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

Sport Aviator

April 2022

www.saaauckland.org.nz

Committee 2021/22

EXECUTIVE COMMITTEE

President: **Peter Armstrong**

Vice President: **Gary Briggs**

Secretary: **Keith Weale**

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Bill Luther **Tony Payne**

Gavin Magill **David Campbell-Morrison**
Treasurer

OPERATIONAL POSITIONS

Newsletter Editor
Gavin Magill

Technical Library
TBA

Safety Officer
TBA

Airspace Users Group
TBA

Tool Library
Manfred Scherbius

Webmaster
Warren Sly

Catering
Chris Wade

TECHNICAL MENTORS

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

FRONT PAGE
Arjen Visser's Thorp S-18 ZK-MBY parked at Motueka in January after his Controlled VFR flight from Ardmore. Arjen kindly provided an article for this months newsletter on his flight.

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Next Meeting

WHEN: April 28th 2022

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

WHAT: **Meeting**

WHO: **TBA**

President's Corner

From the Presidents corner

You never stop learning. Departing from Christchurch International last Saturday after doing my pre-flight checks which include cycling the prop I was climbing out and at 1000 feet transitioned to cruise mode and went to reduce prop speed back from 5800rpm to my cruise rpm, usually around 5200, nothing happened. After the startle factor subsided, I was able to get a rpm under the 5500rpm 5-minute limit by reducing manifold pressure, in the meantime Christchurch ATC gently reminded me that I was still in their Instrument Sector and could I expedite to the west. After a period, everything settled down and I decided to proceed onto Paraparaumu, once again ground checks OK but in-flight the previous symptoms re-occurred.

I landed at Pauanui and decided to check the ease that the prop worked against its fine pitch return springs and noticed a binding. Worked the blades, they came free but I decided that upon my return to Ardmore I would not leave the matter. I removed the prop and between Bryn Lockie and I, we disassembled the prop hub. You can see the cause of the problem looking at the photograph, moisture has ingressed into the side thrust bearings of the prop with the resultant corrosion occurring. This is the second time this has occurred, last time the hub was sent back to Italy for overhaul, it took 4 months to repair, so I have decided that we will source bearings locally and do it ourselves.

This is my last Presidents update. Covid not withstanding it has been a frustrating time over the past two years so special thanks go to Keith Weale our secretary who keeps us on the straight and normal, and Gavin, newsletter editor and publisher, and to others that have assisted our club to continue. Earlier this year I was approached to stand for the national Executive of AOPA and was duly elected. It is my plan to ensure that SAANZ, RAANZ and AOPA, who represent most non-commercial flying in NZ, work as closely as possible together for the benefit of all. Waka Kotahi has agreed to hand an amount of money to be used by the Aviation Federation for safety purposes, I would like to see, via our respective groups support, ADSB ground stations (where coverage is poor) coupled with Wind direction, wind speed and local QNH (4-clicks) at airfields that do not currently have this capability. There seems to be significant support for such an idea.

Thanks to all

Cheers Peter

From the Editor

Hi All

I hope everyone has had a good month. Things have been a bit hectic at our house with one thing and another so not much progress has been achieved on the Camel build and not much flying has been achieved either.

Temperatures are definitely starting to drop with mornings being quite cool of late. The first few days of the Easter break were quite pleasant with stunningly fine weather but sadly the rain arrived Easter Monday and stayed for much of the rest of the week around Whitianga.

This has been good for the new grass seed planted on the northern side of the 04/22 runway at Whitianga but did not make for good flying weather unfortunately, especially for those who took the days off between Easter and Anzac weekends.

Speaking of the runway work at Whitianga, look out for the article in the newsletter from Pete Walton regarding the work in progress at NZWT. To the frustration of those on the committee responsible for organising, funding and carrying out the resowing of the runway, we have had no less than five aircraft land on the newly ploughed and prepared ground, clearly not having read their Notams before visiting the airfield. For those intending to visit NZWT anytime over the next couple of years, please read the Notams carefully to understand the current state of the runways for your own safety.

