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

Sport Aviator

September 2011

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- **Member Profile – Evan Wheeler**

www.saaauckland.org.nz

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Front Page

Evan Wheeler's Murphy Rebel ZK-WEM sitting outside its hangar at Patumahoe.

Contents

Next Meeting

WHEN: Thursday 29th Sept 2011 -7:15pm
WHERE: Auckland Society of Model Engineers Club Rooms
Peterson Road, Panmure Basin
Mt Wellington
SPEAKER: Alan Moselen
SUBJECT: CAA Accident Investigator

Alan Moselen is a CAA Accident Investigator and will speak on all aspects of Air Accident investigation. Alan is an ex-RNZAF and Air NZ Investigator of Air Accidents. This should be a good talk. Thanks to Evan Wheeler for arranging with Alan to come along.

Presidents Report

Hello all

I have just come back from visiting a friend that is getting ready to pass over (die).

He is organizing his funeral and asked a group of men to sing a song at his funeral.

We decided to give him a surprise and with communication with his wife, four of us went up this past Saturday morning to sing to him.

He is a beautiful man and is passing over very organized and peacefully.

It made me consider how many of us have a very organized way of going flying but are we organized for our last journey in this physical body.

Over the years I have made a few coffins for friends and I am building one for my friend mentioned above.

He wants a blue one. He has daughters so they want to carry him in and so I am making handles that go all the way along so that it is able to accommodate 8 women.

If you were to pass over tomorrow, are you organized?

If you have a share in a plane what happens to the other partners?

One way is that you all take out an insurance policy so that when one dies, the ones left have money to pay out the share. This means their partner won't have the problem of sorting it out.

If you have a will, is it up to date?

Have you got a lathe that you would now want it to go to friend A as your friend C died two years ago?

As they say, the cowboys used to spread the gear of their friend that had died on the ground and it was shared between the ones left.

I hope you all live as long as you want to and your passing is organized and peaceful.

So happy flying.

Cyril Wright

From The Editor

Well the Rugby World Cup has finally arrived along with all the hype and fanfare. For those who went to the opening ceremony in downtown Auckland or at Eden Park, I hope you were fortunate enough to not get caught up in the public transport problems and managed to get to a vantage point where you could enjoy the show.

I personally spent the evening at a friends place watching the ceremony on a large projected television screen and was quite impressed with the light show and the fact that the whole show wasn't too long. This was probably in no small part due to the fact that there was still a game of rugby to be played so the show needed to be short and sweet. I somehow think we will all be a bit over it all after six weeks.

As I write this I am on the train heading into Britomart and it is a somewhat wet and miserable day outside. By contrast the last few weeks have been fine and calm with some fantastic flying weather. I hope those of you who are able to, have been getting out and enjoying it.

I have managed to get in a little flying myself a few weekends back however it wasn't in Sonex JQP but in Kevin Paulsen's Piper Tomahawk ZK-EVL. Kevin has EVL online with the Airline Flying Club at Ardmore and I am able to make use of it through the club.

Kevin Paulsen's Piper Tomahawk ZK-EVL

I have a bit of a soft spot for Tomahawks as this is the aircraft type I originally learned to fly in so I was immensely pleased when AFC announced that they were going to get EVL on line. That said, flying EVL certainly isn't the same as flying JQP (if nothing else it has a much bigger impact on my wallet) but it does at least keep me current and flying. I don't know about others but I am finding that keeping current over winter is a challenge with the weather conditions.

Speaking of JQP, Paul Blackmore and I visited Te Kowhai during the month to replace the undercarriage bolts on the aircraft after Sonex Aircraft in the United States issued a mandatory Service Bulletin to replace the stainless steel bolts with high tensile steel ones. I have written a bit of a blurb in the Chapter News section to explain what we had to do.

Sonex ZK-JQP with her cowls off

Also in this months newsletter I have included a copy of Peter Armstrong's presentation he did at the last meeting on his DynAero. Peter's presentation gave a very good background as to why he chose the DynAero and what was required during the build.

Bob Keith kindly took the minutes at the last meeting and these have been used for the summary of the last meeting. One of the points raised under General Business was that Neville Hay and David Grove Hills have both stepped down from their respective roles of providing input to the SAA National Magazine. As the Newsletter Editor it kind of makes sense for me to pick up one of these roles but I am looking for someone to support me in gathering information to publish. Please contact me if you are in a position to help with this.

The member profile this month is on Evan Wheeler. Evan kindly hosted me at the Patumahoe strip where he has his Murphy Rebel ZK-WEM ensconced. Evan has a very interesting background and it is well worth a read.

Evan Wheeler's Murphy Rebel ZK-WEM

I think that's more than enough from me. I hope you enjoy the newsletter.

Happy building or flying

Cheers
Gavin

Last Meeting Summary By Bob Keith

Don Wilkinson -Corby Starlet U/C Legs

Don Wilkinson brought in the Corby Starlet u/c legs from TNT which had started to show signs of pitting corrosion which would necessitate polishing out the pits completely. Alistair McLachlan confirmed the need for complete removal of this corrosion as if left it will progress into the core of the material and as with any high strength steel can cause hydrogen embrittlement and eventual failure. Further discussion was on corrosion prevention and the merits of PA10 primer.

Don Wilkinson - Spinner Backplate

Don Wilkinson also brought in the spinner backplate which had a circular crack around the line of the crankshaft propellor flange. This is a typical failure point on spinner backplates and is caused by engine vibration. It was suggested that a photo of this be included in the next newsletter to alert aircraft owners to inspect this area carefully.

Alistair McLachlan - SAA Maint Course

Alistair McLachlan advised that he had attended a Maintenance planning course in Taupo run by Bob Jelly and John Kaiser from CAA. Alistair commented that the course was primarily focused at non-techincal staff working for aircraft maintenance organisations to give them a good understanding of the CAA rule requirements around maintenance planning.

He also advised that the next SAA Maintenance Course will be at the end of October in Ashburton. The course will be run entirely by SAA. There will be no CAA participation. Bruce Cooke has agreed to teach the Regulatory part of the course, which is a major part with the documentation required for each attendee, being some 15 inches high.

Alistair replied to a question from a member about North Island courses that it would take some time for Bruce to prepare and it would not be possible to have one in the North Island before the Ashburton one.

Evan Wheeler - Weather Charges

Evan Wheeler reported that he, Bill Sisley and Don Rider had been interviewed by TV1 regarding the recently introduced charges for aviation weather. While the annual fee of $100 does not appear to be excessive this is regarded as a safety issue however MOT who is the responsible body has refused to discuss the matter. Currently only 266 of a possible 5000 pilots have paid the required fee. As an aside to the issue Evan said it is possible to obtain NZ weather on line from Norway.

Gavin Magill - National Magazine

Gavin Magill advised that both Neville Hay and David Grove Hills were stepping down from their positions of news gatherers for the Auckland Chapter News section in the the national magazine Sport Flying. Gavin said that he would be happy to take on the role of providing updates to the national magazine but would require assistance from other members to gather the necessary updates.

Don Wilkinson - Historic Film DVD's

Don Wilkinson brought along the old films donated by Robin Hickman and the DVD's copied from them. Cyril Wright offered to store the original films. The DVD's were placed in the library cabinet for Sandy Dawson to add to the Tech library list. The DVD's are entitled "High Propulsion Engines", "50 Years of Fiat Aviation" and "Fiat Helicopters for Agriculture".

Guest Speaker - Peter Armstrong

The Speaker for the evening was Chapter and Committee member Peter Armstrong who spoke on the selection and building of his Dyn Aero MCR 4S.

Peter's interest was kindled with a visit to "Big Boys Toys" in 2000 where he viewed Tony K's Europa. His choice of aircraft was determined from surfing the web and dictated by appearance "it had to look good" and it had to have 4 seats.

The MCR 4S is a high performance design by the Societe Dyn'Aero based in Darois in France it is constructed from carbon fibre and is very light and aerodynamically clean. The Dyn'Aero web site quotes a stall speed of 45kts with a cruise speed of 131kts. Empty weigh is stated as 300kg. Max weight 750kg.

