

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

Sport Aviator

February 2016



www.saaauckland.org.nz

Committee 2016

EXECUTIVE COMMITTEE

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Secretary:	Ken Watters 09 535 2435 027 565 9596
Treasurer:	Gordon Sanders 09 534 2464 021 266 0585

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	David Campbell-Morrison 09 817 4782 021 946 078

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Safety Officer Norm Bartlett 09 528 0108 027 611 2153	Technical Library Rob Keith 09 534 3845
Tool Library Manfred Scherbius 09 298 0221 021 0813 6503	Newsletter Editor Gavin Magill 09 298 7174 027 291 0525
Catering Carl Pudney 027 430 5303	Airspace Users Group Steve Chilcott 09 376 3794 021 763 742

TECHNICAL MENTORS

Wood & Fabric	Mike Tunnicliffe	09 237 8173
Composites	Alistair McLachlan	299 2775
Metal Skin	Kevin Paulsen	296 5125
Avionics	Liviu Filimon	268 1199

FRONT PAGE

Judged Grand Champion for 2016 was the Murphy Rebel of Geoff van Asch. Nine years in the making, Geoff became known as "The Other Woman" by Geoff's friends and family.

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Next Meeting

WHEN: Thursday 25th February 2016
WHERE: Auckland Society of Model
Engineers Club Rooms
Peterson Road, Panmure Basin
Mt Wellington
SUBJECTS: SportAvex Review
Bob Hoover Video



Hi Everyone

The wild weather last Thursday caused chaos and frustration getting to Sport Avex. Friday however gave us a northern window in the early afternoon to sneak through the Napier Taupo Rd after the morning front had gone through.

Peter Armstrong picked me up from Whitianga midday and we headed south confident in our weather window. We had a great trip down with just a few bumps over the range. 80 knots on the tail had us soaring over the hills at over 200 knots. Who needs a Lancair. Peter and I were pitching our tents in high winds when our old mate Don came along and offered us to share his hotel room. Thanks Don. Good meeting John Corby (Don's aircraft designer) and Barrie over from Australia, they really enjoyed the show.

In spite of the weather effecting our Friday program I thoroughly enjoyed the weekend. Saturday and Sunday were brilliant, so many took the opportunity to make the late flight. Lots of fellowship and fun.

Special mention to the huge effort put in by Gavin and Delys throughout the weekend ensuring everything ran smoothly. Well done.

We are now looking forward to Thursday's meeting at our club rooms. David Wilkinson has arranged a great movie on Bob Hoovers exploits and we will have a debrief on Sport Avex.

Trust everyone is back working hard to get in the air this year. I'm finding that last 5% tough but will taxi within the next 2 weeks.

See you all Thursday.

Regards
Warren



Hi Everyone

Delys and I are back from SportAvex in Hastings and I have to say it was certainly a busy time for both of us.

The weather on the Thursday and Friday left much to be desired and

stopped a number of those who had registered getting through to Bridge Pa. Saturday and Sunday however turned out to be absolutely stunners and a good number of folks took the opportunity to drop in to see us for the day. Some even stayed on for the evening and Gala Dinner.

The Auckland Chapter was well represented at Hastings. Don and David Wilkinson both flew down on the Friday although I think the manner of Don's arrival in TNT gave us all a bit to think about. Don tells us he was left hanging on to the control column after his seatbelt came unbuckled during severe turbulence. Suffice to say I am just glad Don made it through ok. Also in attendance was Peter Armstrong with Warren Sly, DCM and Wags drove down as did Evan Wheeler and John King. Sandy Wilson made the trip down in Sonex ZK-JQP which was his first visit to a SportAvex and Manfred Scherbius dropped in to see me at the Registration desk as well.

It was interesting to see the range of new aircraft which have flown for the first time this year. There were two home grown aircraft designs in the form of Gavin Grimmer's Grimmer Skylux which is a purpose built glider towing aircraft. Whilst not the most handsome aircraft ever built, the Skylux is certainly functional and fit for purpose. The other design was John Hansen's Hansen Deuce. John's aircraft started life as a Bakeng Deuce but with John basically having built the aircraft twice, once as a Bakeng Deuce and then as the Hansen Deuce, he can rightly call it a new design.

