



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

# Sport Aviator

June 2014



[www.saaauckland.org.nz](http://www.saaauckland.org.nz)

# Committee 2014

## EXECUTIVE COMMITTEE

<b>President:</b>	<b>Evan Wheeler</b> 09 238 6081 027 924 807
<b>Vice President:</b>	<b>Warren Sly</b> 09 534 2364 021 266 0585
<b>Secretary:</b>	<b>Gavin Magill</b> 09 298 7174 027 291 0525
<b>Treasurer:</b>	<b>Gordon Sanders</b> 09 534 2364 021 266 0585

## COMMITTEE MEMBERS

<b>Nev Hay</b> 09 521 7077	<b>Don Wilkinson</b> 09 576 5009
<b>Peter Armstrong</b> 09 576 3676	<b>David Campbell-Morrison</b> 09 817 4782

## OPERATIONAL POSITIONS

<b>Safety Officer</b> Norm Bartlett 09 528 0108	<b>Technical Library</b> Sandy Wilson 09 536 4018
<b>Tool Library</b> Manfred Scherbius 09 298 0221 021 081 365 03	<b>Newsletter Editor</b> Gavin Magill 027 291 0525
<b>Catering</b> Carl Pudney 027 430 5303	<b>Airspace Users Group</b> Steve Chilcott 09 625 5273

## TECHNICAL MENTORS

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

### **FRONT PAGE**

The line-up of RV's at the NZ Warbirds D-Day airshow. L-R, Kevin Paulsen RV6 (ZK-PRV), Stephen Jones RV7 (ZK-NVS), Dave Wilkinson RV8 (ZK-WLK), Des Barry RV7 (ZK-DES). Also in display but not in line-up Harry Gallagher RV7 (ZK-LVA), William Luther RV7 (ZK-WLL)

# Contents

- 2 Committee 2013
- 3 Presidents Report
- 4 From the Editor
- 5 Chapter News
- 9 SAANZ Technical Courses 2014
- 10 NZ Warbirds D-Day Airshow
- 12 Taylor Coot Restoration Project
- 15 Mystery Aircraft Quiz
- 16 In The News & On The Web
- 18 Upcoming Events

## Next Meeting

**WHEN:** Thursday 27<sup>th</sup> June 2014 -7:15pm

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

**SUBJECT:** Aircraft Corrosion Prevention

**SPEAKER:** Chris Auret

Engineer ex SAAF and now in NZ running a corrosion prevention service for aircraft and other toys needing looking after.

He completed corrosion treatment on David Wilkinson's RV recently.

An example of the value of this can be taken by comparing Kevin Paulson's engine, now several years old, with any average A/C engine.

Corrosion prevention can be sprayed internally into an airframe, or I think, boat engines, campers etc.

He has physical samples to show us as well as "telling his story".



With the shortest day now gone we are on the rundown to summer. I have managed to get a few hours in over the last month. Great BBQ with South African meats at Mercer the other Sunday. Weather stopped northern aviators coming through but was okay locally for us in the Franklin area.

An interesting email arrived in my letterbox on Saturday with a new venture about to be launched out of Naike just out west of lake Whangahape down Huntly way. A new strip being set up with a welcome to anyone wanting to drop in. Apparently has camping and other facilities which one needs to check on in due course. The location is close to the Naike cave attraction where a one and half hour journey through limestone cave apparently better than the famous Waitomo cave network. Might be worth a group trip in not too far distant future.

I went for a fly down there Sunday afternoon but could not land due to sheep on the runway. Will follow up. The focus of his business adventure however is a double bed set up in a piper Seneca offering anyone who feels the need for a certificate joining the mile high club while flying over the west coast or wherever. Putting that aside, it will be another welcoming destination for any of us to visit.

Talking destinations, I will put in my apology for next month's meeting as I will be away visiting Gallipoli and Belgium battlefields continuing a personal family project then to the far north of Europe.

See you Thursday night

Evan





Hi Everyone

As I write this it is June 21<sup>st</sup>, the shortest day, and the days certainly do not seem to have much time in them to accomplish things in daylight. That said the

upside is that from here on in we are now on the countdown to summer 2014/2015.

With the AGM behind us the Chapter is now ready to face the coming year. The Committee met before the AGM last month and we have agreed to look into organising a couple of flying events in the lead up to summer this year.

Proposals on the table include looking at hosting the September Chapter meeting at North Shore airfield on a weekend day instead of the last Thursday of the month. Also Don Wilkinson is investigating whether the Chapter could re-visit the Composite Helicopters facility again. A good chance for those that missed out last time.

A second proposal on the table is a Dawn Raid at Mercer airfield sometime in October. The committee will be in contact with Mercer Airfield management to see if this can be arranged.

Finally we are also looking at having a wives and partners function which will be a non-aviation event. Details are yet to be finalised but we are looking at an afternoon lunch somewhere followed by some sort of other activity. I will keep you posted as to when and where.

On the flying front things have been pretty quiet for me. ZXZ has been down for maintenance for the last four weeks and this is taking longer than expected due to work commitments. Having started a new contract in the CBD I find

the amount of time I have for getting out to Ardmore is somewhat limited. I am flying ZXZ down to Tauranga this week to get the Solo Wings guys to carry out the five yearly replacement of the rubber components in the engine. Phil and Colin will no doubt look after her well.

The mystery aircraft from last month was correctly identified by Bob Keith as the PZL M15 Belphegor. Barry says the Belphegor was "a Polish attempt to build a more modern replacement for the Antonov AN-2 in the topdressing role. I believe it holds the record for being a) the only jet-engined biplane ever built, b) the slowest jet ever built (VNE only 108 knots), and c) the world's only jet agricultural aircraft. Needless to say it was an unmitigated flop."