Peter's aircraft is powered with a Rotax 914 with some additional improvements courtesy of Gilles Thesee (another Frenchman) the main one being an intercooler.

Peter spent some four and a half months at the factory during its initial construction and brought the aircraft to NZ structurally complete and with the engine attached. There were some issues with the supply of the ballistic parachute i.e it was included in the purchase price but not supplied, and again with the engine which was supplied by the Australian agent shipped to France and then back to NZ with the A/C at a cheaper than factory price.

The aircraft is very well equipped with "state of the art" engine and flight instrument systems. It is all electric and as such has a number of features to ensure that the engine is kept running if electrical failures occur.

Peter quoted there are 27 pages of wiring diagrams and he used about 1000ft of 22 swg wire.

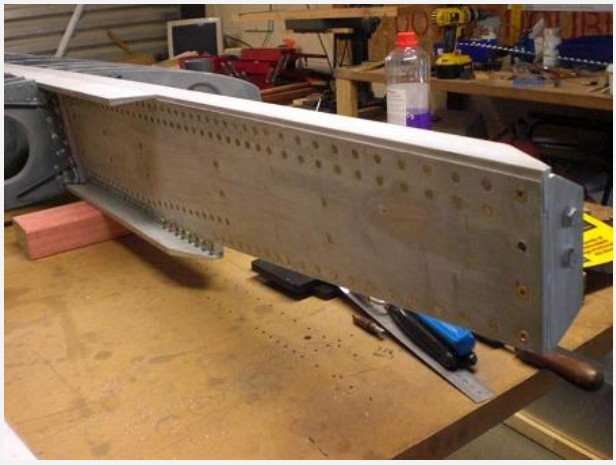
Chris Wade
Waiex Progress Update

Chris Wade sent through the following update on his Waiex build.

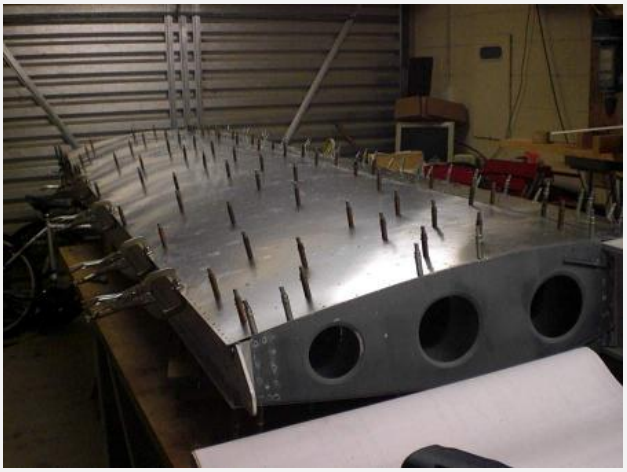
"These are the photos of the wings.

Note the bow in the main spar due to the riveting. This comes out quite easily when aligned with the skins.

I'm pleased that the driven riveting is complete. Thank heavens for cherry rivets.



Now the arduous task of taking it all apart, deburring, cleaning and priming.



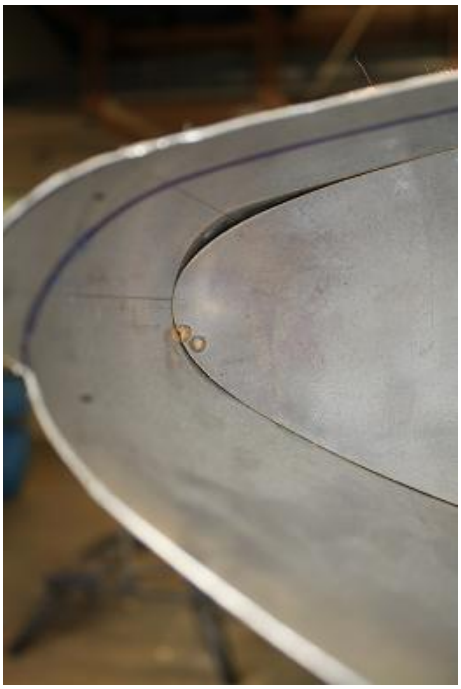
The flush riveting to the leading edge should be a nice challenge.

Chris"

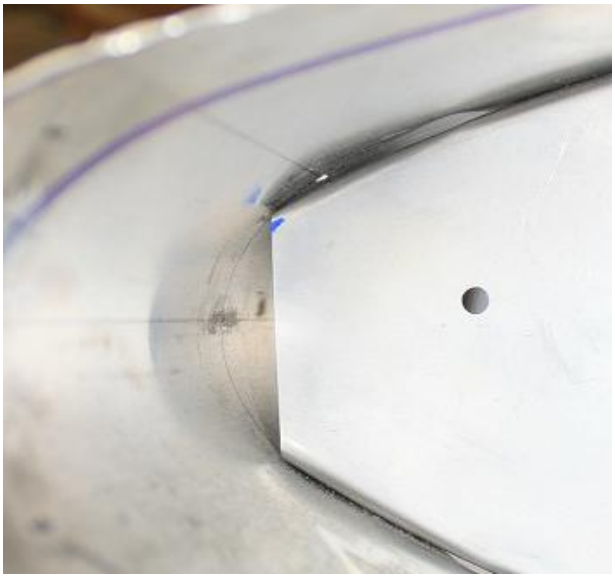
Paul Blackmore
Sonex Wings Skins

During the month I also caught up with Paul Blackmore who is at a similar point as Chris in the built of his Sonex. Paul is scratch building his Sonex and is in the process of fitting the wing skins.

When I spoke with Paul, he was wrestling with an issue around the skin leading edge not conforming exactly to the airfoil template for the wing. (See photo next page.)



As can be seen from the photo there is a small gap at the bottom of the template where the skin does not conform to the template (note that the wing is sitting inverted on Pauls workbench in the photo). Paul has determined that this is being caused by the lower front tip of the rib template being slightly too long and not allowing the wing skin to curve to match with the wing template.(See next photo).



After speaking with Mike Tunnicliffe and emailing Sonex Aircraft in the US, Paul has determined that if he removes about 1/16" from the bottom front of each rib (indicated by blue mark in photo above) this will allow the skin to curve correctly to match the rib template.

Gavin Magill
Update on Sonex JQP

And to complete a trio of Sonex updates, the following is an update on the syndicate Sonex ZK-JQP.

In late June Sonex Aircraft in the US issued a service bulletin to all Sonex, Waiex and Zenos aircraft owners (ACV-SB-006) which said the following.

"Description:
Sonex Aircraft has received 4 reports of the stainless steel bolts that secure the gear legs in standard gear motormounts breaking inside the titanium gear leg. All affected aircraft have logged more than 20 hours and/or more than 25 landings on turf runways. To date there have been no reports of bolt breakage on aircraft operated on paved runways. Three of the four reports have been on aircraft operating on rough runways. Additionally, over-tightening of the nuts may have contributed to these failures.

Mandatory Inspection:
Prior to each flight inspect all stainless steel bolts securing the gear legs in the motormount (standard gear) or gear mount brackets (tri-gear), as well as the stainless steel bolts that secure the axles to the landing gear legs.
Minimum inspection requirement is to try to turn each bolt with a wrench, observing the nut for similar movement. The bolts must be replaced with "steel" AN hardware prior to flight if there is any indication of a failed bolt. If both the bolt and the nut turn together DO NOT TIGHTEN the nut. This is acceptable until the hardware can be replaced.

Mandatory Corrective Action:
As soon as possible, replace all stainless steel bolts with drilled "steel" AN bolts of equivalent size, and replace the AN365 elastic stop nuts with AN310-4 castle nuts and MS24665-208 cotter."

We checked the bolts on JQP and found they were not broken however checking them before every flight was going to be a pain because it meant removing the cowlings every time. As such we decided to go ahead and just make the changes required for the Mandatory Corrective Action. We ordered new hardware from Steve Noad in Christchurch and then Paul Blackmore and I drove to Te Kowhai in the first weekend of September and replaced the bolts.

After removing the engine cowls and leg fairings to access the bolts, the aircraft was lifted on blocks to take the weight off the legs.

