



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

Sport Aviator

March 2012



In This Issue:

- The Cub the Kids Built

www.saaauckland.org.nz

Committee 2012

EXECUTIVE COMMITTEE

President:	Cyril Wright 09 372 9329
Vice President:	Evan Wheeler 09 238 6081
Secretary:	Paul Blackmore 09 910 0119
Treasurer:	Bruce Turner 09 889 0780

COMMITTEE MEMBERS

Norm Bartlett 09 528 0108	Don Wilkinson 09 576 5009
Peter Armstrong 09 576 3676	Gavin Magill 09 298 7174

David Campbell-Morrison
09 817 4782

OPERATIONAL POSITIONS

Safety Officer Norm Bartlett 09 528 0108	Technical Library Sandy Wilson 09 536 4018
Tool Library Manfred Scherbius 09 375 8392	Newsletter Editor Gavin Magill 09 298 7174
Catering Chris Groves	Airspace Users Group Steve Chilcott 09 625 5273

TECHNICAL MENTORS

Wood & Fabric	Mike Tunnicliffe	09 237 8173
Composites	Phil Richards	09 826 4150
Metal Skin	Kevin Paulsen	09 296 5125

FRONT PAGE

Students from Otamatea High School, Maungaturoto stand in front of the fuselage of the replica Super Cub they helped build in August 2004.

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Next Meeting

WHEN: Thursday 29th Mar 2012 -7:15pm

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

SPEAKER: Possibly Peter Walton

SUBJECT: Cruising the Great Loop, a boat
adventure covering a chunk of the
eastern USA and a bit of Canada.
Also Cyril Wright will be bringing
the latest DVD from Oshkosh.



Hi Everyone

Thanks to Gordon Sanders, my two gas cylinders and my next door neighbour Jim's two cylinders (Jim is the man that I have been repairing the D2 with) are now in Hamilton getting tested and filled and they will be back in two weeks.

Really good service. If you take them in on a Wednesday they go down on the Thursday and come back the following week. Unfortunately I took them in on Thursday so that's why the wait. They will cost about \$185.00 for the pair.

For welding gas supplies and cylinder testing the vendor is Supagas Ltd, 141 Roscommon Rd, Wiri. Tel 278 0145.

This last few weeks, in mid week, I have been doing an hour of flying when it hasn't been raining. I landed in the wet the other day in the rain and experienced aquaplaning. Pleased I had an instructor on board to talk me through it.

With all this rain my grass strip is growing well and when I mowed it I found that the drainage is working fine and it's good and firm. Looking forward to landing on it in the near future.

Hope all your projects are working out and if you have wanted to fly, I hope you found a fine day.

All the best

Cyril



March is traditionally the first month of Autumn and the weather has certainly taken on a very Autumnal feel. With the less than pleasant summer (to say the least) we can only hope

for a late Indian summer but I don't think I am going to hold my breath waiting. :-)

Last month's guest speaker at the Chapter meeting was Paul Morrison from Otamatea High School. Paul gave a very well received talk on how he managed to raise the necessary investment to enable the technology class at Otamatea High School to build a Piper Cub replica. Paul is a great example of how aviation technology can be introduced at a grass roots level to high school students and leaves me wondering how we could leverage what he has done and try to convince other schools to do similar.

Paul Morrison has kindly provided a write up of his presentation which is included in this month's newsletter.

Also at last month's meeting, Evan Wheeler covered off the agenda items from the SAANZ National Executive Meeting. The two main items of discussion were firstly the investigation to integrate SAANZ and Chapter subscriptions into a single payment so members aren't paying to join two separate organisations.

Secondly the exec is looking into the continued involvement of SAA with the Tauranga airshow and the hosting of the biennial SportAvex event at this show. Evan has asked for feedback before the next Chapter meeting to take to the exec meeting so if you have not already done so please drop Evan a line as to your thoughts and ideas for the future.

March has been quite a busy month for aviation events around the region. There have been a number of airshows, open days and fly-ins. Unfortunately the weather has impacted a number of these. The events that come to mind include the Northern Chapter Air Rally at Dargaville, the Matamata Air Carnival and the Whitianga T51 Fly-in.

Unfortunately I haven't managed to get along to any of these events however I will be attending the Ohakea airshow at the end of the month and will also be attending Warbirds over Wanaka this year as well. Having never been to a WOW I am really looking forward to this event.

In other news our Chapter Metal Skin mentor, Kevin Paulsen, tied the knot over the weekend of 24th – 25th March. Kevin has been busy remodelling his hangar at Ardmore to include living quarters for himself and his new wife. Congratulations Kevin. Welcome to married life.

For those members who own Aerovee VW conversions, a service bulletin was issued during the month which you need to be aware of. ACV-SB-031312-A (http://www.aeroconversions.com/support/aerovee_sb.html) requires all Aerovee engines purchased before 1 Jan 2012 to be checked to ensure the four cap screws securing the Alternator Stator to the Alternator Mount Plate are the correct length (5/8"). Both Sonex JQP and Steve Chilcott's Jodel were found to have incorrect screws and are currently grounded pending replacement.

There is plenty of other news in the newsletter so I hope you enjoy the read.

Cheers
Gavin

MEMBER NEWS

RV-12 Update

By Alan Coubray

Alan reports he has now completed the test flying hours for his RV-12 ZK-YRV. He just needs to complete the paperwork to get the full Certificate of Airworthiness issued.

Alan says he has also had to replace the rear windscreen of YRV as the poly carbonate plastic cracked along the line of screws securing it to the airframe. He made arrangements to use the rear wind shield of the RV-12 being assembled by students at Whitianga High as a template. He made a temporary repair using high speed tape and flew over to Whitianga where he cut and fitted a new windshield. YRV is now fully repaired and serviceable although Alan says the paint job around the rear windscreen is somewhat slightly worse for wear.

MEMBER NEWS

Lighthouse Keeper Don

By Don Wilkinson

Had a great week with my Corby mate Gary Montagu during the week 12 - 16 March. Gary is a highly skilled electrician and technician. He has contracts to service and repair coastal light houses in NZ and other places around the world including Panama Canal and even Africa.

I got a call "Would you like to get a plane to Dunedin tomorrow. I am leaving for 5 or 6 days in Fiordland." (I was at the Chateau Tongario at the time.) I was on the next plane to DN.