Many thanks to Arjen Visser for the article he provided in this months newsletter on a flight he took in January from Ardmore to Motueka using Controlled VFR. It is interesting to read the experience he had with Air Traffic Controllers, particularly around Ohakea. He has some excellent lessons gained that we can all learn from.

Please also note the Notice of Annual General Meeting from our Chapter Secretary Keith Weale which will be held at the start of our May Chapter meeting. With Covid having made life difficult for the last couple of years it would be great to get a quorum together for the AGM. Please do consider attending if you are able in May.

Thanks once again to all the contributors this month's newsletter. I am still on the lookout for assistance with putting together the "Upcoming Events" section of the newsletter. If anyone is able to offer a little of their time each month to collect the list of local and international aviation events it would be greatly appreciated.

Many thanks in advance.

Gavin

CHAPTER NEWS

Notice of AGM

By Keith Weale (Chapter Secretary)

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.

Business includes the receipt of reports, election of officers and committee, and setting subscriptions for the coming year. The annual accounts will be distributed to members by email before the meeting.

Please nominate members to serve on the Committee, including a new President as Peter Armstrong, having led the Chapter for two years, must step down this year in accordance with our Constitution. Nominations, duly seconded, may be submitted to the Secretary well before the AGM. Please also obtain the permission of the person you wish to nominate.

The AGM is scheduled to be brief and to be followed by the regular club night. A good attendance is requested to ensure that there is a quorum. All members who were financial at 31 April 2022 are deemed to be financial members until the close of the AGM.

Secretary
SAANZ Auckland Chapter

SAFETY NEWS

Risk Reduction

By John Ashman

Forgive me for saying that flying, just like any other activity, carries its own risks.

We might appear dismissive by quoting the often heard "the drive to the airport was my riskiest activity today", but in reality, we all try to manage the inherent risks to levels each of us are comfortable with.

Every pilot makes an effort to minimise risks with good airmanship, good maintenance, and a thorough pre-flight and prior planning.

But high up on my list for risk reduction is to stay current; to get regular instruction/ training (as revision and also to broaden skill base) and to listen to good advice from highly experienced pilots; of which we have many in the field, and within the SAA membership.

MEMBER NEWS

Sonex ZK-JQP Reengining (Take 2)

By Mike Penny

Mike Penny is in the process of refitting the Aerovee Engine removed from ZK-JQP late last year after replacing the heads on the engine.

JQP has been operating the Aerovee that came out of Paul Blackmore's Sonex before he replaced it with a Rotax and which Chris Wade then bought off Paul.

Chris has since sold the Aerovee to Bruce Turner to replace Bruce's engine which had a crank failure earlier this year which caused ZK-WYX to lose its prop overhead Whitianga.

It all sounds very confusing but we were fortunate to have the spare engine available to use in JQP otherwise she would pretty much have been a hangar queen for the summer given the relatively long lead time to get the replacement heads.

JQP's Aerovee about to be refitted to JQP with new heads whilst the Aerovee which was temporarily fitted over summer and which now belongs to Bruce Turner sits at front having been removed.

SAFETY NEWS

Whitianga Airfield

By Pete Walton

The Plain English Version of The Notams!

If you are visiting Whiti, please read the Notams.

Of course, you do this every time don't you.

Yeah right! as the TUI ads go.

So, what is happening at Whiti?

Two projects are on the go here.

Project Number One:

04/22 RUNWAY has been getting a real hiding each summer and gets badly cut up. This year there were some calls to close the runway.

So we have cut the 04/22 RUNWAY STRIP in half lengthways and the northern side has been sprayed, tilled, graded, rolled, sown and fertilized to hopefully provide a great runway by Christmas time. THEN, next year, we will do the same to the side that is currently in use right now, and by Christmas 2023 we hope to have a great wide grass RUNWAY STRIP that we can move our RUNWAY back and forth across to spread the wear.