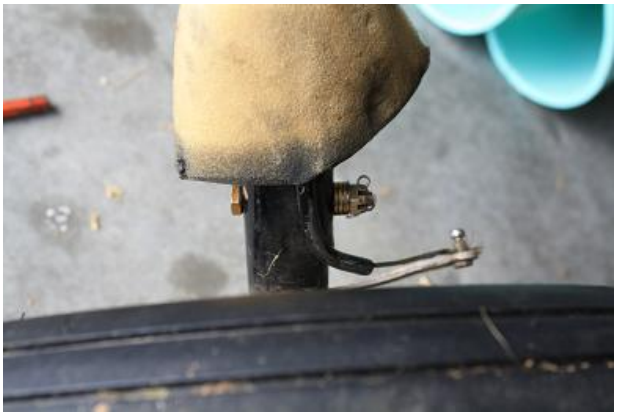
A trolley jack takes the weight off u/c legs.

With the weight off the legs, we were then able to remove the main motor-mount bolts. I was a bit of a struggle to extract them but we got them out and replaced these with the new hardware.

As can be seen from the photo below there is not a lot of room between the nut end of the bolt and the firewall so fitting the cotter pin was a bit of a challenge.

The new motor mount bolt with castellated nut.

After replacing the main motor-mount bolts we then replaced the bolts securing the axles to the gear legs. Fortunately these are somewhat more accessible than the motor-mount bolts.

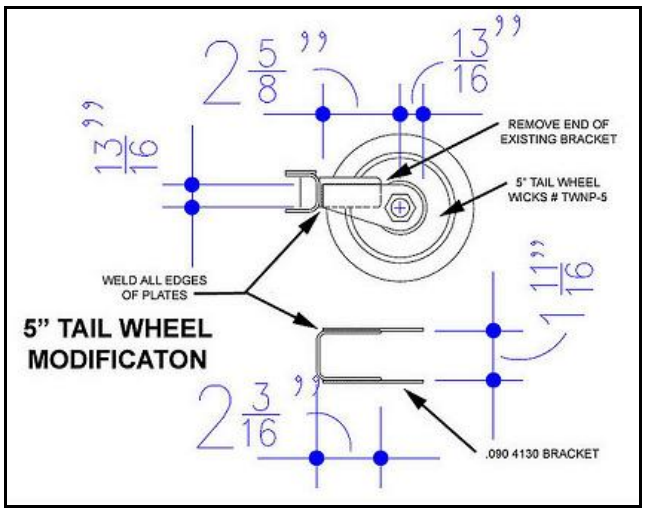


The new axle/gear leg bolt.

The final job required for the SB was to replace the two bolts securing the tail wheel.

We have been looking to replace the tailwheel on JQP with a larger 5” diameter wheel for quite some time so we decided to make this change at the same time. The existing 4” tailwheel tended to dig in to soft turf when taxiing which is not a good look with JQP currently based at Te Kowhai. Installing the larger wheel will hopefully reduce this happening.

The larger tailwheel requires the tailwheel bracket be modified to accommodate the slightly wider and deeper wheel. Fortunately we were able to utilise the plans from another Sonex builder who has already implemented the same modification and has published plans for this on the web. We used the drawing below as the template for the new bracket and Paul welded up the changes by modifying the existing tailwheel bracket.



The 5” tailwheel was ordered from Wicks and Paul picked this up while he was at Oshkosh.

The new unit is yet to be fitted to the aircraft as we are awaiting the return of the aircraft radio from Neil Jepson in Palmerston North. We will make a trip down to Te Kowhai to replace the tail wheel and radio at the same time when it arrives. A photo of what the finished product will look like is shown below from off the web.

Once all these changes are made we can then give JQP to Dave Readman to do the Annual Compliance Certificate inspection and she will once again ready to fly.

Don Wilkinson
ZK TNT - Cracked Spinner Back Plate

Cracked spinner back plate TNT Corby Starlet

The essential other attach point for the spinner ahead of the propeller reduces the bending in the back plate and probably almost eliminates the likelyhood of a complete separation.

[The crack] was found during regular inspection. It has been opened up during inspection but was not obvious at first glance.

We will put an aluminium plate 1.6 mm thick between the hub and back plate to "soften" the interface.

Don Wilkinson

Bob Keith
Corby Starlet Wing Jigs

Bob Keith sent me a couple of emails during the month regarding the Corby Starlet wing jigs which the Chapter has inherited and are now part of the tool library. Bob sent the following email to DCM.

DCM, as I understood it at the last meeting Manfred agreed to find a place to store the jigs in his hangar along with the chapter tooling. If that is the case how about a small article for the newsletter explaining the history of the jigs and that they are available for use.

DCM replied with the following.

No I gave them to the Wilkinson family and then they must have passed them on. I don't know or cant remember who I got them off, [ZK]ONE I think was built off them ask Norm but Alfred used them then David King from down south built three a/c off them - they were originally built for DEO - my a/c is still not flying...

I am trying to reduce the weight on the Laingholm land.

DCM

Bob then contacted Norm Bartlett who replied;

Norm Here- I got them from John Buchannan who built them plus the tail and rudder jigs. John was a farmer in Ngarua out side of Matamata and built ZK-DEO. He was very generous with his time over the years while I was building ONE. He let me fly his Starlet DEO at Matamata- had a 1600cc v.w. at that time so not overpowered. I believe he also made the moulds for the canopy- cheek cowls and wingtips and they still use them at Ultalite fibreglass to this day I believe. Norm

Don Wilkinson then added.

Bob. They are temporarily in David's basement Pakuranga. They are securely wrapped for courier. We will get them to Manfred's in due course. I will put a notice in Sport Flying to the effect they are available and should not be lost to builders Cheers Don

So the wing jigs now appear to be part of the Chapters tool library and Bob has asked Cyril to look into developing some policy around a process to enable them to be loaned out to other builders around the country who would like to use them.

Evan Wheeler
Murphy Rebel Tail Wheel

Evan Wheeler reports that he has replaced the standard Scott tailwheel unit on his Muphy Rebel ZK-WEM with an Alaskan unit.

Original Scott Tailwheel

New Alaskan Tailwheel

David Horton
On Holiday In Turkey

Hullo Gavin,

We are on holiday in Turkey and although there is very little sport aviation here they do lay claim to the first person to fly.

We went up the Galata Tower which was made out of stone in 1348 and used as a watch tower for fires. (A little ironical when the tower itself caught fire!!) When we got to the top of the winding staircase this story was paraded in several different languages.

"In 1638 Hezarfen Ahmet CELEBI climbed to the top of the tower, strapped on some wings he had made and jumped. He managed to glide across the Bosporus River to Uskudar about 6km away and landed safely. Sultan Murad 4 was so pleased that he gave Hezarfen 1000 gold coins But then things got a bit tough. The Sultan's senior advisers were clearly not happy to let anyone enjoy the fruits of flying so they ganged together and forced the Sultan to send the poor lad to exile in Algeria. He was in good company though because Galileo had also been there for a couple of years for saying some dreadful scientific things that later turned out to be true. Sadly poor Hezarfen died a couple of years later at the age of 38."

I don't know if this is of interest but if you google the name you can see it all in print.

Regards,

David Horton in Urgup

John Struthers
Flight Radar Site

A bit late for the club magazine ... just found out about it yesterday.

Very handy for finding when ' the boss ' is arriving back.

Or just want to know where any airline aircraft are in actual flight anywhere in the world?

Use either the area quick change or click and drag the screen.

Point mouse on an aircraft and flight number appears. If you click on whatever aircraft flight number is identified, the description appears on left of the screen.

The aircraft move if you wait long enough ... all depends on the number of people accessing the website at the time.

The link is flightradar24.com

John S

John Eaton's Pitts S12
At Warbirds Battle Of Britain Day

New Zealand Warbirds hosted an open day on Sunday 18th Sept to commemorate Battle Of Britain day. Along with the usual array of Warbirds on display, John Eatons Pitts S12 ZK PTS was also displayed. Although the weather was less than favourable, the show still went ahead and John's Pitts was the first aircraft to perform in the first air display. The photo below was taken after the S12 had completed its display. The other photos are from the later display.

John Eaton's Pitts S12 ZK PTS after completing it display.