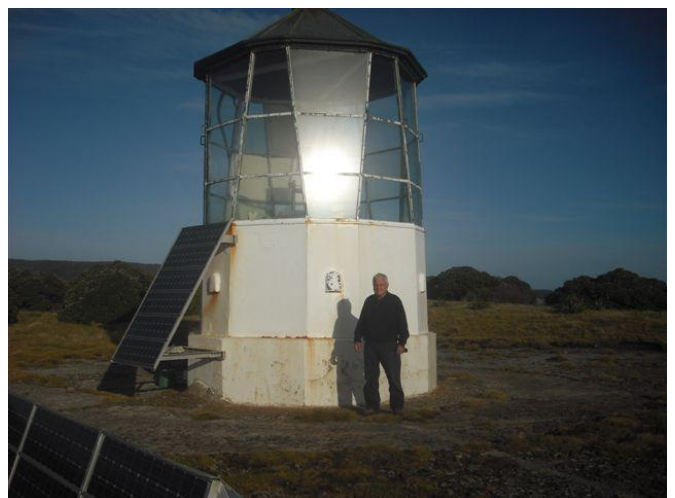
We left Manapouri in a Squirrel B2 on 13 March in perfect conditions, nil wind, clear skies with 20 deg C, and flew across the incredible landscape of Doubtful Sound.



First stop, Secretary Island and one and a half hours to service that light.



Then on to Five Fingers, Cape Providence and Puysegur Point where we stayed at the light station hut



We were there for 3 days measuring voltage charge rates, replacing bulbs, removing and re-sealing windows, replacing the lightning rod on the top and painting the outside (my job).

6 Chapter News Continued

We lived off beef on rice, Thai chicken on rice, canned "anything" on rice and red wine from a card board box in beer glasses. 1.2 star accommodation but great fun. The only thing we took off to get into our sleeping bags was wet boots.

Gary had every thing needed, battery powered drills, grinder, hammer drills, skill saw, nibbler saw and even a satellite dish and TV receiver which we bolted down as a priority after arriving.

Satellite phone was the only contact and yes I rang my wife on her birthday. Told her it was "\$40 a minute but OK you're worth it Honey". (It was US\$1.76 but don't spoil the story). \$40 per minute was the chopper price.

We got a real stormy night on the 14th, the night of the Foveaux Strait tragedy. It was bad, we had to abandon all work as it got too dangerous. Next day was clear and calm.



After Puysegur the chopper returned and we set off for Long Point light and then back to Manapouri.

Great trip, great company, great scenery and great adventure. I am putting a slide show with the videos to show at a future meeting. Sadly Brenda does not think the housekeeping could be stretched to a Squirrel. Great machine but she was not impressed.

Cheers

Lighthouse Keeper Don

MEMBER NEWS

David Rose's BD-5 Moves To Tauranga

By Jon Farmer

Last Sunday, David Rose and I loaded his BD5 pocket rocket into my covered microlight trailer and set off to Tauranga to show it to an interested potential purchaser.

Conditions of sale were a bit one sided – the aircraft had to be delivered to Tauranga, the engine must run and the thrust must equal that of the BD5 they already have, the engine temperatures must stabilise at or below temperatures in their BD5 and, as if all that was not enough, the aircraft had to fly !!!

Anyway, the trip was uneventful, we called in to Matamata but there were only a few gliding types looking hopefully at the puffy clouds so we proceeded on to Tauranga Airport.

The hanger, shared by a consortium of Air New Zealand Captains, was magnificent. The walls were 'tilt slab' and the 10-12m high roof had around 25% clear light panels as did the tilt up doors. For night use, there were 8 or so mercury flood lights which I was told lit the place up like day. At one end of the hanger was a mezzanine floor containing a complete apartment where one of the Captains lived.

The aircraft contained in the hanger were very interesting - dominating them all was a 'Seawind', probably the second one John Boreman built. Looking hopefully out of the hanger door was a KR2 and on the other side, not so hopeful, was a 'Cozy'. On it's last flight the Cozy's canopy had opened like a huge air brake and caused it to make a rather solid return to Earth. Ironically, the canopy that had caused the crash was undamaged as the gas struts had held it but the nose and main gear, also the propeller, were a bit 'munted' - bulk strip required of course.

7 Chapter News Continued

In between, the resident BD5 looked like a toy beside the Seawind. Over to one side was the 'Velocity' type canard, with a jet engine that was capable of proceeding upwards at over 3000 ft/min if only it had enough fuel.

Over the other side, hiding under a cover, was a 'Quickie' - you know, the canard taildragger that has a wheel track the same as the wingspan because the wheels form part of the wing tips.

What really attracted the attention of David and myself was a jet engine in a transit case about 1.5m long by 0.8 square which was designed to produce smoke when waste oil was fed into it's output nozzle and designed to protect infantry troops. I can't remember the thrust this jet was supposed to produce but the 'hanger syndicate' had the long term aim of fitting it in a BD5.

Nearby under a cover, was a 'hot' car engine that had caused a 6 blade Ivo Magnum propeller to cavitate when fitted on the Velocity.

Interesting things could be found in various corners of the hanger like 'hot' motorbikes, dive gear, large, curved water skis and sundry aircraft parts.

David and I assembled the BD5 complete with the very expensive machined aluminium spar stiffeners that were a 'mod' and left the aircraft, more or less, ready for a pre-flight.

We have since heard that they have run the engine and found the engine compartment temperatures too high. And so!! Watch this space.

An uneventful trip back to Ardmore with the empty trailer completed an eventful and interesting day.

MEMBER NEWS

Craig Thomas' Rans Moving to Ardmore

From Bruce Turner

Below is an excerpt from an email Bruce Turner received from Craig Thomas. Bruce was letting Craig know about the recent move of Sonex JQP to Ardmore.

"Hi Bruce.....

I too will shift my Rans to Ardmore soon to Peter Fahey's hanger.

It's not the same at Te Kowhai now that Max and Maxine are not there.

Great you are in Whitianga, I was there at Xmas, great spot, will fly in some time for a coffee....

Best Regards

Craig"

CHAPTER NEWS

Overdue Chapter Subscriptions

From Bruce Turner

Bruce Turner reports that there are still quite a number of annual Auckland Chapter subscriptions outstanding.

He has sent out reminders to Chapter members so if you have not received a reminder can you please get in contact with Bruce (bruce@hta.co.nz) to make sure you are on the subscription list and to make payment if you have not already done so.

The Chapter relies on its subscriptions as our primary source of income. Without your support it makes it difficult to maintain the viability of the organisation. Bruce would appreciate receiving your payment as soon as possible.