So the CURRENT RUNWAY is marked with the usual marker boards, and the AREA of RUNWAY STRIP that has been resown has been marked with CROSSES.

Pretty simple eh?

NO, ITS APPARENTLY NOT!

We have had 5, that's FIVE; F-I-V-E aircraft that have overflown the crosses and landed on the ploughed up dirt.

This has caused shock, horror, embarrassment, and apologies from the pilots involved.

Please remember RUNWAYS are marked by marker boards, not X marks the spot!

Also note that 16/34 has been shortened to around 438 meters AND IS ALL NORTH OF 04/22.

Again look for the marker boards!

Yes we have had one aircraft land on 34, south of 04/22 and run out across the ploughed up bit!

Project Number Two:

This is about to start but has been delayed several times so watch out for NOTAMS.

Project Two is the council running pipes across the runway intersection of 04/22 and 16/34.

This will **COMPLETELY CLOSE 16/34** while the work is in progress, and **04 WILL START JUST PASSED THE EASTERN SIDE OF THE CROSS RUNWAY AND 22 WILL STOP PRIOR TO THE EASTERN SIDE OF THE CROSS RUNWAY**. 04/22 will still be around 1000 meters long.

Watch for Notams.

Note that **THERE WILL BE NO RUNWAY BETWEEN THE CLUBHOUSE/FUEL PUMPS AND THE CROSS RUNWAY.**

There will be a taxiway to get to the pumps, cafe, hangars etc instead.

Again, read the NOTAMS.

Remember, RUNWAYS are marked by marker boards. Look out for them. They are your friends. Land between them. Crosses are bad. They are not your friends. Don't land between them.

(Probably time to have plain English Notams, life would be less confusing!)

Pete

Editor – my two cents worth

This would seem obvious but I would strongly recommend all pilots visiting NZWT join overhead and visually confirm the location of the runway marker boards for the runway in use BEFORE descending to join the circuit to land.

PROJECT NEWS

Electric Pelican Project

By Jon Farmer

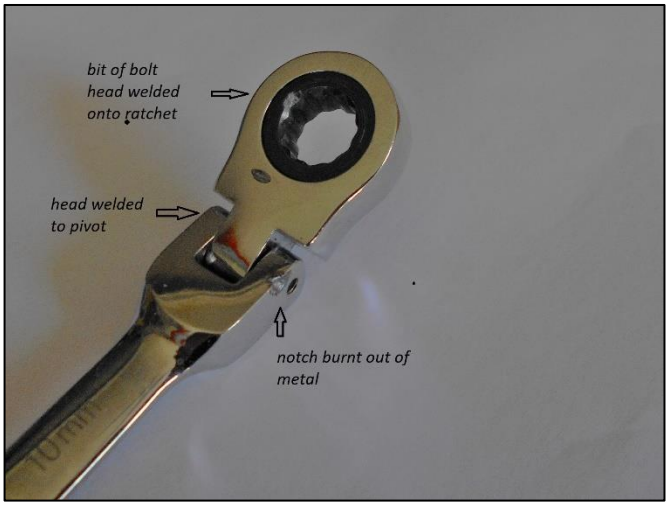
The project started using 8 small lithium-polymer batteries in series parallel to form a battery nominally 48 Volts and 20 Amp hrs or just under 1 kW hr.

These batteries were never going to give more than about 6 minutes at full power but they turned out to be of inferior quality and not able to hold a charge for more than a couple of days unlike genuine lithium batteries. This made testing the motor and prop impossible as there wasn't time to read the instruments before the power dropped off drastically.

Late last year, I ordered 12 lithium-nickel-cobalt-magnesium cells with a very good power to weight ratio of 4kg/120 A hr per cell for a total of 48kg which is about the same as the petrol engine removed from the aircraft.

These should form a 5.7 kW hr battery and, rather optimistically, give up to an hour flight time by throttling back after takeoff.