It was also great to see helicopters and gyro's to the fore this year. Bruce Belfield won Best All Metal Aircraft and the Fling Wing trophy for his Bellbird 500 which is derived from the Safari Helicopters he is most well known for. Lloyd Fitzsimons Benson B8M Gyro was a classic piece of DIY

given he basically built it from a photograph.

All in all, I think a great weekend was had by everyone in attendance, including Delys and I but it would be fair to say it was a pretty stressful event for us

The mystery aircraft for January was not identified by any Chapter member, but was identified by Steve Stride (Don's mate from the UK) as the Martin XB-51. DCM thought it might be a twin jet Corby Starlet but I think the T-Tail ruled that out.



The picture above made it quite difficult to identify so I sourced a clearer photo from Google. The XB-51 was known as the "tri-jet" and was designed as a ground attack aircraft. It first flew in October 1949 but never made it to production having lost out to the English Electric Canberra which became the B-57.



Barry Gillingwater has provided the mystery aircraft again this month so have a look and if you can identify the aircraft, send me an email to let me know.

Enjoy the newsletter.

Cheers
Gavin

PROJECT UPDATE

Steve Chilcott – Menestrel ZK-TBS

By Steve Chilcott

Test flying is going well and I am getting more confidence with the aircraft. I am looking to upgrade the Aera500 GPS with a 695 if I can sort out panel space. I have found with my eyes being what they are I am struggling to see anything on the Aera, particularly if there is a bit of sun on it, and at the moment I am not finding it of any use. The backlight seems to be too dim particularly compared to the MGL EFIS.

Out of interest I found that the gascolator in the Menestrel was getting very hot so have arranged a blast tube using some 3/4" scat directly onto it and it has made a huge difference. I also directed one straight at the voltage regulators to keep them cool. I was surprised just how hot everything behind the engine baffles had got after a short flight. The two small blast tubes have made a significant difference I guess by just introducing cold air into the rear part of the engine bay and it does not seem to have affected overall engine cooling.

MEMBER NEWS

Gavin Magill – Hangar House

By Gavin Magill

The roof trusses on our house went up two weeks ago and the roof last weekend.

This week the windows arrive and hopefully also the garage and hangar doors.

With luck the house will wrapped by this coming weekend. It is coming along nicely.



PROJECT UPDATE

Chris Wade – VP2

By Chris Wade

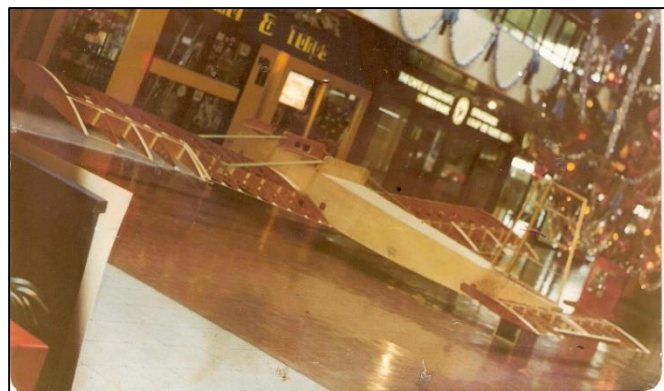
[I asked Chris Wade to send an update on his VP2 project which he is resurrecting. He still has the Waixex project to finish but is now starting on the VP2 as well - Ed]

The VP2 was started in 1971 in the front bedroom of a house I was renting in Cape Town.



It is covered in fabric now and stored in Buckland's Beach.

I used aerolite glue and will have to open things up to see how it has fared.



I have purchased the AeroVee motor from Paul Blackmore, which should get it into the air.