MEMBER NEWS

Aerovee Issues Service Bulletin

From Gavin Magill

Owners of aircraft which have AeroVee engines installed need to be aware of a mandatory service bulletin issued on March 13 for all AeroVee engines purchased prior to 01 Jan 2012. The SB (ACV-SB-031312-A) can be found at (http://www.aeroconversions.com/supp/ort/aerovee_sb.html).

The Service Bulletin calls for the immediate inspection of the cap screws which secure the Alternator Stator to the Alternator Plate to check that the length of the threaded portion of the screws is 5/8" and not 1/2".

Steve Chilcott's Jodel D18 (ZK-SCJ) and the syndicate owned Sonex (ZK-JQP) were both found to have the shorter screws and are presently grounded awaiting installation of the longer screws.

Steve Chilcott ordered five sets of screws from Sonex in the United States for his plane, ZK-JQP and Paul Blackmore's Sonex. Contact Steve if you want one of the other sets. Sonex Aircraft will provide replacement screws free of charge however I believe you may need to pay for shipping to get them here.

Below is a picture of the alternator plate from Sonex ZK-JQP and the four cap screws securing the Alternator Stator can be seen in the centre.



Steve has also provided the following tips for removing the alternator plate to check the screws.

1. Disconnect battery
2. Remove starter motor.
3. Remove/disconnect the two leads that go from the ignition triggers to the switches. Do not remove the screws from both sides of the triggers as you will lose the timing.
4. Undo the 6 screws holding the alternator plate in place.
5. The magnets hold it in place firmly so you need to lift it off as best you can and slip a screwdriver underneath it to help get it off.
6. You should be able to rotate the alt. plate around and above the engine to check the screws with the wires still in place depending how it has been arranged.

MEMBER NEWS

Sonex Build Continues Apace

From Paul Blackmore

Paul Blackmore reports his Sonex build is progressing well with work on the final structural component, the left wing nearing completion.

All that remains is installation of the pitot and associated tubing, final attachment of the leading edge and riveting.

Following completion of the wing, work will commence on assembling, rigging and fitting out.



MEMBER NEWS

Super Pelican

From Jon Farmer

The other weekend when I arrived in David Rose's hangar to work on Sonex JQP I noted that the BD-5 that had been living at the back of the hangar had been replaced by a type of aircraft I was not familiar with. It turns out the aircraft was a Super Pelican and belonged to Jon Farmer. He provided the following background for the newsletter. Ed



The 'Super Pelican' microlight was way ahead of the tube and wire types when it came out some 25 years ago.

Firstly, it had a fuselage that the pilot sat inside and looked through a windscreen, controlling flight with a stick, rudder pedals, ailerons and elevator.

The engine was a half VW four stroke - the only four stroke on any microlight in NZ at that time, as far as I know - also the decent 600 x 6 wheels had toe brakes.

Wings had a 'D cell' leading edge of foam ribs and aluminium skin and airfoil section which was covered in Stits fabric, heat shrunk and doped.

The 35 hp 'Global' half VW engine had a purpose cast and machined crankcase with VW pots and Scat heads.

However, consider two opposed pistons coming towards BDC together and

displacing 1.2 litres of air in the crankcase, next 1/50th of a second they are at TDC and sucking 1.2 litres of air into the crankcase.

The net result of this 'suck and blow' was that a fair amount of oil was blown out of the crankcase breather.

Fitting a non return valve in the crankcase breather made matters worse as the hot oil foamed in the partial vacuum and the oil pump cavitated.

In the end, I fitted the present engine which is a 43 hp Rotax 508 - the only one in NZ that I know of. It is a four stroke of around 500cc and develops full power at 8,000 rpm turning the prop via a 3:1 gearbox.

This engine was originally developed by Rotax for a failed International (Germany, Italy and UK) motorbike project.

The Super Pelican took three months and 3,000 pop rivets to build but the trailer took 6 months and 6,000 rivets.



However, I have been very glad of it at various fly-ins as it is fitted with a bunk and folding table, doors and windows - much more comfortable than a tent.

SportAvex 2012

Norm Bartlett spoke about SportAvex saying he had contacted Bill Sisley to find out the financial results of the SportAvex / Tauranga airshow and Bill reported the airshow had run at a loss.

Norm reported the weather on the Saturday was good and attendance at the Saturday airshow was as good as if not possibly better than the Sunday when the weather was very windy.

Norm reported that a number of SAA members had performed in the airshow and those that participated enjoyed themselves. Don and David Wilkinson's Corby Starlet demonstration was received very well

The Auckland Chapters contributions were well received. Norm organized the SAA flying displays at the airshow and also assisted with the commentary. Neville Hay had the job of chief judge.

The SAANZ AGM was also held at SportAvex on the Friday and the issue was raised about the continued participation of SAA in the Tauranga Airshow. Future participation at Tauranga will now depend on input from SAA members and the continued financial viability of the Tauranga show.

Norm noted that if members choose to move to an independent event they should be aware that airshows rely on a considerable effort by volunteers from the hosting Chapters and that volunteers are typically only available for 1-2 years before they tire of the commitment.

He also mentioned that compliance costs, insurance and health and safety requirements have made it prohibitively expensive and very difficult to present large scale airshows. SAA members will need to keep this in mind when suggesting that the SAA run its own event.

National Executive Meeting

Evan Wheeler has been elected to the National Executive of SAANZ and reported on the results of the first meeting of the executive. Following on from the SAANZ AGM at SportAvex the executive has been tasked with two main agenda items.

The first is looking into finding a solution to the current situation whereby SAANZ and SAA Chapter memberships are separate. A sub committee has been tasked with identifying options to enable a single membership model whereby members only join once and pay one sub which funds the National body and individual chapters. Evan noted that the Chapter funding would likely not cover costs of hiring facilities for meetings so some mechanism would still be required for Chapters to raise funds through subscriptions themselves.

The second main issue is the continued involvement of the SAA in, and the hosting of, the SAA SportAvex event at the Tauranga Airshow. The executive has been tasked with investigating the SAA's continued involvement with the Tauranga event and whether the SAA looks at going to another venue.

Evan noted that the main purpose of the SAA annual event is for the SAA to hold its AGM, to host competitions and judging of aircraft and also (and most importantly) to provide an event where SAA members can meet other Chapter members and present their aircraft to the public.

Evan said that the SAA executive is requesting feedback from the membership as to the future direction of the SAA annual gathering, where it should be held, how it should be run.