Anyway, the battery order is stuck in a port in China with no shipping date in sight. Discussing the shipping delay with the importer, he offered me 6 second hand modules from a Nissan Leaf car so that I would have something to play with. As a matter of interest, there are 48 of these modules in the Leaf car. When new these modules were 64 A hr but are down to about half that now which seemed to be plenty of power to weld up a wayward spanner and they didn't even drop 0.01 V.



As the photo shows, I have bolted the modules into two packs of three for convenience of carrying one in each hand. As each module weighs 4 Kg the total weight is 24 Kgs leaving me the option of adding two more modules for more power.

Running the test rig was a bit disappointing as it only produced 15 Kg of thrust at a max 1,000 rpm drawing 114 Amps or 5.1 kW hr. The electric motor is rated at 15 kW, 20hp, at 4,000 rpm and so it seems that not only is the prop too coarse, but it is out of balance after several minor mishaps. Once I can get 25 to 30 Kgs of thrust, it will be time to think about fitting battery and motor on the fuselage. In the meantime, there is the problem of charging the battery. For a start, I have two transformers each able to supply 30 V at 10 A which should charge the two packs of modules, each up to 24 V, in around 4 hours. For fast charging, I have a 'Hobby Welder' with 50 V at welding amps, say 100 A, that should charge the battery in less than an hour but the control circuit is a bit daunting. Imagine the bang when it was over charged!!!

MEMBER NEWS

Controlled VFR Ardmore to Motueka

By Arjen Visser

VFR flight from Ardmore to Motueka through controlled airspace with a Thorp S-18 MBY - Jan 2022

This was my first attempt at flying VFR solo to the top of the South Island from Ardmore. I had flown to Motueka before with my instructor but that was before I had my license. I did not want to fly the shortest route which would take me over a large portion of the sea, but I wanted to follow the coast down and cross at Kapiti Island to the Marlborough Sounds. This is not the closest point to cross, you can fly all the way down abeam Wellington and cross at Ohau Point, but it gets pretty congested in controlled airspace around Wellington, so ATC prefers you to cross at Kapiti Island.

The plane I am flying is our Thorp S-18 MBY. It has 100 litres fuel in the main tank and 45 litres each in the wing tanks. We had not used the wing tanks in a while so I was only going to fly on the main tank. Total flying time about 2.5 hours so it meant I had to land somewhere half way to fuel up. I picked Fielding NZFI just because I had never landed there before and has no landing charges. The Thorp cruises at around 145 to 150 knots and is a very nice airplane for cross country.

I wanted to fly controlled airspace all the way because I think it makes for a more relaxed and safer flight. In controlled airspace I don't have to worry about local frequencies, other traffic and if I have an emergency, they know where I am and who I am. The higher you fly the more time there is to react to an emergency. With an engine failure, every 1,000 feet gives me about 1 minute of glide time so at 8,500 feet, I have a round 8 minutes. This gives me some time for trouble shooting, or picking out a good field.

I am by no means an experienced pilot (having only flown for 4 years, and around 280 hours) or qualified to instruct or give advice about flying. This article only describes my experience and is only meant to encourage pilots that do not fly in controlled airspace to consider it. But check with your instructor and train with him or her on the correct procedures.

Note: from December 2022 you will need an ADSB-Out capable transponder if you want to fly in controlled airspace.

The first thing to do is to list all the ATC frequencies on the route. Looking at the VNC map between Ardmore and Fielding, I note down all the ATC frequencies between Ardmore and Fielding. They are:

1. *Auckland Approach - 124.3.*
2. *Bay Approach - 125.3 (change over around Huntly)*
3. *Auckland Approach - 126.0 (change over about 15 miles north of NZTM)*
4. *Ohakea - 126.2 (change about 3 miles south of NZTM)*
5. *Ohakea - 125.1 (change over about 5 miles north of Hunterville)*
6. *Local Fielding NZFI frequency - 124.1*

From Fielding to Motueka the frequencies are:

1. *Ohakea - 125.1*
2. *Wellington - 122.3*
3. *Christchurch - 123.7*
4. *Nelson Tower - 127.4*
5. *Motueka local - 127.3*

It is also good to know the Christchurch Information frequencies associated with each area as backup.