Ex RNZAF Strikemaster ZN6370 on display.

Unfortunately this aircraft did not fly due to an engine fault.

The Warbirds P51 performs a low pass for the crowd.

11 Chapter Project & Aircraft Lists

Chapter Projects

Make/Model	Rego	Member	Status
Auster J5F	BDY	Les Wilson	Restoring
Bede BD5	ZIP	David Rose	Building
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		Stephen 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
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
Van's RV-12	YRV	Alan Coubray	Building
Waiex		Bruce Turner & Chris Wade	Building

Chapter Projects Other

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
Witman W-10	RET	Cliff Bellingham	Active
ATEC Zephyr 2000S	ZFR	Kevin Hartley	Arrived

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
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	TBD	Giovani Nustrini
Falco F8L	SMR	George Richards
Falcomposite Furio LN27RG	LLG	Giovani Nustrini
Fisher Dakota Hawk		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
Piel Super Emeraude	FMM	Peter Nicholson
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		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 Coot A	JST	Alistair McLachlan
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
Vans RV-7A	MIS	Dave Cogan
Van's RV-6	PRV	Kevin Paulsen
Zenair CH 601 B	ZXZ	David Rose
Zenair CH601	JFN	Peter Herrick

ZK-PSA The Journey by Peter Armstrong

At last months meeting Peter Armstrong presented a summary of the story behind the build of his DynAero MCR 4S. The following is a précis of the slides Peter presented on the night.

How did it start?
- Blame: Tony K and Big Boys Toys 2000 with his Europa.

What did I know about building planes?
- Diddley – Squat!!!!!

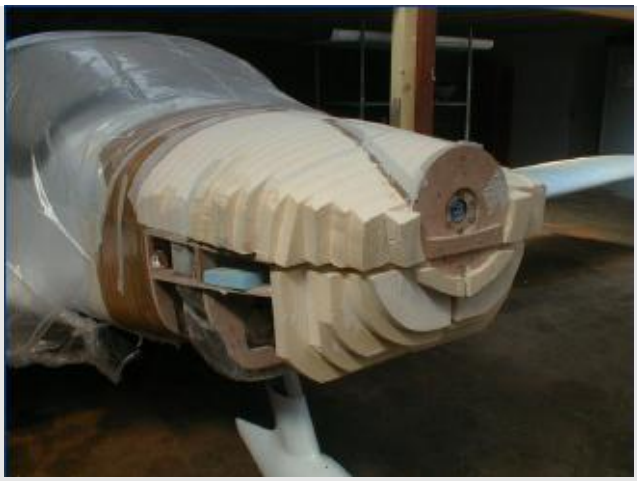
How come the DynAero MCR-4S??
- Wanted a 4 seater.
- Wanted good fuel economy, performance and endurance.
- It had to look good – bugger its flight characteristics.
- Wanted it to be avionically (read geeky) advanced.

And Then;
I got busy on the web and came across Gilles Thesee and his website http://www.contrails.free.fr/ who was building a MCR-4S in Vienne near Lyon (south of Dijon).

So I got on the phone and then on a plane and went to meet him.

Gilles had his own "Skunk Works" at Darois and had designed a brand new cooling system.

He was also independent of the factory and helped adjudicate given my non-prowess in French.



So where did it start:
Darois (12kms from Dijon), France May 2007

I purchased an advanced kit – all major fabrications done, wings, tailplane, stabilator etc

The Process:
3 trips to France totalling 4 ½ months over a period from May 2007 through to February 2008

Last trip was motor installation – Rotax 914 with intercooler (not standard) and the 1st of its type – the new Ecolight cooling system – my requirement after working with Gilles Thesee.

13 ZK-PSA The Journey

The Builders Environment:
Pretty rough but warm (even in winter)
Needed to be as the plane is glued to together

The Rivalry

The Building

The Shipping

And Then;
Parachute – what parachute, paid for it but not supplied
Got it in the end direct from BRS after 2 years
3 blade propeller paid for but only got 2/3's of that – 2 blades
Ah the French
Electrical Design – the French are very constrained so;
I designed it myself.
I now have 27 pages of electrical diagrams and 1000' of 22AWG installed, excluding other cable – weight, weight, weight - ☹

And The Panel

Electrical Design Philosophy;
Rotax 914 is an all electrical beast, no mechanical fuel pumps and 2 electric pumps SO:

- Protect the fuel pumps at all times
- Dual Buses each supported by its own battery
- And an independent Auxiliary Bus

Primary Bus

- Has Electronic Circuit Breaker Protection included
- 1 fuel pump (VP-X unit with Alternator Over Voltage and Low Voltage Monitoring)
- The VP-X supports most of the electronics however the engine data acquisition (RDAC) is dual powered
- AHRS (one set) powered by this bus

Endurance Bus

- Cross fed from Primary Bus and Aux Bus (fused)
- Supports
  - One dual scanning radio
  - Xtreme EFIS with full EMS and Flight System
  - RDAC unit (alternative supply)

Auxiliary Bus

- Direct from second battery (fused)
- Supports
  - Secondary Fuel Pump
  - Aux Battery Lighter Socket

Both batteries are contactor protected

If the primary bus voltage falls below 13.1v the endurance battery is automatically dropped to protect its capacity for the fuel pump.

Can be overridden for engine start and security on take-off.

Primary Bus

- Electronic Circuit Breaker Protected
- Soft design and displays on EFIS

Endurance Bus

- One Radio
- Xtreme EFIS
- Intercom powers down into fail-safe mode protecting transmission

The Parachute

- Bloody heavy about 20kgs
- Designed to be ejected with 850kg payload at up to 180Kts
- BRS give no guarantees of survivability – funny that

The Scary Part – Connecting and Installing the Rocket

Some Interesting Bits

Radio Aerials – Bob Archer integrated into wing tips

All lighting, strobes, landing lights - LED based

No round instruments

No fluid compass, dual AHRS and dual solid state compasses

But more importantly – What does it fly like

Very neutral handling – little trim required

Still learning the prop controls

Need to get to grips with fuel flow measurements.

Have not gone near the Autopilot

Challenges solved

- Prop balanced (Throw the Club's one out, wasted 6 hours. Used Kevin Paulen's Aerotech unit. Done in 1 ½ hours)
- Throttle cable was binding – replaced inner
- Alternator plug not fully home, replaced plug.

Just want to get into the LHS seat and start flying the thing!!!

15 FLAIR 2011 Aviation Showcase

As Chapter members may be aware the FLAIR 2011 Aviation Showcase event is due to hosted at Te Kowhai airfield Oct 13th -15th. Below is the front page of the flyer that can be downloaded from the event webpage http://www.nzflair.com/flair-brochure.pdf. The event programme is shown on the following page.

event guide

Flair
Te Kowhai Airfield
13th to 15th October 2011

www.nzflair.com

flair 2011

NZ Aviation on the World Stage

By Shaun Mitchell, General Manager, Aviation Industry Cluster

THE NEW ZEALAND aviation industry is making history. Never before in our industry have we come together to launch new products, learn, exhibit and fly, all under the banner of one major event.

Flair 2011 is that event. It's being held from 13-15 October at Te Kowhai Airfield, just north of Hamilton. And, through Flair we have the opportunity to showcase our industry's uniqueness, ingenuity and innovation to the world.

With the support of the government, Flair 2011 is one of only a handful of business events taking place across the country during the Rugby World Cup. Its purpose is purely an economic one – we want to drive product sales, drive investment into our companies and increase global awareness of the capability of our niche industry.

And to succeed in our purpose, we only need one thing – your support. If you are a company operating in the aviation industry, we need you to exhibit, attend the industry activities, support the seminars and encourage others to attend.

Remember that Flair is a not-for-profit event. That means we need the industry to get in behind it to ensure its success.

So, whether it's booking your exhibit space, planning to join the Saturday Fly-In, attending a seminar or workshop, or simply joining us at the event for one or all three days, decide today how you'll support your industry!

On behalf of myself, the Aviation Industry Cluster, the NZ2011 office and NZTE, we look forward to seeing you there.