He noted that if SportAvex continues at Tauranga there is a likelihood that the SAA aircraft display would go back to the Museum Lane as it was 4 years ago.

11 Last Meeting Summary Cont.

National Executive Meeting Cont.

Evan has asked for members to please provide feedback to himself before the next Auckland Chapter monthly meeting so he can take this feedback to the executive committee.

Don Wilkinson then spoke to the meeting with the following comments on the history of why the SAA National event had ended up at single locations in the North and South Islands.

He noted the original approach saw alternate chapters host the annual fly-in. This was an excellent model for those flying into and participating but horrendous for organisers. Each event was a prototype and no knowledge was carried forward from event to event. Organisers were always shattered after event.

A decision was made to host a central event at Paraparaumu. An airshow was organised and despite good weather the event ran at a loss (\$40K). Don and Bill Sisley loaned money to the SAA to cover the debt and keep the organisation viable.

The event then moved to Matamata which was great for camaraderie but not so good for exposure to public. Don commented that he did not think SAA should go back to the regional airshow model due to the financial risk involved

He also noted that considerable voluntary assistance and sponsorship is required to run an airshow.

Don suggested SAA coordinate with and join in other organisations air rally's. He also suggested becoming more closely aligned with and/or joining with the AOPA organisation to participate in their events. He closed saying we should endeavour to keep away from the politics of running our own events and avoid losing money at all costs.

Other member comments included;

Running an airshow is like running a business but just for one day.

Tasks like traffic management can no longer be undertaken by volunteers but must be done professionally to meet OSH requirements which results in significant cost.

Advertising is a large part of the budget and can run to thousands of dollars.

A comment was made that the best site for the SAA display thus far at Tauranga was at SportAvex four years ago in Museum Lane. The hangar secured for the SAA display in 2008 was also well placed.

Alistair McLachlan made the following comments.

Air traffic control at airshows like Tauranga makes it very hard for sport flyers like the SAA to fly in and out due to airfield restrictions.

He indicated he would rather fly to smaller fly-ins than a large airshow like Tauranga and would rather drive to an event like Tauranga.

He noted that involvement with the flying program at large scale airshows also restricted or prevented involvement with away days and seminars.

Evan Wheeler wrapped up the discussion asking for input from members before the next meeting so he can take it back to the national executive.

SportAvex 2013

Evan noted that SportAvex 2013 will be at Ashburton and that it would be on the weekend following Waitangi day.

Waitangi day falls on a Wednesday next year and he suggested members might like to take leave and make the trip down on the three days following Waitangi day to give time to get to Ashburton.

12 Last Meeting Summary Cont.

AOPA Summer Safari

Evan then gave a brief summary of the AOPA Summer Safari event which he and Alistair McLachlan had participated in which was on at the same time as the SportAvex event in Tauranga. The stats for the event were;

- 35 aircraft involved
- about 100 people
- 34 airstrips visited around the top half of the South Island including Lake Albury (where they were hosted by the local religious group), Greymouth, Arthurs Pass, Lake Hood, Cape Campbell Lighthouse, Greville Strip on Duval Island (where the approach was to fly over the sand dunes and turn 90 degrees onto final to land), Seddon (where AOPA had organised for a road to be closed so the safari aircraft could land) and Lake Akarita.

RNZAF 75th Anniversary Airshow

Evan then spoke about the upcoming RNZAF 75th Anniversary airshow on the 31st March. He noted that the RNZAF has invited pilots to fly-in to the event but that they must register at the site listed in AIP Supplement or they will not be permitted to land. There will be five Air Forces present including F18's from the RAAF.

TVAL Airshow, Masterton

Don Wilkinson then spoke about a recent trip he and some others had made to Hood Aerodrome in Masterton to attend a TVAL airshow. Don said they flew down in the Corby's and an RV 7 and flew home the day after airshow in somewhat rough weather. They stayed in a small shack beside the aero club rooms for \$20. The aeroclub has a pool beside the clubhouse and bar facilities in the clubhouse. They were close enough to walk into Masterton to buy food. Don recommended that anyone interested in attending one of the regular airshows at Masterton should make the effort as it was well worth it.

Whitianga Open Day March 18th

Brian Wigley spoke about the open day at Whitianga being planned for 18th March. This will be a warbirds day and will be a fill in for the Festival of Speed which is no longer happening.

SAA Maintenance Course

Evan Wheeler and Alistair McLachlan then spoke about the Maintenance Course to be held at Tauranga that was mentioned in the newsletter.

Twelve members from TG had indicated they wanted to attend but only 2 actually booked.

A total of seven people are currently booked on the course.

ASL providing the exam at the end of the course.

Normally ASL would not run an exam for under 10 people due to expense of providing facility.

Alistair noted this course is expensive to put on and that it incurs printing costs for 3000 pages of documentation

The course is aimed at teaching members what is involved with servicing their own aircraft.

Guest Speaker

With no more general business, Evan Wheeler asked Don Wilkinson to introduce the evening's speaker. The speaker for the evening was Paul Morrison who is Head of Technology at Otamatea High.

Paul's talk described the program he ran at Otamatea high school from 2002 through 2006 in which senior students began construction of a replica Piper Cub aircraft and the subsequent work to finish the project after Paul left the school in 2006 till 2011 when the aircraft flew.

(For further reading on this project see the article later in this newsletter.)

The talk ended and the meeting was closed at 2110hrs.

13 Chapter Projects & Aircraft Lists

Chapter Projects

Make/Model	Rego	Member	Status
Auster J5F	BDY	Les Wilson	Restoring
Bede BD5	ZIP	David Rose	For Sale
Cessna 150L		Craig Thomas	Repairing
DeHavilland DH-83C	AQB	John Eaton	Restoring
Europa XS Tri-gear	ROB	Rob Waters	Building
Fisher R80 Tiger Moth	CCC	Jon Farmer	Rebuild
Jack Thompson 1		Kevin Moir	Building
Lancair 235		Rod Sullivan	Building
Menestrel HN-700		Steve Chilcott	Building
Osprey 2 Amphibian	XRT	Richard Thompson	Restoring
Pietenpol Aircamper		Mike Tunnicliffe	Building
Pitts S1-SS	MPH	Stuart Mackereth	Building
Rand KR-2	CCK	Walter Reinauer	Repairing
Rand KR2S		Gavin Magill	Building
Rearwin Sportster(37)	ALX	Tony Payne	Rebuild
Rutan Long Ez		Wayne Cunningham	Building
Sonex Tri Gear	PDB	Paul Blackmore	Building
Taylor Monoplane		Kevin Moir	Building
Taylor Coot Amphibian	JST	Peter Hall	Rebuild
Titan T51 Mustang		Gary Mitchell	Building
Titan T51 Mustang	FDL	Warren Sly	Building
Van's RV-4		David Grove-Hills	Building
Van's RV-6		Ian Chapman	Building
Waixex		Bruce Turner & Chris Wade	Building