For most cross-country flights, I always file a VFR flight plan with Airways (www.ifis.airways.co.nz). The flight plan will give me a Squawk code that will be handy I pre-load this squawk code into my transponder and that is one less thing I will have to do when contacting ATC.

Once contact is made with ATC, it is vital

that you stay on that frequency. You can listen to other frequencies in the background such as an ATIS or AWIB, but you always have to monitor the ATC frequency that you are on.

ATC will instruct you when you have to switch to another frequency. So when changing from say Auckland Approach to Bay Approach ATC, Auckland Approach will instruct you to change to Bay Approach 125.3. It is easy to let the new ATC know that you are now on their frequency by saying "Bay Approach, MBY is with you at 8,500 feet and 1021". You give your height and the QNH.

When switching from an ATC to a TWR, you have to provide more information such as your location and intention. So in my flight when I was flying through Nelson TWR airspace to Motueka, I had to specify my location, height and intention when switching to them from ATC.

If you have a radio that can load a second radio frequency, it is good practice to put the next ATC frequency already in the radio as the second frequency. This way when you are asked to switch, you already have the radio frequency in your radio.

It was a beautiful flight from Ardmore to Fielding. I was cleared to fly at 8,500 feet and this gave me some beautiful views of Mount Ruapehu.

About 20 minutes out from Fielding, Ohakea ATC asked me to vacate controlled airspace because of intense IFR flying. So I had to descend to 3,500 feet and switch to local frequency to continue the flight to Fielding.

Fielding is a nice airfield, plenty of runway and a place to sit and relax for visiting pilots. Once refuelled, I set off again to continue the flight. The airspace around Fielding is complicated and I should have studied this more, but because I was going to fly in controlled airspace I thought I could avoid this complicated airspace and fly above it. However as soon as was airborne, I asked Ohakea ATC for approval to enter controlled airspace, they denied it and said I should take transit lane T354, follow the river then contact them again.

I did not know where transit lane T354 was and because there is restricted airspace on both the south side and west side of Fielding, I was trapped. So I started circling above Fielding at 1,500 feet (which was maximum height) and started looking at my map for transit lane T354. I was looking for large transit arrows much like the Whangaparoa transit lane T159. But I could not find it on my map. One of our main rules of flight is Aviate, Navigate, Communicate so I was making sure I was aviating and not getting too low or high.

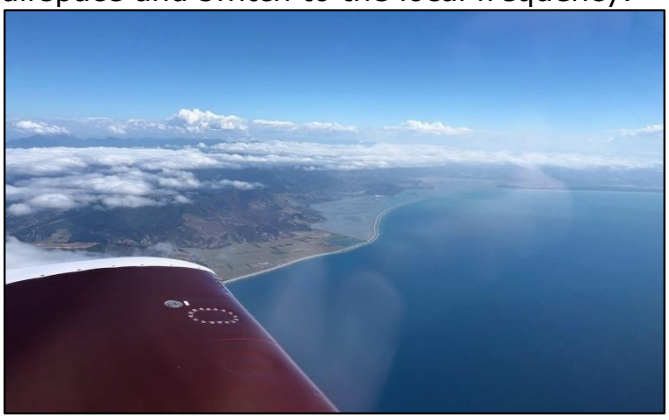
I circled about 6 times above Fielding and thought about landing back in Fielding. But then I remembered watching all those Youtube videos where pilots are afraid to ask ATC for help and end up in serious situations. So I contacted Ohakea ATC again and said I am unfamiliar with airspace and please give me a vector. They said standby and within a few moments they came back and said fly heading South at 2,000 feet. They then proceeded to clear me to 6,500 before crossing Cook Straight to the South Island.

Lessons learned here is to study the local airspace carefully and be familiar with transit lanes. Also do not be afraid to ask ATC for help. Afterwards I had another look and found the transit lane quite easily but in flight where you are doing multiple things, I could not find it.