Flair is being run by the Aviation Industry Cluster, with support from the ALA and Aviation NZ. Flair is part of the REAL New Zealand Showcase, the business programme developed by the Government for visitors to the Rugby World Cup. Flair has been made possible through support from the NZ2011 office and New Zealand Trade and Enterprise.

In the Air at Flair (and a great deal more as well)

Six great reasons not to miss Flair

at Te Kowhai Airfield
13th to 15th October 2011

10 new Product Launches

Exciting new products will be on show including new aircraft, new engines, new software and more - all from New Zealand aviation companies. Many of these products generated huge interest at Oshkosh in July.

Martin Jetpack on display for all to see and touch

Strap yourself into the Martin Jetpack Simulator - the same one they train their pilots in.

Informative Seminars

Meet key aviation people from New Zealand and 4 visiting United States industry leaders. Hear from John McGinnis, Team Synergy entrant for the NASA Cafe Green Flight Challenge, tipped in the United States as the next Burt Rutan.

Flying Demonstrations

See a new LSA Turbine Helicopter, the RNZAF Red Checkers, Pacific Aerospace's P-750 XTOL, the Falcomposite Furio, and much more.

Educational Workshops

A huge variety on offer for home builders and aircraft enthusiasts.

Organised Fly-in Day

Including an attempt at the Bantam world record currently held by South Africa.

Flair is a not for profit event supported by NZ2011. Refer to www.nzflair.com for ticket and pricing information.

F1

flair

Flair Event Guide produced in association with KiwiFlyer

Programme of Events

Please note: Most of the events listed are between half and one hour in duration. This Programme is correct at the time of print in September. Additional events are expected to be confirmed in the coming weeks. Please refer to www.nzflair.com or event notices for final details.

There's plenty happening in the sky above Te Kowhai during Flair. Highlighted boxes signify **Events In the air**

	Airfield	Main Hangar	Seminar Hangar A	
Thursday 13th: INDUSTRY ONLY		**Interest Seminars**	**Air Innovate Showcase**	
9:00		**Speed Dating Business Intro**		9:00
10:00	**Event Opens**	**Synergy in Aircraft Design** John McGinnis	**How to shake the money tree** Guy Tapley	10:00
11:00		**Emerging Aviation Trends** Gretchen Jahn	**Tech NZ Aviation Strategy**	11:00
11:30	**Product Launch 1** Aviation Painting Services			11:30
11:45			**Exporting Aviation Products** NZTE Peter Smyth	11:45
12:00		**Martin Jetpack** From the shed to the sky, Kiwi style Glenn Martin		12:00
12:30			**Journey to Lean Mfg.** Lean Gemba Academy John Cook	12:30
1:00	**Capability Display** Air Display from 1:00 to 2:15			1:00
2:15		**Emerging Technologies** Aviation Aerodynamics and Electric Aircraft Sid Siddiqi	**Angel / VC Investment** Key mistakes by start-ups	2:15
2:30	**Product Launch 2** Duke Engines			2:30
3:00	**Product Launch 3** Composite Helicopter Mfg.			3:00
3:30			**UAV Technology in use** Hawkeye UAV Rowland Harrison	3:30
4:30	**Event Closes for Thursday**			4:30
5:00	**Pitch and Mingle** This Trade, Industry and Investor only event includes presentations from six companies to an invited group of international investors. Hear from and meet the people behind Falcomposite, Shearwater, Martin Jetpack, Sora Aircraft, AeroHawk UAV, and Synergy Aircraft USA.			5:00

Don't Miss the
Pitch and Mingle
5pm Thursday 13th
details from www.nzflair.com

Don't Miss the
Aviation Industry Gala Dinner
6.30pm Friday 14th
details from www.nzflair.com

				Seminar Hangar B	
Friday 14th: PUBLIC DAY		**Interest Seminars**	**Air Innovate Showcase**	**Home Builders How to**	
09:00			**Emerging Aviation Trends** Looking for growth Gretchen Jahn	**Composites Workshop**	09:00
09:30			**Composite Helicopter Mfg.**		09:30
10:00	**Product Launch 4 & Demo.** AeroHawk UAV	**Emerging Technologies** Aviation Aerodynamics and Electric Aircraft Sid Siddiqi			10:00
10:15			**AeroHawk UAV**		10:15
10:30				**Tig Welding Display**	10:30
11:00	**Capability Display** Air Display from 11:00 to 12:15				11:00
12:00				**Metal Working Workshop**	12:00
12:15		**Martin Jetpack** From the shed to the sky, Kiwi style Glenn Martin	**Falcomposite Furio**		12:15
12:30	**Product Launch 5 & Demo.** Auroa Helicopters				12:30
1:00			**Duke Engines**		1:00
1:15		**Synergy in Aircraft Design NASA Green Flight Challenge** John McGinnis and John Paul Noyes			1:15
1:30	**Product Launch 6 & Demo.** Kiwi Props			**Fabric Covering** Pacific Aero Coatings	1:30
1:45			**Auroa Helicopters**		1:45
2:00	**Product Launch 7 & Demo.** Falcomposite Furio				2:00
2:15		**Careers in Aviation** How to, Where to, What to, Panel Disc'n			2:15
2:30			**Sky Challenge**		2:30
3:00	**Capability Display** Air Display from 3:00 to 4:15			**Aircraft Painting** Pacific Aero Coatings	3:00
4:30	**Event Closes for Friday**				4:30
6:30	**Aviation Industry Dinner**				6:30
Saturday 15th: PUBLIC DAY		**Training for Aviation**	**Interest / Air Innovate**	**Home Builders How to**	
9:00	**Fly-in Arrival** Bantam and General Fly-in			**Composites Workshop**	9:00
10:00		**Aviation Engineering Careers (TBC)** NMIT	**Martin Jetpack** From the shed to the sky, Kiwi style Glenn Martin		10:00
10:30				**Tig Welding Display**	10:30
11:00	**Capability Display** Air Display from 11:00 to 12:15				11:00
12:00				**Metal Working Workshop**	12:00
12:15		**Air Force Careers** RNZAF	**Synergy in Aircraft Design NASA Green Flight Challenge** John McGinnis and John Paul Noyes		12:15
12:30	**Product Launch 8 & Demo.** Martin Jetpack				12:30
1:15	**Product Launch 9 & Demo.** Sky Challenge		**Aviation Painting Services** Phil Byrne		1:15
1:30		**Training to be an Airline Pilot** CTC Aviation	**Piper Cub** Paul Morrison North School Aviation Trust **How to become a Recreational Pilot**	**Fabric Covering** Pacific Aero Coatings	1:30
2:00	**Product Launch 10** Shearwater Aircraft				2:00
2:30	**Capability Display** Air Display from 2:30 to 3:15				2:30
3:00				**Aircraft Painting** Pacific Aero Coatings	3:00
3:15		**Martin Jetpack** From the shed to the sky, Kiwi style Glenn Martin			3:15
4:00	**Bantam Mass Departure**				4:00
5:00	**Event Closes**				5:00

17 In The News & On The Web

SportAvex 2012
From SAA New Zealand

During the month Adrienne Fillery sent out the advertising poster for SportAvex 2012. For those that may have missed it the image is below.

Black Sands Fly In
By Bruce Cooke

This regular and popular event will be held at Raglan on the weekend of 12th – 13th November, with early arrivals, particularly those travelling some distance and this Chapter's comms van, arriving on Friday 11th. Info on the web site at www.saa.org.nz is running a little late but Bruce Cooke has advised the following by email:

We hope to get the details on to the web site this coming week, I just have to pin down some details about changes being made this year. (and I've been a bit busy playing with a nice new aeroplane of mine!)

Basically it is the same as previous years, based out of the camp ground. The Waikato Chapter has block - booked the HQ area and bunkrooms, so if people want to use those, we'll have those available. all other cabins etc should be booked directly with the Raglan Kopua Holiday Park.
Regrettably there won't be any beach flying this year as the low tides are quite late and there wouldn't be enough daylight left, but for those who want to do some flying, there will be an Air Rally or Fly - Away activity on the Saturday. Key thing for aircraft arriving is to follow standard overhead rejoins and make good radio calls if so equipped. Beware of wind sheer / sink and a sudden change from sea to land breeze as the day warms up. The airfield will be checked for surface damage. Beware of pedestrians crossing the airfield, and on take off, check for other aircraft also lined up, as the wide airstrip has caught people out in the past!
As mentioned earlier

Lunches will be a bit different this year as we are now trying to reduce the workload of the hospitality team. Saturday lunch will likely be a Spit Roast rather than a BBQ, but there will still be plenty of food available and aeroplane spoken. Entry prices may also change (downwards!). This will be in the info put on the web page.