Other Projects

Make/Model	Rego	Member	Status
Nexus Mustang	NEX	Stuart Wards	Plans
Rand KR2S		Karl Pudney	Plans
Pazmany PL2		Frank Ciochetto	Stored
Helicycle		Allan Cameron	Unknown
Murphy Rebel		Eric Breetvelt	Unknown
Safari Helicopter		Dick Ussher	Unknown
Wittman W-10	RET	Cliff Bellingham	Active

Updates

If Chapter members are aware of any changes to or aircraft missing from the lists on this page please forward an update email to the editor at gavin.magill@gmail.com

Chapter Aircraft

Make/Model	Rego	Member
Aerosport Kahu Gyroplane	RCP	Chris Wade
Aircam	SUN	Cyril Wright
Airtrainer CT4 (Syndicate)	DGY	Norm Bartlett
ATEC Zephyr 2000S	ZFY	Kevin Hartley
Avid	PCM	Graham Smith
Bolkow Junior BO 208	CJF	Keith Trillo
Brantley B2B	INK	Nick Koreneff
Cessna 172	DKH	David Horton
Cessna 172D	CCI	Graeme Weck
Cessna C182	WKK	Brian Wigley
CFM Shadow C2	FSG	John Granger
Corby Starlet	TOY	David & Don Wilkinson
Corby Starlet CJI	TNT	Alfred Hirzel
CRICRI Cricket MC15	LBW	Neville Hay
Druine Turbulent D31	CFY	Kevin Paulsen
DynAero MCR 4S	PSA	Peter Armstrong
Europa XS	EPA	Gavin Lee
Falco F8L	SMR	George Richards
Falcomposite Furio LN27RG	LLG	Giovani Nustrini
Fisher Dakota Hawk	SOL	Gary Mitchell
Grumman AA-IC Lynx	EFV	Brian Wigley
Grumman Cheetah AA-5A	ERJ	Chris Watkins
Isaacs Fury II	JHR	Rex Carswell
Jabiru J200	CHW	Chris Watkins
Jodel D18	OWL	Mike Tunnicliffe
Jodel D18	SCJ	Stephen Chilcott
Lancair 360	MHS	Norm Bartlett
Micro Aviation Bantam B20	XIE	Bob Syron
Mike Whitaker MW6S	MWS	Grant Sandiford
Morgan Aero Works Cheetah	CCB	Jon Farmer
Murphy Rebel	DKZ	David Horton
Murphy Rebel	WEM	Evan Wheeler
Murphy Rebel	WEC	Graeme Weck
Petrel Amphibian	JAQ	John Eaton
Piper Cherokee Archer I	DQX	Leo Johns
Piper PA38 112 Tomahawk	VBM	John Eaton
Piper Pacer PA-22/20	PAT	David Wilkinson
Pitts S12	PTS	John Eaton
Pitts	MPM	Paul McGruer
Ragwing Special	MIK	Bob Syron
Rans S6ES Coyote II	TNA	John Struthers
Rans Sacota S10	CLT	Craig Thomas
Safari Helicopter	IJE	John Eaton
Sequoia Falco F8L	TBD	Giovani Nustrini
Socata Tobago TB10	JIE	Stuart Wards
Sonex (Syndicate)	JQP	Paul B, Sandy W, Bruce T, Chris W, Gavin M
Taylor Monoplane	CRS	David Grove-Hills
Thorp S-18T	MBY	Mike Boyles
Titan T51 Mustang	WSV	Peter Walton
TL2000 Carbonsting	PLR	Phil Richards
Ultravia Super Pelican	JDI	Jon Farmer
Van's RV-6	PRV	Kevin Paulsen
Van's RV-7A	MIS	Dave Cogan
Van's RV-9A	RVY	Peter Whyte
Van's RV-12	YRV	Alan Coubray
Zenair CH 601 B	ZXZ	David Rose
Zenair CH601	JFN	Peter Herrick

FEATURE ARTICLE

The Cub the Kids Built

By Paul Morrison

At the start of 2002, I asked eight students in Year 11 (Form 5) if they would like to join a new activity group for the next three years. All said, "Yes" even without knowing what it was they were entering into.

I am Paul Morrison, and at that time was the Head of Technology at Otamatea High School, Maungaturoto and so started a journey that was to span the next ten years and has given me the greatest sense of achievement in the whole of my teaching career.

I had purchased a set of plans from the USA for a replica Super Cub. The plans left much to the imagination of the builder with very large gaps in what information was supplied.

A start was made in March of 2002, and the LMA Aviation Group was formed.

For the next three years the group met on a Wednesday afternoons and worked on the construction of the wings, fuselage and tail group.



This took place in a very small room attached to the engineering workshop.

Starting at 1.00 pm and working until 3.30 pm each week, progress was steady with the unquestionable shape of the classic lines of a Cub taking shape.

Every part of the aircraft had to be crafted by the students, from the seat, on loan to copy from Southair, Dunedin, to the complete undercarriage built from 4130 off the Wag-aero plans. The sides of the fuselage were laid up on the full size plans on purpose built tables.



After three years, the original group moved on from the High School and all were gainfully employed or went onto higher education at the Universities around New Zealand.



The next group of students joined the Programme and continued with the covering, and fitting out.

In 2006 I resigned from full time teaching and the project was moved to my home in Mangawhai. Every Wednesday afternoon, the students would arrive and the work continued.

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The wings were finished and the trial fitting took place to ensure all systems were functioning.



Fuel tanks were made and fitted, along with many other parts.

To get the leading edge ply to fit perfectly, the ply was steam formed



...and left to dry on the wings, held in place with rubber bands.



It was so easy to glue them into position after they had dried.

I took three of the students to Flightline Aviation at Ardmore, and together we zero timed the C-85-12 engine.



The day came to ground run the engine for the first time, and it started first swing of the prop. Smiles all round.

Fitting out continued with what seemed like hundreds of small jobs to do. Finally, it was down to a half page of items, which could only be done with the wings on, and at an airfield outside the hanger door.