The flight across Cook Straight is relatively short. It is very comforting that I saw the South Island even before I started crossing Cook Straight. During the whole crossing the North Island seems very close so that is also reassuring. During the crossing I made note of where the boats are. If I have an engine failure I will make sure I ditch in front of a boats path so that they can hopefully pick me up.

The Marlborough Sounds is a magical area to fly over and I had beautiful weather as a bonus.

From the Marlborough Sounds it is a straight line to Motueka. Once past the Marlborough Sounds, there is another stretch of water called Tasman Bay. This is under Nelson Tower controlled airspace. About 15 miles from Motueka I let Nelson Tower know I was Top of Descend for Motueka and they gave me clearance to descend and finally to leave controlled airspace and switch to the local frequency.



Motueka is another very nice airfield with both grass and sealed runways. There was a Piper Cub in front of me in the circuit but other than that it was very quiet and a smooth landing.

Motueka has ample space for parking aircraft and once I had tied down the Thorp it was time to go and see my sister who lives locally.

The flight back after a few days in Motueka was uneventful. The only difference was that I flew to Whanganui for fuelling instead of Fielding. I like to experience different airports. So when I crossed Cook Straight at 9,500 feet under ATC and came to Kapiti Island, I then tracked straight to Whanganui. This is flying above water but the coast is close enough and at 9,500 you are within gliding distance.

When requesting ATC for clearance when I departed Motueka, I asked for: "Request controlled VFR 9,500 feet to Whanganui via Kapiti Island". ATC then knows you are intending to fly via Kapiti Island to Whanganui. Then when you are above Kapiti Island, I asked ATC "Request heading direct to Whanganui". Never make heading changes without getting ATC approval even if they know in advance this is your intention.

The other fun bit on the flight back was past Hamilton. I was at 9,500 feet and ATC called me up to inform me that an aircraft would be passing on my nose from left to right. And sure enough I saw an AirNZ aircraft descending on my nose from left to right. They were far enough away, but I thought it was very nice service of ATC to let me know.

As I was getting closer to Auckland, ATC did ask me to change my heading for about 5 minutes as traffic was getting busy. But this is very easy to follow. They will either give you a heading to fly, or they will give you a place name to fly to.

I like flying in controlled airspace. It takes a bit of courage the first few times and you will be nervous. I typed out all the phrases I would use, how to initiate the call, what to say, and all the typical responses from ATC I could expect and I had this as reference on my knee pad. I still stumbled the first few times, but with this reference to help me, I managed to get through.

My flying instructor played a key role in helping me fly in controlled airspace. If you are interested in flying more in controlled airspace, then talk to your instructor or someone that has experience with flying in controlled airspace to help you practice what to say and what to expect from ATC on the ground to help you gain confidence.

PROJECT NEWS

Chris Wade – Sonex ZK-VDB

By Chris Wade

I hope to use the repaired cowl as a mould from ZK-WYX to form the cowl for VDB.

The intention is to use hessian reinforced plaster of Paris for the mould.

I intend to split the cowl horizontally unlike the existing cowl which is split vertically.

Fibre glass is not my forte so any advice in that regard would be most welcome.

The Damage

Start of repair

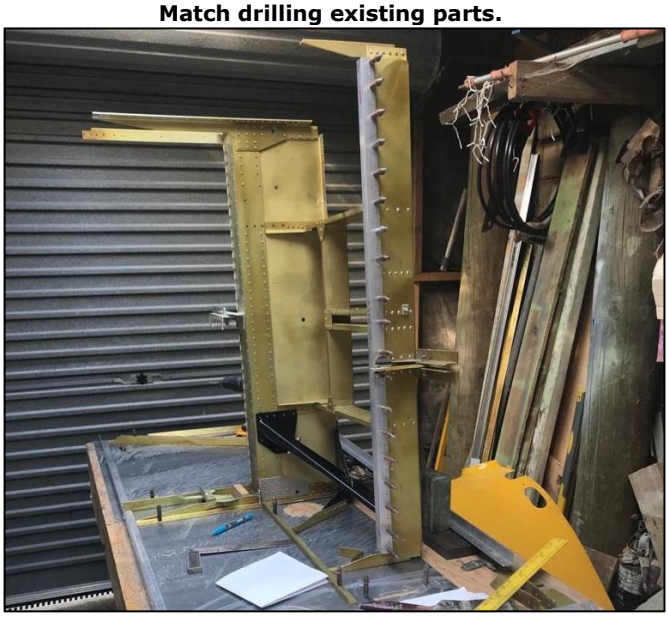
Ready for finishing.

