Waikato Chapter of Sport Aviation Assoc (SAA) of NZ

(Dedicated to building, flying, designing, modifying - and talking about - home-built aircraft)

Newsletter - November 2024

<u>A big thankyou</u> to all our contributors. As always, the more the merrier...

The AGM has been and gone last month at Paul Waterhouse's delightful hangar and veranda. I really enjoyed learning about the Stewart Systems covering method and seeing it in action. Thank you Paul! It was very interesting, and for anyone not aware of this water based covering solution, its worth talking to him about it. Cheers, Tony.

For your diary:

There will be a Christmas BBQ at Bart Burgers Spitfire manufacturing establishment in Kinloch. Be there for 10.30am Saturday 14th December for a look at the Spitfire, then and please bring meat/etc for BBQ Lunch. Salad and hot drinks will be provided, bring cold drinks or anything else you will require.

Bart's Address is: 34 Hepina Heights, (Kinloch), Taupo. See you there. If you want to fly in, we can ferry from Taupo Airport, but please contact Grant if you need a lift as early as possible.

From the AGM: The Committee asks and reports:

1) Please pay the modest amount of \$10 to cover the entire year subs to help our Treasurer keep the all important 'pile of gold' up to the correct level, purely for administrative purposes of course. The bank account is named 'Waikato SAA', and the number is: 02-0320-0104853-000 Please put your name as a reference to the payment.

2) Clint Kraidy who flies a Airbike hangared at Matamata has been elected as our new Club Captain. You will already have received a few emails from him about fly-ins up and coming. He is a great choice for this role as he roams around the whole Waikato region when the weather is up to it. So expect news leading up to the weekends as to whats on and some useful details of where and when to go. (There may be some duplication with the SAA bulk email from David Wilkinson & Dave Homewood, but I'm expecting Clint to do a more specific job for those of us in Waikato, who are interested in local flying. David will probably cover longer distance and NZ wide events. Time will tell...) Also: Please pass Clint any interesting local places to visit around the Waikato to give him more options.

3) Grant has supplied the President's address to read for all those who did not make to the AGM:

Good afternoon everyone and welcome to Waikato SAA AGM. Firstly thank you .to Paul for hosting the day and for his demonstration of Stewart Systems Fabric Covering. Thank you all for your understanding of delays and thoughts during my family's recent tragedy. Much appreciated.

My initial suggestion of a visit to Bart Burgers was a ploy on my part to get a high attendance because of the high level interest the project has. Then I heard that sometime before this Christmas the Allison engine was going to be run. An AGM with that possibility, nah. That is a visit it its own right and with Paul close to finishing the covering on the Pietenpol I felt I had to act quickly. When talking with Paul about hosting the AGM I mentioned the running of Bart's engine. Paul's response was " It was my idea but is was a dumb idea. The motor is inhibited at present and if we plumb it up and run it now the corrosion will not be as well controlled as it is at present so best it not be run till its mounted on the fuselage." Sorry folks we have to wait. Unfortunately I have to say the Branch has not been very active this year. I had every intention of an activity or visit every 2 months but that did not happen. My apologies. It wasn't helped by the fact that Blacksands, due to weather concerns, was postponed until some time after the National Flyin at Whakatane in order to have a suitable low tide. To remedy this lack of activity a person has been approached to take on this role on a years trial. This will be discussed during the election of Officers so as to give anyone else on opportunity to stand for the position. Black sands. First and foremost a huge thank you to Sheryl Freemantle and hubby Bruce, for organizing and running the Catering and to Bev and Case Jim and Irena Warwick and Melvia and Brett and Chris who assisted. They did an awesome job and provided good quality meals. Despite it being a success we learnt quite a few lessons. Later in the meeting I will read an email from Sheryl outlining areas she sees the need for change. The support and co-operation from Te Kowhai Airfield management goes a long way toward the success of the event and we must record our thanks and appreciation to them. The event is popular amongst the other Branches and I felt that although postponed it was a success this year. The discussion later is a chance to review and see if there are any areas we can improve on.

The latest on the Matamata Airfield is we still have no idea of how the future will pan out. It might be clearer after the Co-governance meeting on Oct 24th when Iwi have been given the opportunity to put forward their aspirations. Something we understand they have settled on. My understanding is that the Users representatives (UWA) have now been given a time slot to speak also. One thing for certain though is from the end of Walsh Flying School 2025, Avgas will not be available on the Airfield. The underground tank has reached it end of life and AirBp are not interested in replacing it. Gofuel were initially interested until a case study gave an estimate of \$500,000.00 to install new tanks.