The completed aircraft was transported to Springhill Airfield, Wellsford, and the final assembly took place.

A couple of taxi trials and Tony Schiscka from CAA arrived.



After a full inspection a certificate was issued for a Class 2 Microlight.

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The test flight was carried out on the 4th of September 2011 and what an exciting time that was.



There were only three things that required attention.

The first was a change of propeller as the wooden one I had made was too course. I imported an aluminium one from the USA and what a difference it made.

The tail plane was adjusted to a full 4 degrees of incident and that allowed me to fly hands off, 87 mph at 2350 rpm.

The only other change was fitting of a replacement ASI that now reads as low as 20 mph.



On the 3rd of December, the official "Wheel Out Day" took place at Springhill with over 40 people attending.

Many of the original students from the 2002 class travelled from around the country to attend.



Rex Kenny, CAA, flew from Wellington to attend and spoke to the crowd of the achievement of the students involved.



The day proved to be very successful with the Cub taking centre stage and a demonstration flight undertaken.



The day was also the official launch of the new Otamatea Aviation Academy.

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The start of the 2012-year has seen the completion of a new dedicated building on the school grounds and the start of an exciting new aircraft build project.

This is the CA-18 Cubflyer, PT-002 , all wood, full size replica of the PA-18, powered with an O-200. It will also be a Class 2 Microlight.

Designed and drawn by Malcolm Savill of Hamilton, the Aviation Academy's aircraft is the second one to be started in New Zealand. The first, being built by Malcolm, is very close to being completed.

The Academy has twelve students and is operating for a full day each week for the next three years.

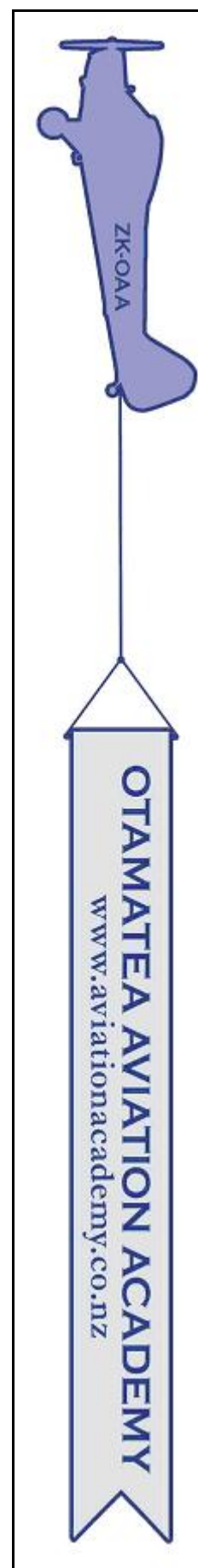
It is proposed to start a second intake of students in two years time with an overlap of twelve months. The next Cubflyer will be built over the next three years.

The students were chosen for their attitude and were subjected to a rigorous interview and from the twenty-six that applied, only twelve were selected. The level of excitement is very high and the support of family, friends and friend in Industry is amazing.

The aim of the Academy is to develop the students into the most sought after young people when it comes time to apply for their first employment. Past projects of a similar nature have proven this to be the case.

I personally, am deeply satisfied with the progress to date, both with the development of the Academy Programme and the direction it is taking. I look forward to another successful test flight in just under three years.

Paul Morrison
Director
Otamatea Aviation Academy
southwind@pl.net



INTERESTING EMAIL

The Bone Yard

From John Struthers

Probably nothing to do with the club mag but interesting to see and to think there is all the rumpus about the NZ Air Force fighters in payable storage. John Struthers

The Bone Yard near Davis Monthan Air Force Base - Tucson, Arizona USA. Remember - Each one of these babies had a multi-million dollar price tag!



For those of you that have never seen this, it is something to see. The precision in the way they are parked is impressive. It's difficult to comprehend the size of the 'Bone yard' and the number of aircraft stored there. Of course the important thing to remember is that they are all capable of being returned to service if the need ever arises.



If you are ever in the Tucson area, the weekly tours of the bone yard are still given through the Tucson Air Museum, located just south of Davis Monthan AFB.

ON THE WEB

Aluminum Overcast

From Bob Keith

Very detailed photo expose with explanations for each photo. Has note on 'compensated' gunsights for the waist guns - I had never heard of them before viewing these photos.

http://home.comcast.net/~szie1a/Al_overcast/Al_overcast.html



IN THE NEWS

Mossie News

From Bob Keith

I read a five page article in the March 2012 copy of Aeroplane recently about Glyn Powell and the Mosquito "factory" at Drury.

It was quite in depth with plenty of photos including one of the original fuselage lying derelict in an orchard. Glyn is apparently keen to see a completed "Mossie" flying in the UK possibly with the Battle of Britain Memorial Flight. It could happen as the magazine editorial states that Steve Burt of Action Station's (a company that provides flights in a helicopter escorted by a Hurricane or Spitfire) is prepared to put together a business case for such a venture using a Mosquito as escort.

The article did also provide another piece of information that Avspec's has received another Mosquito project from the Flying Heritage Centre, Paine Field, Seattle. That airframe could be the recipient of the Mosquito wing that Avspec's have been quietly working on for some time.

IN THE NEWS

Mossie News Continued

From Bob Keith

Not sure that Glyn would appreciate someone else manufacturing Mosquito airframe parts even if it is just the wing at this stage, perhaps someone in the "know" could comment on that.

Aeroplane Monthly is a good magazine to find out what aircraft are being restored around the world although a bit expensive at \$23 a copy from a bookshop.

ON THE WEB

Edwards Open Day 2009

From Gordon Sanders

There are a lot of cool aircraft, and sound bites, at this link. All from Edwards AFB open day 2009. From a home-builders viewpoint one of the most interesting was an aircraft I was previously unaware of, the Lockheed YO-3, which is apparently inaudible if it flies by at 1,000 ft. Now there is a target for getting things quiet, and it's Viet War technology using an O-360, not new electric power!



Thought the link could be interesting for the newsletter.