PROJECT NEWS CONTINUED

Chris Wade – Sonex ZK-VDB

Checking set out with the existing damaged side skin.

Match drilling existing parts.



Replaced 0.032" seat angle with 1"x 1" x 1/8" angle.

Checking the bottom skin.

New engine mounts.

VDB progress is slow, having to match drill all the existing reusable parts to the new material. Many hours just checking set out.

ON THE WEB

Electric Power Unit for homebuilders

Gavin Magill

I spotted this in a Kitplanes Magazine update a couple of weeks back. Maybe of interest to some of our members.

Pipistrel to Market Its Electric Power Unit to Builders and Developers

Pipistrel is looking to enable developers and individual kit builders to use their technology. By purchasing a proven off-the-shelf power system, builders can get their projects to first flight faster and safer. Interested folks can contact Harrison Freer, Northeast U.S.A. Sales at Pipistrel, or visit pipistrel-usa.com/electric-propulsion.

https://www.kitplanes.com/pipistrel-to-market-its-electric-power-unit-to-builders-and-developers

ON THE WEB

STOL

Jon Farmer

Talk about STOL, I think he was off the ground in 3 rotations of the main wheels!

https://www.youtube.com/watch?v=VcigIk55wj4

ON THE WEB

Something to think about.

Robin Hickman

CABIN CREW ALERT QANTASLINK PILOTS TO GEAR DOWN AT 15,000FT

A QantasLink Dash 8 crew failed to retract the landing gear after take-off and only realised when a member of the cabin crew flagged the error, a report by the Australian Transport Safety Bureau (ATSB) has found.

The incident involved Bombardier DHC-8-402, VH-QOY (c/n 4288), which was operating a flight between Sydney and Albury, New South Wales on July 12 last year.

The ATSB found that both pilots were heavily focused on aircraft performance in the immediate period following lift off, which resulted in subsequent 'positive rate' and 'gear-up' calls not being made.

The Dash 8 was being operated by Qantas subsidiary Sunstate Airlines on behalf of QantasLink. Wikimedia Commons/Bidgee

Several minutes later, a second opportunity to catch the error was missed, when during the after-take-off checklist, the pilot monitoring (captain) provided the 'landing gear challenge' and the pilot flying (first officer) incorrectly called 'up, no lights' in response.

I missed the rest of the story as Key Aero has changed the rules on premium membership and I won't pay the extra. Previously your magazine sub covered it.

https://www.key.aero/article/cabin-crew-alert-qantaslink-pilots-gear-down-15000ft

14 Upcoming Events

Chapter Events

2022	
Apr 27	**Chapter Monthly Meeting** Last Thursday of the month 7.30pm at the Auckland Society of Model Engineers clubrooms, Petersen Dr, Panmure Basin
May 26	**Chapter AGM** 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	
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 $12 per person.
Every Sun	**Whangarei Flying Club Sunday Lunch** Penny burgers every Sunday $5. Contact Rusty 021 173 8942 Penny burgers are now back on!
May 15	**Central Hawkes Bay Aeroclub** **2022 Dawn Raid** **Waipukurau Airfield (NZYP)** **Sunday May 15th**  Free Breakfast Spot Landing on arrival Ph Ross Macdonald 021 262 9550

Aviation Calendar

2022	