Regards
Chris

PROJECT UPDATE

Keith Weale (KEA) – RV12

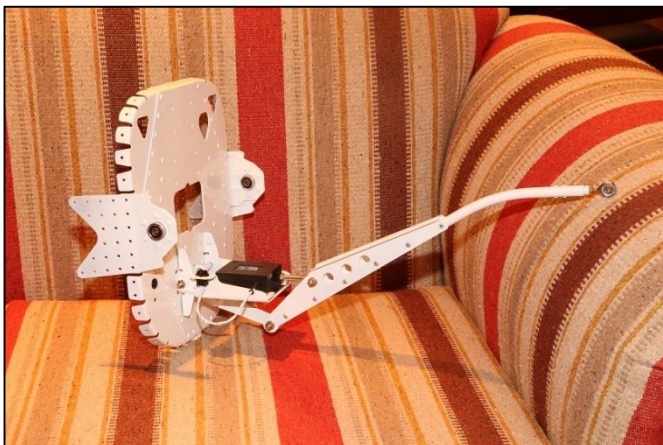
By Keith Weale

The RV-12 'wing spar woes,' as one blogger put it, are over, for me at least, with my delayed wing kit leaving the Van's Aircraft factory on Saturday.

The woes began for Van's when they decided to rout all the edges of the factory assembled wing spar components instead of leaving the edges rough in an 'as punched' state as they had previously done. This, although not an apparent structural issue, wasn't very aesthetically pleasing, especially considering all the trouble some of us go to smooth and deburr and round all other edges. The routing caused quality assurance issues with tolerances being out of spec and the process had to be rejigged. Nevertheless, Van's seems to know how to treat its customers - estimate a five to seven-week delay and delivery in four.

In the meantime, the tail cone is progressing nicely and should be finished well in time to start the wing kit when it arrives in about a month.

I finished the trial fit of the anti-servo tab trim assembly this evening - photo 2909 attached. I know there are no split pins yet - that is for Justin Case. As with all good aircraft parts, it is de rigueur that they do have to migrate into the lounge where everyone can admire them and not sit on them.



I have also added a couple of trial fit photos of the rear bulkhead and horizontal stabiliser taken a couple of weeks ago.

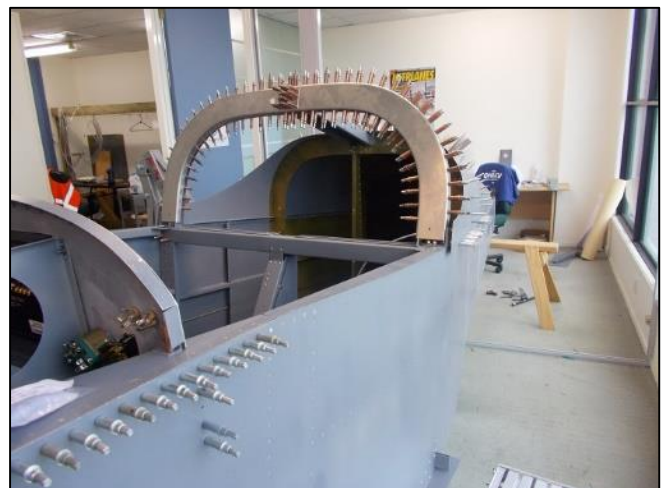


PROJECT UPDATE

Ken Watters – RV7

By Ken Watters

The replacement roll bar parts have arrived from the states and I am in the process of re-doing that bit. Apart from that no real progress.



PROJECT UPDATE

David Wilkinson – DR107

By David Wilkinson

Next TOY coming on slowly...



SAFETY NEWS

Take Your Pre-Flights Seriously

By Norm Bartlett

One of the most interesting programs on TV to my mind is "Mayday" on Prime TV - the story of airline crashes and their cause and investigation. The last one I watched was of a twin Otter flying short distances between Islands in Tahiti. It had just taken off and reached 400ft when it dived into the sea with the loss of all on board. It turns out the elevator up cable broke due to excessive wear. In 1960 after two years of trade training, my first posting was to Ohakea on 42 Squadron. We had a couple of DC3s for VIP transport and a number of Devon's for transport and multi engine conversion for Air Force pilots.