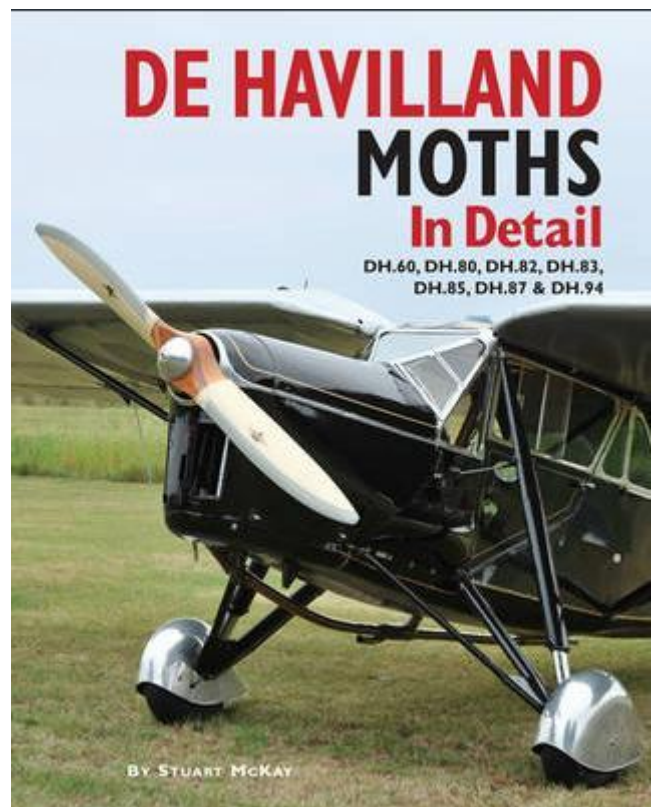
<http://home.comcast.net/~bzee1a/Edwards09/Edwards09.htm>

BOOK REVIEW

De Havilland Moths in Detail

From Bob Keith

I thought I would mention a library book I am currently wading through. It is entitled De Havilland Moths in Detail by Stuart McKay and published in 2010 by Herridge and Sons.



The operative word in the title is Detail as it has plenty of that and quotes serial numbers, modifications and the dates relating to construction and modification. The Moths it covers are DH 60, 80, 82, 83, 85, 87 and 94. There are about 400 pages and lots of detailed photos both black and white and coloured.

I am up to Chapter 7 which deals with The Military Tiger Moth (Trainer of the Empire). Here is a partial extract from page 220 which is quite amusing. "Tiger Moths were involved in two other bizarre anti invasion schemes in 1940. One involved using the aircraft to spray invading forces with a poisonous bright green insecticide called Paris Green. The other scheme was to fly though massed ranks of descending enemy parachutists with a scythe attached to a long pole and trailed below the fuselage.

TIPS & TECHNIQUES

Revmaster Ignition Noise

From Gavin Magill

The emails below came through on the KRNet and I thought they may be of interest to those members with RevMaster or other VW derived engines with ignition noise problems.

My KR2 has a Revmaster 2100-D with a dual-mag setup using auto-plugs. From day one, it's had ignition noise problems with my ICOM A-24 radio. I've tried multiple solutions (external wire braid on the ignition leads, different spark plugs, removed the p-leads) to cure the ignition noise but nothing seems to work. I'm to the point of replacing the Solid Core ignition wires with some automotive suppressor wire (carbon or spiral core) but I wanted to get some input from those here on KRNet before I move forward. There is chatter on the web about suppressor wires harming the magneto internally.

Any thoughts?

Dave R.

You can also try wrapping the ignition wires with "silicone tape wrap". Available through most commercial electrical supply houses and hotrod shops. Looks like fat electrical tape and some brands come in various colors. I've used it on ignition wires on 2 stroke engines with great success. I've wrapped from the HT coil (mag) all the way out including the spark plug caps. The stuff only sticks to itself after it cures for 24 hours. If you ever want to get it off, split it with a razor blade and it lifts right off in one piece. One companies name for it is "level wrap". It has a colored line down the center of the tape and you wrap it around following the stripe and the tape ends up being one constant thickness the whole route.

Ron

I [also] have the dual Bendix mags on a Revmaster. Some years ago I purchased

the auto spark plug conversion from Revmaster, (I only did the top 4 plugs) but like you I was unable to fix the ignition noise problems with my ICOM A-200 despite trying many solutions. In the end I purchased shielded wires etc. and made up a new ignition harness for the top plugs and went back to aviation plugs.

A few years after that I decided to try again, this time I purchased the auto plug adapters from Great Plains (top plugs only again). These adapters don't require you to cut or alter the harness in any way. The long and the short of it is that the Great Plains adapters work very well, I now have about 110hrs on them and so far they have been trouble free.

Alan Bradtke

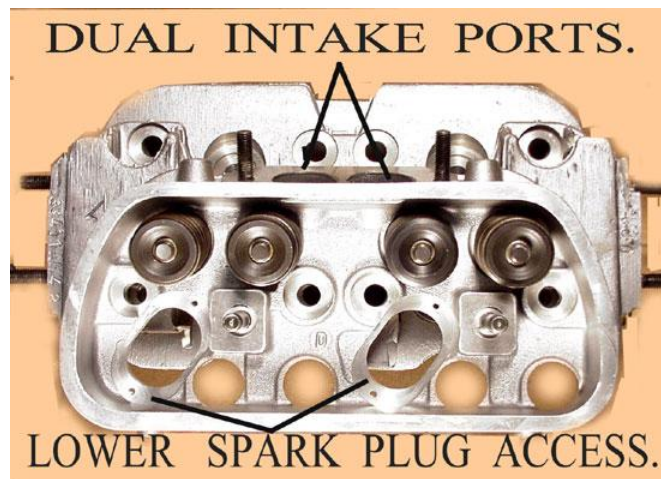
TIPS & TECHNIQUES

Revmaster Spark Plug Access

From Bob Keith

One of the problems the Minicab EEF syndicate had with the Revmaster engine initially was with shorted plug leads to the bottom plugs. In these engines the second plugs are accessed by first removing the rocker covers then the rocker shafts. This then gave access to two elongated, domed covers which when removed allowed the bottom plugs to be removed and new ones installed.

The cylinder head below shows the two elongated holes for plug access. The domed cover plates are secured over these two holes after the plugs are installed.



21 Tips Continued & For Sale

TIPS & TECHNIQUES

Revmaster Spark Plug Access Cont.

From Bob Keith

The problem was that the distance between the top of the plug and the bottom of the cylinder head was quite small and although the domed cover allowed some room for the ignition lead to bend where it attached to the plug, the curvature was too tight and the leads used to short out to the braided shielding at this point.

The fix to the problem is to have a deeper domed cover to allow a larger radius of bend for the plug lead at this point.