Should be an awesome weekend - I hope to finally bring CKE over for its first public outing!

We'll see you there!

Bruce Cooke.
021-112 2364 or bmcooke@waikato.ac.nz.

[Flyer for Black Sands is included at end of newsletter. – Ed]

Red Tails Movie Trailer

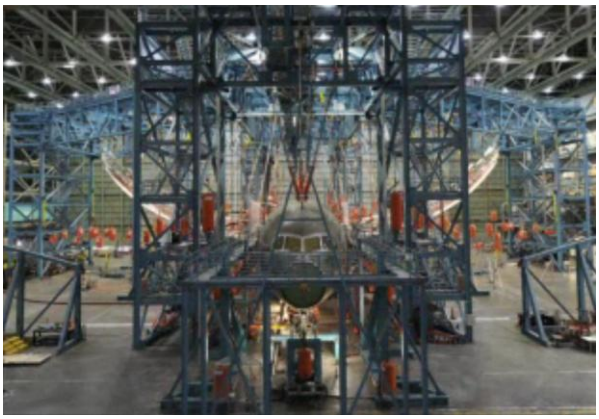
Two movie trailers for the new movie "Red Tails" were released during the past month. This is a Lucasfilm production dramatising the Tuskegee airmen story and looks like it will have some great flying scenes. The movie is due for release January 20th 2012 and might be worth a look. Perhaps it might even be worth organising a group booking and make it a Chapter event. The trailers can be seen at the following links.

http://www.youtube.com/user/RedTailsMovie#p/a/u/0/xkFPx_RzGKA

http://www.youtube.com/user/RedTailsMovie#p/a/u/1/wityJA7DlII

18 In The News & On The Web

Boeing 787 150% Wing Strength Test
From Nev Hay



This is a recent wing strength test video on the new Boeing 787 which has a 'composite wing' versus an 'all metal wing'. This particular wing test was taken to 150% beyond the design limit of the 787 wing without a structural failure -which is quite an accomplishment.

http://787flighttest.com/hanger/wp-content/plugins/flash-video-player/mediaplayer/player.swf?streamer=rtmp://cp81820.edgefcs.net/ondemand/tpn/firstflight/&file=TestLog4.flv

Whats that beeping noise?
From Peter Armstrong

I had heard this story told at the Airline Flying Club bar but did not realise there was actual web footage to go with the story. (Note the movie takes a while to buffer when you click the link.)

http://aeroelectric.com/Pictures/Misc/Whats_that_beeping1.wmv

Glider - Skydiver - Glider
From Peter Armstrong

Peter has a habit of finding some very cool links.

http://www.dailymail.co.uk/news/article-1265891/Hold-think-youre-going-Skydiver-grabs-gliders-tail-fin-fly-2-100-metres-100mph.html

Galloping Ghost Crash
Reno 2011

Much has already been written about the crash of Jimmy Leewards highly modified P52 Mustang 'Galloping Ghost' at the Reno Air Races last week. The links below provide just some of what has been published on the web including video.

The consensus thus far is that the accident was caused by the failure of the port elevator trim tab possibly due to aerodynamic flutter. Whatever the cause the outcome was the worst possible for the Air Racing event with ten spectators and the pilot killed when the aircraft crashed in front of the main grand stand.

Initial posting of photo's showing the missing trim tab
http://corduroyplanet.blogspot.com/2011/09/chilled.html

First person account from a spectator in the stand
http://www.homebuiltairplanes.com/forums/hangar-flying/11072-galloping-ghost-crash-reno-2011-a-2.html

A useful summary from four days afterward
http://airpigz.com/blog/2011/9/20/the-galloping-ghost-tragedy-life-risk-and-the-future.html

News article with video of the crash
http://www.msnbc.msn.com/id/21134540/vp/44576019#44576019

Second video of the crash.
http://www.youtube.com/watch?v=-fruRv6LZos

19 Tips, Techniques & Technology

Delta Pop Aerials
Link from the KR Net

I picked up the following link from a post on the KR Net. This is for a company which specializes in supplying Radio and Transponder Antennas. The prices seem reasonable and the product received an endorsement from a list member. I thought I would list the link in case someone was looking for these. http://www.deltapopaviation.com/Home.html

Metalshapers Association
Learning Center

While researching Aluminium welding I came across this link for the Metalshapers Association website. You may have seen this site before but I thought I would provide the link as the Learning Centre page on the site has some great links for tips and hints.

http://metalshapers.org/learning-center/

Spark Timing Myths Debunked
Link from the KR Net

An interesting article and well worth the read for those with an interest in engine performance.

http://www.innovatemotorsports.com/resources/myths.php

A widely-held myth is that maximum advance always means maximum power. Here's what's wrong with this thinking:

The spark plug ignites the mixture and the fire starts burning. The speed of this flame front depends on the mixture, this means how many air and fuel molecules are packed together in the combustion chamber. The closer they are packed together in the same volume, the easier it is for the fire to jump from one set of molecules to the other. The burning speed is also dependent on the air-fuel-ratio. At about 12.5 to 13 air-fuel-ratio the mixture burns fastest. A leaner mixture than that burns slower. A richer mixture also burns slower. That's why the maximum power mixture is at the fastest burn speed. It takes some time for this flame front to consume all the fuel in the combustion chamber. As it burns, the pressure and temperature in the cylinder increases. This pressure peaks at some point after TDC. Many experiments have shown that the optimum position for this pressure peak is about 15 to 20 degrees after TDC. The exact location of the optimum pressure peak is actually independent of engine load or RPM, but dependent on engine geometry.

Typically all the mixture is burned before about 70 deg ATDC. But because the mixture density and AFR in the engine change all the time, the fire has to be ignited just at the right time to get the peak pressure at the optimal point. As the engine speed increases, you need to ignite the mixture in the combustion chamber earlier because there is less time between spark and optimum peak pressure angle. If the mixture density is changed due to for example boost or higher compression ratio, the spark has to be ignited later to hit the same optimal point.

20 Tips, Techniques & Technology Continued

Spark Timing Myths Debunked Continues

If the mixture is ignited to early, the piston is still moving up towards TDC as the pressure from the burning mixture builds. This has several effects:

The pressure buildup before TDC tries to turn the engine backward, costing power.

The point where the pressure in the cylinder peaks is much closer to TDC, with the result of less mechanical leverage on the crankshaft (less power) and also causes MUCH higher pressure peaks and temperatures, leading to knock.

Many people with aftermarket turbos don't change the spark advance very much, believing that earlier spark creates more power. To combat knock they make the mixture richer. All that happens really then is that the mixture burns slower and therefore hits the peak pressure closer to the right point. This of course reaffirms the belief that the richer mixture creates more power. In reality the flame front speed was adjusted to get the right peak pressure point. The same result (with more power, less emissions and less fuel consumption) could be achieved by leaving the mixture at the leaner optimum and retarding the ignition more instead.

Turbo charging or increasing the compression ratio changes the mixture density (more air and fuel molecules are packed together). This increases the peak pressure and temperature. The pressure and temperature can get so high that the remaining unburned mixture ignites by itself at the hottest part in the combustion chamber. This self-ignition happens explosively and is called 'knock'. All engines knock somewhat. If there is very little unburned mixture remaining when it self-ignites, the explosion of that small amount does not cause any problems because it can't create a large, sharp pressure peak. Igniting the mixture later (retarding) causes the peak pressure to be much lower and cures the knock.

The advances in power of modern engines, despite the lower quality of gasoline today, comes partially from improvements in combustion chamber and spark plug location. Modern engines are optimized so that the flame front has the least distance to travel and consumes the mixture as fast as possible. An already burned mixture can no longer explode and therefore higher compression ratios are possible with lower octane fuel. Some race or high performance engines actually have 2 or three spark plugs to ignite the mixture from multiple points. This is done so that the actual burn time is faster with multiple flame fronts. Again, this is to consume the mixture faster without giving it a chance to self-ignite.