My first few days were engaged in learning the ropes of doing daily inspections and pre flights – I still to this day do pre-flight's in the same order that the Air Force required. One of the tips I learned when checking control surfaces for movement, was to use your fingertips to detect any problems in the control cables or rods. The cables and rods can transmit any problems such as frayed cables to your fingertips and I am passing on this 55-year-old lesson if you were not aware of it.

I hired a Cessna 172 as I was flying for a photographer who was taking photos of Schools around the Auckland area – quite a bit of flying and lots of turning over schools while keeping a good lookout and trying to keep the photographer happy. While doing a pre-flight on the 172 I felt a "snick" while moving the elevator in one spot. I took another aircraft and the flying school had it checked out and sure enough it was found to have a number of broken strands and severe wear on the up cable of the elevator. Other pilots must have missed this problem many times before I picked it up. I can't think of too much worse a problem than control failure especially on the elevator control. You may be able to use your trim to get some sort of control back in pitch as a last resort. Take your pre-flights seriously.

SportAvex 2016 is now behind us and although the weather leading up to the weekend made for some challenging conditions for those trying to fly in on the Thursday and Friday, many did finally get to Bridge Pa on the Saturday.

The weather and low numbers on the Friday also meant the team on the ground were kept busy adjusting the schedule for the scheduled seminars and meetings at the event.

Many thanks must go to everyone on the organising committee at Hastings who made everyone welcome and went above and beyond the call of duty to deliver a successful event under, at times, trying conditions.

Though numbers were down on previous years, we still saw in excess of 60 aircraft at the field on the Saturday. The variety of aircraft present clear evidence of just how diverse the Sport Aviation sector has become in New Zealand.

The Grand Champion for 2016 selected by the judges was Geoff van Asch's Murphy Rebel ZK-VAN. There was however plenty of competition for Geoff's aircraft as a large number of new builds have taken to the sky this year (fourteen Wings Awards were presented at the Gala dinner) and many of these were present at SportAvex.

The highlight of the weekend for me was seeing John Hansen's Hansen Deuce in the flesh. This is one very nice looking aircraft. I also thought that Bruce Belfield's Bellbird 500 helicopter was beautifully presented. Sadly, I didn't manage to get a photo of it as the paint job is amazing.

I am looking forward to next year's Great Plains fly-in and not having to manage Fly-In Registrations and Gala Dinner bookings plus cook dinner for 80 odd people (long story) as well as preparing for the AGM, the Trophy Presentations and the Wings Awards. Hopefully I will have a bit more time to visit with people and take more photos and maybe even get to do a bit of flying. Here's hoping.

Just wanted to finish by saying thanks to everyone who pitched in to help Delys and I out over the weekend. We couldn't have done it without everyone's help and it was greatly appreciated.

The following are some photos taken over the weekend until my camera battery went flat on Saturday afternoon.



John Fraser's Cavalier SA102. Started 1961, Finished 2015



Saturday morning dawned clear and calm.



The Wilkinson campsite.



John Hansen's Hansen Deuce. Stunning.



Panorama shot taken from the Aero Club balcony on Saturday afternoon. Sixty plus aircraft present. Pete Armstrong's ZK-PSA closest to fence.



Grand Champion for 2016, Geoff van Asch's Murphy Rebel.



The Richmond Racing team Sonerai's. Very nice.



David Wilkinson refuelling ZK-WLK Saturday.



Joh White's Zenith CH650 UL. Photo Peter Mole



Sandy Wilson in Sonex ZK-JQP. Photo by Peter Mole



Gavin Grimmer's - Grimmer Skylux. Purpose built glider tow plane. A 2016 Wings Award recipient. Photo Peter Mole

10 Possible Rotax Competitor By Rob Keith

I saw a reference in a magazine recently to a **D Motor LF 26** and as I had never heard of this particular engine I did a bit of an Internet search to find out more.

I found that D Motor is a Belgian Company based in Deeljk. Their manufacturing blurb describes the LF26 as a four cylinder, 2700 cc, water cooled, direct drive, fuel injected type with integrated flywheel, clutch and freewheel. Those last 2 features apply to the Helicopter version I believe.