Our newsletters are a credit to you all. Yes, Tony nags you for contributions and then puts them together to send out as newsletter but it is your willingness to contribute a photo and a paragraph or two that makes it possible for us to receive an interesting email from Tony. So thank you for your efforts.

Btw did I mention the fact that Sheryl Freemantle did a fantastic job at Black sands and we owe her a huge amount amount of gratitude.

Currently Building:

Bart Burgers, Pegasus Spitfire MK9 (Full Scale) reports:-

With building a spitfire or for that matter any other thing there are times that you need to think "outside of the box".

I needed a balance weight made out of lead, shaped in a particular form. I thought this through...I needed something that would withstand the heat of melting lead and was easy enough to shape into a mold.

The lead I had obtained from a local tire change place, where they gave me to discarded balance tire weights....

In NZ we have "pumice" a volcanic rock that is very soft....got plenty of that in my garden.

Attached are the six pictures of my venture. (sorry, slightly out of order to fit these pages.)



Above Left: 2) Starting making the mold



Above Right: 4) mold complete

Below: 1) An early view of the mold... (Its on the right with moss ;-)



Above: 3) Progressing, intermediate step...

Below Left: Cast lead on left hand side. Bottom Pic: Shows fixture inside Elevator Tip.





• **Paul Waterhouse: Pietenpol AirCamper ZK-BZY repair, reports**: – Paul, with some updated photos says simply: Fuselage + Wings = Aeroplane (almost) not far away now.



Above: Fuse looking pretty complete now.

Below: Two wings beautifully covered using Stewart Systems which we saw earlier in the process at our AGM. Now nicely painted, Its going to look great for sure! Tony Ashworth: Jodel D.18 ZK-OWL - reports: – I have made progress on multiple fronts but nothing fully finished as is often the case. I have been fitting the lower cowl with some side stiffeners clamped for positioning, allowing the re-use of two lower mounts and positioning of two new side mounts.

I also designed up an instrument panel layout with all the switch labels and a matching dark green background. It was designed using the same DXF file the panel was laser-cut from, so everything lined up properly. Its not bad, but I can see a few things that don't line up as well as I wanted. Hence I am currently having a second one printed (its a vinyl overlay, that sticks on) to fix the issues. It costs aprox \$50 per overlay, so not too expensive, its more the time to design it then get it fitted accurately, then put all the instruments in again.

Once the panel is in place, i can then move to wiring it all up. I find myself moving from one area to another as i wait for other bits to arrive. I also have a new Propeller! thanks to Gary Williams...

Below: Engine in place, lower cowling being fitted, some baffles to finalise next...

Below: New overlay on the Jodel panel, not the final one, but looking better than bare aluminium. Still a few circuit breakers to put in the lower arc (bent wing shape) of holes...

• Simon Teague: Bearhawk 5 – reports: I have made some floorboards, but they still need some trimming. Also working on the control stick location and fitting horizontal stab, which needs a negative two degree incidence. Will follow up with making cables. That is about all for last month. 3 Photos: *Below Left: Control stick fitting, Below Right: floorboards fitted.*

Above: Simons Bearhawk, checking and setting stabiliser incidence

• Grant Horn: Vans RV-7a ZK-DRV – reports:

Sometimes a job is easier said than done. I fitted the aileron to my right wing so that I could determine the position of the flap. When the aileron is in the neutral position the trailing edge of both the aileron and the flap should line up. The aileron fitted into the hinge brackets fine but something didn't look right. The outboard hinge bracket was not square to the rear spar. Grrrr... I was not happy with it so decided to drill out the rivets holding that bracket in place. Easy, only 10 rivets. The first 8 were easy as, but those last 2 were not.

To get those jokers required me to remove the aileron gap fairing. Basically its a brace that goes from the rear spar and supports the trailing edge of the top wing skin for the length of the aileron. Only another 55 rivets to carefully remove. That is what I counted on my drawing at home. Reality is there is probably more.

So I came up with a cunning plan here. I drilled the rivets out slightly undersized and instead of punching them out I machined up a pin and a hollow dolly that fitted in the rivet squeezer and removed the drill rivets without distorting either the flap brace or the rear spar, or the top skin. It worked a treat.

Much muttering but in the end I am so glad I did it that way. The problem was that the rivets that hold the outboard wing rib to the rear spar were sitting ever so slightly proud and when the outboard aileron bracket was riveted over those rivets the bracket did not sit flush on the rear spar. Instead it cocked it over slightly and caused it not to sit square to the spar. So 2 more rivets to be drilled out and very carefully deepened the countersink to allow the new rivets to sit absolutely flush. Once I re riveted the bracket back on i was happy with the outcome as it now sits flush and is square to the rear spar as it should be.

