at the picture and judge for yourself.

I advocate that changing a propeller on an aircraft should be one of those times when having an A&P take a good close look at it would be a wise decision. In this case, a careful inspection of the parts that were removed would have indicated that they should not have been reused. If not an A&P, then at least find someone who has lots of experience. Single-engine aircraft have many components in them that are critical to the safe outcome of the flight.

This is one of those times that enlisting the services of an experienced person would have kept the fun factor alive much longer. Luckily, the pilots didn't suffer any injuries.

Royal Aeronautical Society  
Hamilton Branch



## Chapter Events

2022

<b>Apr 27</b>	<b>Chapter Monthly Meeting</b> Last Thursday of the month 7.30pm at the Auckland Society of Model Engineers clubrooms, Petersen Dr, Panmure Basin
<b>May 26</b>	<b>Chapter AGM</b> The Annual General Meeting of the SAANZ Auckland Chapter will be held on Thursday 26 May 2022 in the Auckland Society of Model Engineers clubrooms, Peterson Road, Panmure Basin, starting at 19:30.

## Aviation Calendar

2022

<b>Every Sat</b>	<b>Dargaville Aero Club – Catered Lunch</b> 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 <a href="http://dargavilleac.weebly.com/">http://dargavilleac.weebly.com/</a> . 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. <b>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 \$12 per person.</b>
<b>Every Sun</b>	<b>Whangarei Flying Club Sunday Lunch</b> Penny burgers every Sunday \$5. Contact Rusty 021 173 8942 <b>Penny burgers are now back on!</b>
<b>Jun 05</b>	<b>Warbirds On Parade Ardmore</b> <b>Sunday June 5<sup>th</sup> 2022 9am – 4pm</b> Commemorating D-Day with flying displays at 10:30am, 12:30pm & 2:30pm
<b>Jul 25-31</b>	<b>EAA Airventure 2022 Wittman Field Oshkosh Wisconsin</b> Billed as the worlds greatest aviation event. <a href="http://www.eaa.org/en/airventure">www.eaa.org/en/airventure</a>

## Aviation Calendar

2023

<b>Mar 03-05</b>	<b>Australian International Airshow 2023 Avalon Airport Geelong, Victoria</b> Experience the awesome power of military aviation... The boom and zoom of vintage warbirds and the roar of attack helicopters... Be thrilled by the high flying antics and precision manoeuvres of the best aerobatic daredevils ever to be gathered together for an Australian air show.
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