Wikipedia had some info on it and stated that it is very over square with a bore stroke ratio of 1.295 : 1 It has a side valve drivetrain. It was designed to give max power at 2800 RPM so the designer reckoned that the extra complexity of overhead valves was superfluous.

It has a dry weight of 58 kg (128 lbs) with a power to weight ratio of 1.46 kW/kg. Coolant fluids weigh a further 5kg. It is dual ignition with the spark plugs sited between the valves and the piston crowns. It has dry sump lubrication. Quoted HP is 91.8 max at 3000rpm and 88.8 continuous at 2800rpm. Fuel consumption is 12 ltr/hr at 75% power.

Wikipedia quoted a unit cost of US \$18,500 in 2015.

The power curve is claimed to be completely linear up to 3100RPM. There was some reference to the fact that the inefficient shape of the combustion chamber could be offset by SQUISH to promote turbulence of the fuel/air mix? I didn't know what that was about but found the following explanation on the net.

"A combustion chamber design layout of grooves or channels or passages formed in the squish band to further enhance turbulence in the charge prior to ignition as compared to existing designs with squish bands or hemispherical layouts in I.C. Engines."

The D motor web site indicated it has been fitted to at least 15 different types of aircraft so far. There is also a statement that the first prototype, a 2500cc version, was fitted to a X air F in Jan 2010 so it has been around for a few years now.

They are working on a LF39 a 125hp engine.

D Motors web site (<http://www.d-motor.eu/nl/home-1.htm>) has a series of video clips of installations in some of the aircraft and of the engines in operation.

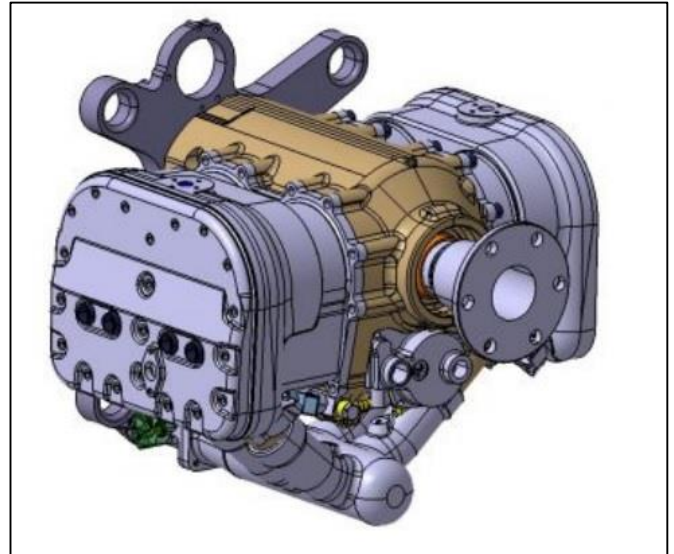
Manfred added.

I have seen this motor even before 2010 at the AERO in Friedrichshafen. And they have a 6 Cylinder now as well.

On my last trip to Germany in September 2015 I visited the German importer (only 25km from my old hometown) and saw 3 installations. It looks very good, is simple, narrow and very light. It has the same mounting plate size [as a] Jabiru, that means swap is simple. Liquid cooling takes the hassles out of designing and engineering air cooling ducts, especially with 6 cylinder engines the middle heads 3 and 4. The only drawback is that it has no built in water pump. An electric pump has to be installed. On the other hand, the new brushless motors can be easily speed controlled and mounted where they are best fitting in the cooling circuit, and not where they would be if engine driven. And electric ones can be kept on after shutdown on a timer to aid cool down.