Higher octane fuel is more resistant to self-ignition. It takes a higher temperature and pressure to cause it to burn by itself. That's why race fuels are used for engines with high compression or boost. Lead additives have been used, and are still used to raise the self-ignition threshhold of gasoline, but lead is toxic and therefore no longer used for pump-gas. Of course a blown engine is toxic to your wallet.

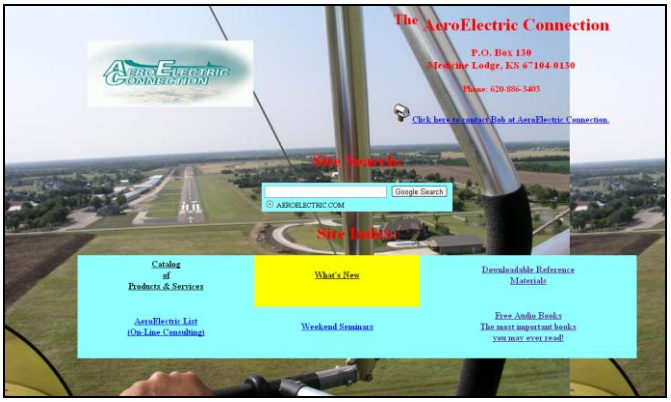
Klaus Allmendinger is the VP of Engineering for Innovate Motorsports, a division of Innovate! Technology, Inc. Innovate develops digital tools for tuning internal-combustion engines.

Bob Nuckols Web Site From Bob Keith

Gavin this is on Bob Nuckols public web site and I used the idea for low oil pressure and alternator failure warning lights on my T18. Too long for the newsletter but useful as a mention

Rob Keith

http://www.aeroelectric.com/



Bob Hoovers HVX Mods From Bob Keith

This is too long to an article but direction to the web site might be of interest. Ian Davis now living at Te Aroha did the mods on his half VW engine but it hasn't done much running so he would not be able to say if they are worth while. I believe a major advantage for aircraft users is that the engine temps will be a lot cooler. The second web site gives some comments about the mods. Bob died last year of cancer I think. He was not the Bob Hoover that used to aerobat the AeroCommander. Ian's half VW engine below.

Rob Keith

Bob Hoover's Blog: HVX MODS

http://bobhooversblog.blogspot.com/2007/05/hvx-mods.html

Better Valve Train Oiling mod.

http://www.volksrods.com/forum/showthread.php?t=33011

HVX Modification With Pictures

http://users.lmi.net/~ryoung/Sonerai/HVX_Mods.html

21 Member Profile –Evan Wheeler

This month's member profile is of Evan Wheeler who is currently the Chapters' Vice President.

Evan Wheeler

Early Years

As with many of us afflicted with the Aviation bug, Evan Murray's interest in aviation started early. Evan has a clear recollection of asking for and receiving a flight in a Cessna 172 for his 10th birthday. He also recalls being told off by his teacher for staring out the window of his Kaihere School classroom at Fred Sawyer's topdressing aircraft as he landed or took off from the airfield next to the school. Growing up on a farm on the Hauraki Plains, he also had the opportunity to see plenty of top dressing aircraft in action.

RNZAF Service

Looking to turn his interest into a career, Evan joined the RNZAF in 1971 at age 17. He enlisted as an Airframe Mechanic with the intention of re-mustering to aircrew after joining. Unfortunately the government of the day decided to introduce restrictions on the amount of flying the RNZAF was doing, citing fiscal constraints, meaing the option of re-mustering didn't eventuate.

Finding himself based in Whenuapai and posted to the Aircraft Maintenance Flight, Evan did depot level maintenance on Hercules and Bristol Freighter aircraft. With the restriction in flying hours however, not many aircraft were reaching the airframe hours required for maintenance and Evan recalls ground crews not really have enough work to keep them busy. To fill in time they worked on there own cars and motorbikes and Evan says he and his mates had some of the best maintained vehicles around.

Evan worked with many well known names from the current aviation world during this time. One of his contemporaries was Rex Kenny whilst Tony Schiska ran the NDT Bay at Whenuapai. Evan was rostered to work in the NDT bay from time to time and got to know Tony well. Tony was into gliding and Evan went up for a few flights accumulating some 5 hours in gliders.

RNZAF 41 Sqn Bristol "Freightner" - 40 thousand rivets flying in tight formation

Post RNZAF Careers

In 1974 one of the other groundies Evan worked with signed up for the Police and told Evan he was going to get a 50% pay rise from 4K to 6K per annum. Given he was not going to be able to re-muster to flight crew and the general lack of challenge with work (read boredom), Evan figured what the hell and decided to sign up for the Police as well.

Evan served 12 years in the NZ Police eventually finishing up in the CIB working on a number of high profile cases. During this time Evan met Graeme Weck after he came to the Police when drugs were found being cultivated on an island in the Hauraki Gulf in which he was a part owner. As Evan recalls, he got to know Graeme well flying over to the island and had a very enjoyable month of fishing, diving and working on the island to sort out the problem.

Looking for opportunities beyond the Police, Evan was asked by a friend if he would like to become a Merchant Banker trading on the stock exchange. Evan told his friend that he didn't have any experience but his mate said that was perfect as he would teach Evan everything he needed to know. Evan took up the role in the mid 80's right around the time the share market was really taking off. There was good money to be made (and spent) and Evan enjoyed himself immensely. Most good things eventually come to an end however and the share market crash of 87 brought these good times to an end.

Looking round for another challenge, Evan was head hunted by a colleague for the role as Group Operations Manager at Bond & Bond. Evan worked in this role for a number of years until being offered the position of Marketing Manager for Rainbows End theme park. Having had enough of the retail industry Evan decided to accept and spent the next two years in this role.

About this time the CEO of Rainbows End decided to step down and he asked Evan if he would take on the role. Evan accepted and found himself as CEO at Rainbows End for the next thirteen years.

Current Career Challenge

During his time as CEO, Evan started his own business, Counties Scaffolding. The business grew steadily such that by 2009 Evan decided it was time the business needed a full time manager. He subsequently stepped down as CEO for Rainbows End in 2009 and has been working as Managing Director ever since.

Evan describes his current role as a bit of a lifestyle position as he can run the business but also has the time to indulge his interest in flying and spend time with his wife and family because he is the boss and it is his company.

Flying Experience

Evans flying experience has been mostly accumulated in the last decade or so after he made the decision to start working towards his PPL in the early 2000's.

Initially he flew with Jimmy Liven at Mercer and quickly built up the necessary flight experience to go solo. However like many would be pilots, Evan had not put time into sitting the flight exams and after completing the initial flying lessons, his training ground to a halt for a couple of years.

He restarted the process again around 2003 but this time sat his exams first at Ardmore Flying School. He then took lessons at Eagle Flying Academy as flying training at Mercer was no longer available and he subsequently passed his PPL in 2005.

Building or Buying

About this time Graeme Weck said to Evan that if he was going to pursue aviation as a hobby he really needed to look at getting his own aircraft so he didn't need to hire aircraft at Club rates. With this goal in mind Evan decided he would look into building his own aircraft and started casting round for a suitable design.

Initially Evan set his heart on the Zenith design and even went so far as to travel to Missouri in the US to have a look through the factory. However also around this time Evan saw an advert for a Murphy Rebel available for sale in Australia. Having experienced Graeme Weck's Murphy, Evan figured that perhaps the quickest way for him to get his own aircraft would be to buy rather than build. In due course WEM was purchased and the aircraft was shipped to New Zealand in 2005.

WEM in profile.

WEM (which by the way stands for "Wheeler Evan Michelle") was built in 1996 on the Gold Coast and was a first of type on the Australian CAA register. It had received a very thorough inspection from the Australian CAA as a result and Evan says it was very well put together.

After the aircraft arrived in NZ, Evan decided to strip the aircraft back to basics before rebuilding it back to near new and make a few changes along the way. He figured it would take him about a year to get the aircraft back in the air but in the end this turned out to be around two years.