All that rework because 2 rivets were not done properly in the first place. No, I do not regret undoing my work because I know that it is right now and there is no chance that bracket will work loose. *(See next to photos...)*

Below: The problem is that the Wing Tip Aileron bracket is not at 90 degrees in RH pic, so it was removed, then replaced to solve the problem. All without making any of the rivet holes enlarged. It requires patience, experience, some thought, and pondering before action.

• Gary Williams – Manufacturing Propellers and a Pietenpol Wing - reports:

Gary has sent three photos showing props in various stages of repair and disrepair. A prop at 1st stage of glassing. Lastly a Pietenpol Air Camper wing as a project to fit in-between building props, so it's not a fast build project. The center section is 99% done, the port wing panel ready for lining all ribs in place level etc.

Below: Various props in different stages of repair (and disrepair, never to fly again):

Below: Fibre-glassing a propeller in progress...

Below: Pietenpol Air Camper wing build in progress, note stored ribs above for the second wing, and the center section on a shelf above the red frame.

• Bruce Cooke – Jodel D.18 ZK-JAC - reports:

I have finally got type rated in the little Jodel, It took a bit longer than expected, but I got there in the end. Its really nice flying it solo as it handles beautifully when its lighter. I'm now trying to fly it on most weekends when the weather allows so I can start feeling comfortable and confident with it.

Shortly after I got my rating, the annuals came due, and also my BFR. Both were sorted with very low fuss.

During the annuals, I tidied up the tailwheel castoring geometry which has substantially improved ground handling. Part of the work was adjusting the castor angle so it was properly vertical, and to do this I had a customised adaptor wedge 3D printed in Aluminium-Magnesium alloy by a company called Zelta 3D in Singapore. It was a matter of uploading a CAD file and the part arrived a few weeks later. The parts was dimensionally perfect, and has a finish similar to a casting. Its a method of making components that could be quite useful to homebuilders. Its a little expensive, but probably still less than getting the part CNC machined.

As the Jodel is coming up to 20 years old, it is my intention to progressively tidy it up, whilst avoiding taking it out of the air for any significant time. I have started tidying up the interior, as I like to have everything stowed efficiently for comfort and ease of use. the cockpit sidewall storage was originally a woven elastic arrangement, which was getting a bit sloppy, and allowed stuff to fall through. I took the panels out and freshened up the finishing with new carpet and some very handy side pockets I sewed up myself from heavy canvas left over from making ZK-CKEs baggage bay. With the new trim painted in the "Jodel Interior Green" Jack Godfrey chose to use originally, I think it looks really tidy. I'll be working through the rest of the cockpit over rainy weekends over the next little while, and will also be getting a new radio and transponder installation at some stage too.

I've already managed to get it across to Matamata for the monthly aero club BBQ, something which I hope to do on a regular basis going forward. (*Bruce sent these four photos*)

Below: JAC parked at the Matamata aeroclub BBQ recently...

Below: Tailwheel caster 'wedge' 3D printed to get the castor angle corrected...

Below: Cockpit sidewall pockets, LH is original, RH is new with diagonal pocket storage, very tidy!

• Clint Kraidy – Air bike ZK-CKD - reports:

Clint sent me some photos of some scratch built floats he is building for the Air bike. He has carefully calculated the volume to be sure it will be buoyant enough. These photos show the making of a master plug to create a mould from. This mould will then be used to make 3 floats, one to test, and two for flying.

(Intrepid kinda sums it up...)

Below 4 pics: Mould coming together, filled and sanded to get the shape right. Last photo showing being sanded to final form getting ready for mould release to be applied. Its two pieces to allow for removal of the plug from the mould.

Air Bike beside to get an idea of the scale and fit.

• Alan Falconer – RagWing Special - reports:

Progress on 912 installation, not as quick as I had hoped but still happy with progress, remodelled cowling underway, airbox mostly done, leaving dual throttle and wiring.

Below: Three views of the engine installation in progress.

Been Flying:

Clint Kraidy: Airbike ZK-CKY: Was heading to Tokoroa last weekend and on the way visited Craig Moss's new strip and hangar aprox 10km west of Putaruru. It is not a long strip at about 250 meters and slopes slightly up towards the hangar, but Clint didn't have any problem as his stall speed is sub 30kts I believe. Thanks for the pics, Clint!

Below: Hangar in foreground left of centre, and strip from right to left leading to it.

Below: Air Bike on the ground, hanger to RH corner.

DC3 Visit to Matamata this Tuesday arvo: A picture from my hangar door, slightly surreal...

Andrew Campbell: Asso V taxiing around testing the radio getting ready for inspection. Glider tow in the background.