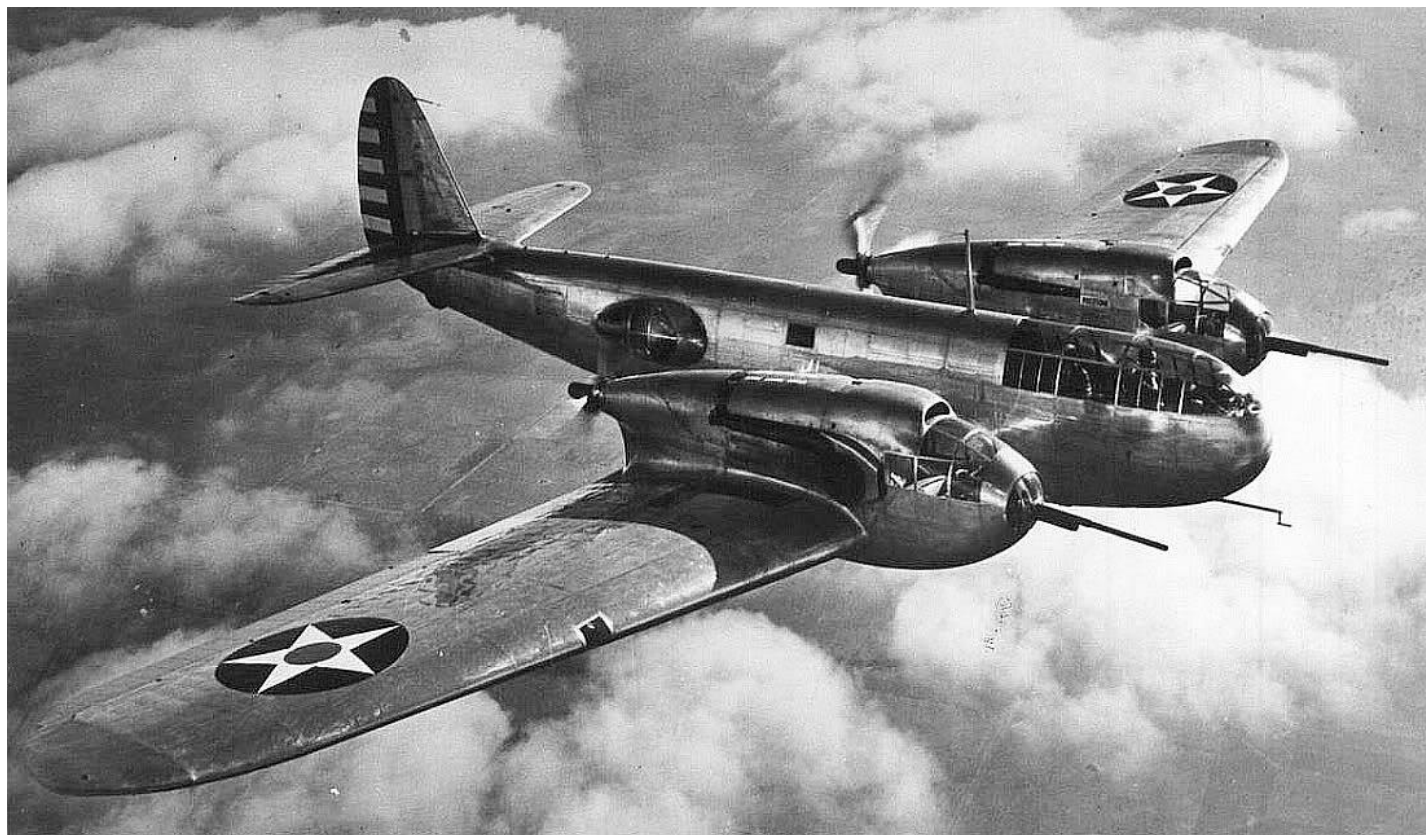
There is already an Australian importer that looks after NZ customers as well. And they seem to have sold a good number in the USA.

If we needed another engine, I would get a D-Motor. Cheers, Mannfred



11 Mystery Aircraft Quiz by Barry Gillingwater

An interesting mystery aircraft this month which should make for a few heads being scratched. Email your answer to the editor at gavin.magill@gmail.com before the next Chapter meeting and the first person to get the correct answer will earn a chocolate fish prize. Note you will need to turn up to the meeting to collect your prize.



12 In The News & On The Web

ON THE WEB

Awesome Air to Air Footage

From Gavin Magill

Spotted this on Reddit. Amazing Air to Air footage from the UK.