Rebuilding WEM

The first thing Evan did was to strip all the paint from the airframe and pull the aircraft completely to pieces leaving just the engine attached to the fuselage. He then worked through replacing all the structural bolts in the aircraft and fitted new windows into the roof of the cabin. He then made and fitted new engine cowls and installed larger wheels to cope with the softer NZ strips.

With the aircraft re-assembled he then gave it to a friend who is a car painter to repaint. This he says in retrospect was a mistake as the aircraft managed to gain an extra 19kg during painting. Evan says he would recommend other builders get their projects painted by professional aircraft painters who understand the importance of keeping weight down.

WEM's Office

The aircraft subsequently received its C of A in 2007 and Evan has since completed some 260 hours of flying in her.

Subsequent Mods

Since receiving its C of A, Evan has replaced the undercarriage bungee cord style shock absorbers with steel spring units. He says inspecting and replacing the bungee cords units was a difficult and time consuming job (read pain in the arse) and the steel spring units, although firmer and less forgiving than the bungee cords, more than make up for this with the convenience of never having to replace the cords again.

Steel Spring Undercarriage

Also in just the last month, Evan has replaced the rear Scott tail wheel with an Alaskan style nylon wheel. This should make taxiing on soft strips much less of a challenge going forward.

The new Alaskan Tail Wheel

Planned Changes

WEM has an empty weight of some 998lbs and a Lycoming 235-116hp engine which Evan says is adequate but perhaps just a little underpowered for some of the tighter New Zealand strips. He says he intends to replace the cylinders in the engine with high compression ones which should give him another 25hp.

Evan is also following other Murphy owners here in New Zealand and looking to install fairings around some of the higher drag components hanging out in the breeze on WEM. This includes the tailplane braces, the undercarriage shock absorber struts and the float attachments.

The elevator brace to be faired.

Ongoing Flying

Having the Murphy based at Patumahoe is very convenient for Evan given he lives just 6km away. He manages to get out and fly about three times a week and is thoroughly enjoying being able to take an afternoon off from work and go flying.

Being a member of the NAG aviation group, he also often joins in the ventures that this group arranges amongst themselves.

He says for the time being he is more than happy with where WEM is based and intends to continue to make the most of the current situation while he can.

Evan Wheeler Profile Continued

ZK WEM off the coast of Raglan.

Classifieds

For Sale – Turbulent ZK-DBN

(From Jon Farmer. Yet another of these 'projects' that people seem to wish on me and I, in turn, wish them on the newsletter !! Regards, Jon.)

For Sale - Turbulent ZK-DBN

Make an offer. A number of years old but has flown about 11 hours. Needs new windscreen and various other 'small' jobs. Contact Ian Williams, 294 8225 or email agcon@xtra.co.nz

ZK-DBN Details

Builder Merv Meredith, Waipukurau
First Registered: 8/3/62, first flew 7/12/64
Sold to Neil Managh of Feilding then Robert Trewavas of Motueka. Crashed Motueka 28/12/71
Rebuilt and sold to A D Stott of Christchurch 13/2/73
Sold to I Williams of Whenuapai. Cancelled 29/8/75
Re-registered 29/5/95 as an Amateur Built Aircraft
Re-designated Class 1 Microlight 23/4/01

For Sale – Foxpine Airpark

Location:	25 Bergin Road, Foxton , Manawatu
Property use:	Industrial
Land area:	139317m2
Rateable value:	$730,000
Price:	Price by negotiation

This is a private airfield which operates 365 days of the year situated on the South West Coast of New Zealand's North Island. After many years of ownership, the vendors are offering this wonderful and beautiful property for sale.

Features include:

- Freehold registered airfield
- Three separate titles - total land area 12.0110 hectares
- All weather grass runway - length 1015 metres
- Hangars available for lease
- Furnished pilots hangar accommodation;
- Tent and caravan sites
- Furnished Pilots Centre/briefing room/owners accommodation
- Sheltered aircraft picketing areas
- AVGAS (10,000 litres) underground tank

Airfield has a strategic position in the aviation industry as a gateway to New Zealand, North, South, East and West.

http://www.trademe.co.nz/property/commercial-property-for-sale/auction-303225068.htm

If members have anything they would like to advertise in the Classifieds section, please send an email with details to gavin.magill@gmail.com.

24 Upcoming Events by Gordon Sanders

Chapter Events

2011

Sept 29 **Chapter Monthly Meeting**
Alan Moselen is a CAA Accident Investigator and will speak on all aspects of Air Accident investigation. Alan is an ex-RNZAF and Air NZ Investigator of Air Accidents. This should be a good talk. Thanks to Evan Wheeler for arranging with Alan to come along.

Aviation Calendar

2011

Every Sat **Dargaville Aero Club**
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.

Oct 14-15 **Flair 2011 Public Days**
Te Kowhai Airfield, Te Kowhai
Aviation industry exhibition, seminars, workshops, displays etc. On both public days there are seminars of wide interest plus workshops for home builders on woodworking, TIG welding, metal working, fabric covering, and painting. Full info at www.nzflair.com. Go to Media Releases > Latest News > 14 Sept 2011 New Event Guide and Program to download an 8-page pdf which includes the full timetable. [Timetable attached below– Ed]

Nov 11 **Walshe Centennial Dinner**
MOTAT, Auckland.
1845 hrs at the new Aviation Display Hall MOTAT. A once-in-a-lifetime event will bring together the full spectrum of NZ Aviation community to recognise and celebrate the pioneering achievements of Leo and Vivian Walsh.
Tickets $120 per head all inclusive. Contact Nev 521 7077 or ann-nev@xtra.co.nz for more info.

Nov 12-13 **13th Black Sands Fly-In**
Raglan Airfield, Raglan
See attached advert below. Contact is Bruce Cooke on 021-112 2364.

Nov 12 **Remembrance Day WW1 Airshow**
Hood Aerodrome, Masterton
1.00 to 6.00 p.m. More info at http://thevintageaviator.co.nz/node.

Dec 4 **NZ Warbirds Open Day**
Ardmore Aerodrome, Ardmore
Pearl Harbour Commemoration.

2012

Jan 21 **Joveux Noel WW1 Airshow**
Hood Aerodrome, Masterton
3.00pm to 8.00pm. More info at http://thevintageaviator.co.nz/node.

Jan 26–30 **SportAvex 2012 & Tauranga City Airshow**
Tauranga Airport, Tauranga
Relocated accommodation and facilities, aircraft parking etc.

Tentative Schedule:

Thu 26th	Arrivals
Fri 27th	Seminars & Flying
Sat 28th	Seminars & Flying
Sun 29th	Airshow
Mon 30th	Fly Home

A fly-out to Whitianga is being planned for Saturday. More info nearer the date.

Mar 4-5 **Warbirds Over Whitianga**
Whitianga Airfield, Whitianga
T51 2012 fly-in, Mercury Bay Aero Club. Light lunch, evening BBQ. Camp on the field or stay at local motels. Evening social with guest speaker John Williams, CEO of Titan Aircraft. Rain date 11-12 March. All welcome.

Apr 06–08 **Warbirds Over Wanaka 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. Much more info at www.warbirdsoverwanaka.com

Apr 28 **ANZAC WW1 Airshow**
Hood Aerodrome, Masterton
12.00pm to 5.00pm. More info at http://thevintageaviator.co.nz/node.

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

Black Sands 2011

The Waikato Thames Valley Chapter of the Sport Aircraft Association of NZ invites all recreational aviators to attend the annual "Black Sands Fly – In"

Raglan Airfield
November 12th and 13th

An Informal, fun get – together for flyers of all types
Barbeque lunches both days
Flying Activities
Plenty of fun for families and non – aviators
Accommodation on Site
Plenty of great dinner options
Some of New Zealand's best flying scenery
What more could you want?...

More Information will be posted at www.saa.org.nz from late August.

SAA N.Z INC

Contact Bruce Cooke,
bmcooke@waikato.ac.nz,
Ph 021 1122364.
Book your accommodation now at
www.raglanholidaypark.co.nz
(please support our hosts)

remember to tell them you are attending the fly – in
Please read the information before flying in – important safety notices are included.