In our case we used the same covers and sat them on packers to provide more clearance. Note you have to seal these covers on installation to prevent oil leaking out of the rocker area and while the second plug is in a good position in terms of flame propagation it was a bit of a pain having to reset the valve clearances after each plug change.

Revmaster probably do not have the same ignition problems as we did as they now use automotive plugs and CDI ignition. Ours had a twin Bendix magneto.

Rob K

FOR SALE

Acetone / Nitrate & Butyrate Dope

From Jon (Steptoe & Son) Farmer

Last Friday afternoon, I visited my favourite paint shop where I am well known as the 'yellow man' having purchased many hundreds of dollars worth of yellow paint for the R80 Tiger Moth and the Cheetah. All I wanted was a couple of litres of acetone to thin the fabric cement as I was covering some repair work on the R80 Tiger Moth. However, they only had one 20 litre container left in the shop and no more until next week. Hard choice but I bought it anyway and was pleasantly surprised to find the cost worked out at about \$6 per litre rather than \$12 - \$16 for a single litre. The last time I bought a 20 litre can of acetone, it lasted me 4 years through the building of three aircraft. As I have, for the second time, promised my wife that I will not build any more aircraft, I probably have some to spare, so, **if you need acetone at \$6 a litre, get in touch with me.**

On a similar line, **I have some nitrate dope and butyrate dope and various pieces of 1.7 oz fabric going cheap** or swop for pieces of 1/8" aircraft or marine ply to repair my Tiger Moth wings and save me having to buy a full sheet.

Jon Farmer, 5200641.

FOR SALE

1-2002 L Alodine

From Jon (Steptoe & Son) Farmer

I must be getting a name as a sort of aviation 'Steptoe and son' because Gordon Swan rang me to say he had some full strength **1-2002 L Alodine** looking for a good home. Also, some **Microlon** which seems to be an additive for engine efficiency. If you are interested in either of these, please deal with Gordon direct on 09 5950122.

Jon Farmer, 5200641.

FOR SALE

Ultra Light Components For Sale

From Bruce Hartzell

At the February Chapter meeting I was given the following list of items to advertise in the newsletter. These items are for sale by Bruce Hartzell. If Chapter members are interested in purchasing any of these items please contact Bruce directly on 09 834 5363.

Plans

- J3 Kitten - Grover Aircraft Corp (USA) - (Steel, wood and fabric construction)
- Bobcat - First Strike Aviation (USA) - Aluminium and wood construction

Materials

- Dacron Fabric - 2.5oz heat shrink, zero porosity rip stop, yellow, 66" x 32 yards
- Alloy Tubing (6261 T6) - 32mm diameter x 1.6 mm wall, 5m lengths, QTY 5
- Chromoly Tubing (4130) - 1820mm x 25.2mm O.D. Qty 1
- 1070mm x 25.2mm O.D. Qty 1
- 760mm x 19.0mm O.D. Qty 2
- 530mm x 12.5mm O.D. Qty 2
- Chromoly Plate - 150mm x 300mm, 040" and 060" (Plus other and welding rod)

Components

- Rotax Gear Box - 2.58:1 Type B (Fits twin cylinder 377, 447 & 503)
- Seat Belt Harness - Simpson Safety (USA) combo lap / shoulder
- Bucket Seat - Fibreglass Shell
- Seat Cover - Quilted Vinyl, Asuza USA
- Pitch Block Set - "Ultra Prop" 15deg, 3 blade
- Build Component - Al. Fuel Tank filler weld neck flange & cp. Qty 2
- Fuel Feed and filter weld assembly. Qty 2
- Gauges - Tacho, VDO, 0-7000rpm, multi cylinder, 2 and 4 stroke, 12 volt
- Compass, Airglide, 2.25" diameter, gimballed mount
- ASI, 0-80mph, California Power Systems (USA), 3.0" dia.
- Landing Gear Assy.(2) - Chromoly Legs and Struts,
- 125mm Azuza(USA) cable operated drum brakes,
- 400x5 ply ribbed tires & tubes
- Nylon wheel with ball race hubs.
- Flight Controls - Chromoly rudder pedals
- Control stick torque tube assy.
- Elevator rubber bell cranks
- Pulleys, assorted diameters
- Turnbuckles
- Rod End Bearings
- Cabling
- AN Hardware - Assorted bolts, nuts, anchor nuts, eye bolts and other.

Chapter Events

2012

Mar Chapter Monthly Meeting

29 Title: TBA
Speaker: Peter Walton

Aviation Calendar

2012

Every Dargaville Aero Club

Sat The place is buzzing every Sat, wet or fine, windy or calm, and the \$10 lunch at 12.30 is good value. Club is on the web at www.goflying.co.nz/index.html. If going as a group please have the courtesy to ring in advance so the cook expects you. Contact Murray on 027-478 4308 or the club house on 09-439 8024.

3rd Sun Turangi Aero Club Fly-In

Each All welcome for a BBQ lunch.
Month Contact Tony on 027-453 3740

Mar RNZAF 75th Anniversary Airshow

31 RNZAF Base Ohakea
The RNZAF's full complement of aircraft, old and new, plus a number of overseas visitors, will be on show to the public for the first time since 2009. Details at: www.airforce.mil.nz/operations/whats-on/75th-anniversary/air-show-information.htm

Apr Warbirds Over Wanaka

6-8 **International Airshow**
Wanaka Airfield, Wanaka
This airshow goes from strength to strength. A special event this year will be a low-level flypast by 40 privately owned jets following the end of the Hong Kong to Christchurch Silver Fern Air Race. Also open in time for WOW will be the new Warbirds and Wheels visitor attraction, which will include an ex RNZAF Skyhawk. Info at www.warbirdsoverwanaka.com

If members are aware of other events that could be of interest to others please pass the details to Gordon Sanders at - gordon@sanders.gen.nz

Apr Possible Poker Run

14 Northern Microlight Club. Details still being worked out by Brian Millett. Probably include Silverdale and Dargaville, plus others. Will endeavour to advise chapter members by email if more info comes through.

Apr ANZAC WW1 Airshow

28 Hood Aerodrome, Masterton
12.00pm to 5.00pm. More info at <http://thevintageaviator.co.nz/node>.

Jun Warbirds Ardmore Open Day

3 Ardmore Airfield
Commemoration of D-Day. Schedule expected to be similar to last year which was: Open 10:00 a.m. to 4:00 p.m. Practice Flying Displays 12 noon and 2:15 p.m. Entry \$10.