<http://www.boldmethod.com/blog/video/2016/02/aerial-photo-flight-mission/>



ON THE WEB

Historic Ag Flying in NZ

From Nev Hay

An interesting historical clip including how to put the chooks off the lay and adding taste to mutton!!!

https://www.youtube.com/watch?v=mINuaCsl5_c



ON THE WEB

Wing Boarding

From Gavin Magill

Possibly a sport for the future. Would take a brave soul to test this concept though.

<https://www.youtube.com/watch?v=oOc70FCUGOU>



ON THE WEB

Russian ATV

From Gavin Magill

Impressive Russian All-Terrain Vehicle

This new generation of ATV called the SHERP was developed with the objective to endure the toughest of environments, including the most distant corners of Tundra, the Siberian Taiga, the mountains of Kola Peninsula and the swamps of Yugra in Russia. This all-terrain vehicle is rough, but also very comfortable with its automatic interior heating system and easy suspension ride.

<http://www.chonday.com/Videos/rusatvw4>



Chapter Events

2016

Feb 25	Chapter Monthly Meeting Normal venue and time. 7.30 p.m. at the Auckland Society of Model Engineers clubrooms, Petersen Dr, Panmure Basin
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Aviation Calendar 2016

2016

Every Sat	Dargaville Aero Club 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.
3rd Sun Month	Turangi Aero Club Fly-In All welcome for a BBQ lunch. Contact Tony on 027-453 3740
4th Sat Month Nov & Jan to Apr	Parakai BBQ, Parakai BBQ starts at 4pm. \$5 donation. As Parakai is used for skydiving ensure you are familiar with required procedures, especially no overhead joining.
Feb 25-29	Wairarapa Balloon Festival 5 days of dawn lift-offs from various sites. Night glow on 27th. Many fun and family activities. For detail see http://www.nzballoons.co.nz/
Mar 5	Otamatea Aero Club Fly-In Ruawai Airfield, SH12, Naumi Celebrating 51 years of flying. Fly In or Drive In. All day tea, coffee and light refreshments. Lunch \$10 per head. No landing fees. (See notice next page of newsletter)
Mar 4-6	Tiger Moth Club Fly-In & AGM Dannevirke Annual summer fly-in, competitions, AGM,
Mar 16	Classics of the Sky mini Airshow Tauranga City Airport. CANCELLED. Due to a combination of reasons Classic Flyers have regretfully had to cancel this show. The first mini airshow on Jan 23rd was a great success and another is planned for 2017. More info at http://www.classicflyersnz.com/Airshow.html

Aviation Calendar 2016

2016 Continued

Mar 20	Omaka Flying Day Omaka Aviation Heritage Centre, Blenheim. Aerial and ground displays of heritage aircraft from 10am-2.30pm. Phone: 03-579 1305 Email: info@omaka.org.nz . Unfortunately, the Aviation Heritage Centre's web site at http://www.omaka.org.nz/ appears to be struggling to keep up to date. (Sod of a job – been there, done that.)
Mar 25-28	Warbirds Over Wanaka Airshow Wanaka Airport Full info at: http://www.warbirdsoverwanaka.com/
Jul 25-31	EAA AirVenture, Oshkosh 2016 Oshkosh, Wisconsin Time to start planning and saving.

Aviation Calendar 2017

2017

Apr 14-16	Classic Fighters Airshow - Omaka Omaka Airfield Includes Knights of the Sky Great War Exhibition. More info at: http://www.omaka.org.nz/ when the web site is updated ☺
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If members are aware of other events that could be of interest to others, please pass the details to Gordon Sanders - gordon@sanders.gen.nz.

OTAMATEA AERO CLUB (RUAWAI)

INCORPORATED

RUAWAI AIRFIELD

STATE HIGHWAY 12, NAUMI.

BIRTHDAY PARTY

51 YEARS OF FLYING

SATURDAY 5th MARCH 2016

FLYIN or DRIVE IN

All day tea, coffee and light refreshments.

Lunch (\$10 a head contact James)

Accommodation available (Contact Tuhi)

No landing fees.

Plenty of parking, Aircraft and off road car parking

Morning: arrivals

Lunch: 1200 to 1330

Official ceremony, cake cutting 1400

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