This month's mystery aircraft is up so have a go and see if you can identify it.

Enjoy the newsletter.

See you all on Thursday

Cheers

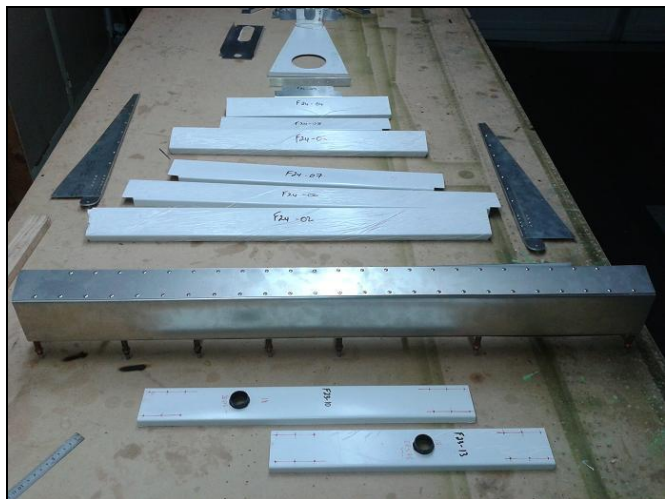
Gavin

## PROJECT UPDATE

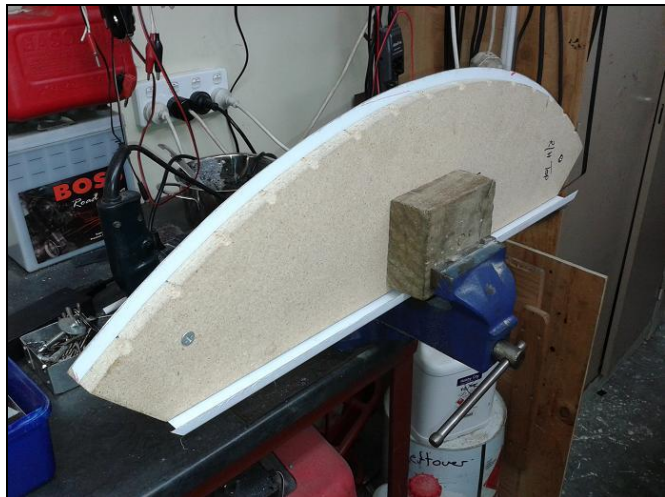
## Gary Briggs – Sonex #1531 Update

**By Gary Briggs**

Since the last update I have spent a lot of time making parts for the fuselage.



The turtle deck formers are probably the most time consuming components in the build so far. Each one has to have its own wood form block. I hope to start assembly on the fuselage soon.



I have also found a serviceable "new style" crankcase for my Rotax 912ULS whereas my engine has an "old style" crankcase which tend to sometimes crack, (as mine did). I will also need a stud kit for the new crankcase as the old has different lengths to the new one.





## PROJECT UPDATE

## Paul Blackmore – Sonex

**By Paul Blackmore**

ZK-PDB continues to inch towards becoming airworthy. Weight and balance was recently completed giving an empty weight with oil of 303.5 kg, which is about right for a tricycle gear Sonex with paint, transponder, radio etc. Next steps are engine runs and final survey.



## PROJECT UPDATE

## Gavin Magill – Zenith CH601 ZXZ

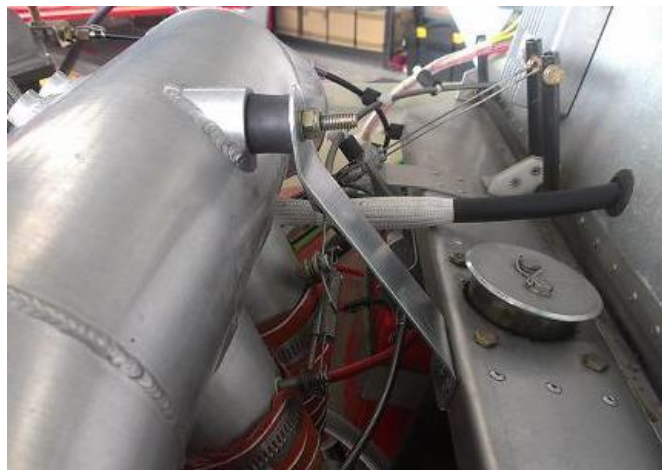
**By Gavin Magill**

ZXZ has recently undergone a bit of maintenance forward of the firewall recently. A small oil seep had started and after much searching was found to be caused by a loose pipe clamp on the inlet pipe to the oil cooler.

While searching for the oil leak however I also noticed the bracket at the back of the engine attaching the air box to the firewall had cracked and broken.



I fabricated a new bracket and fitted this to the engine.



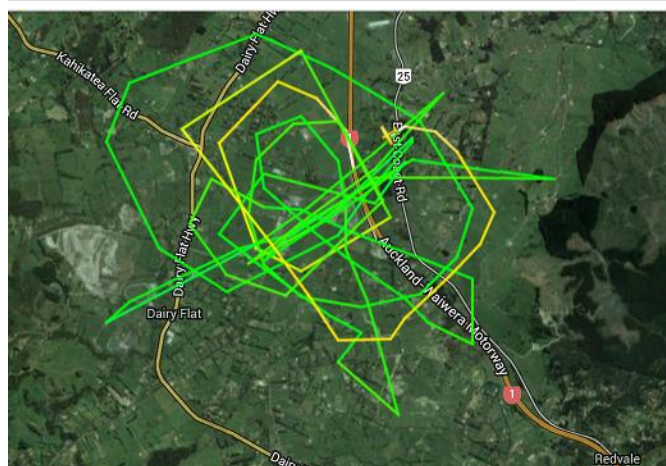
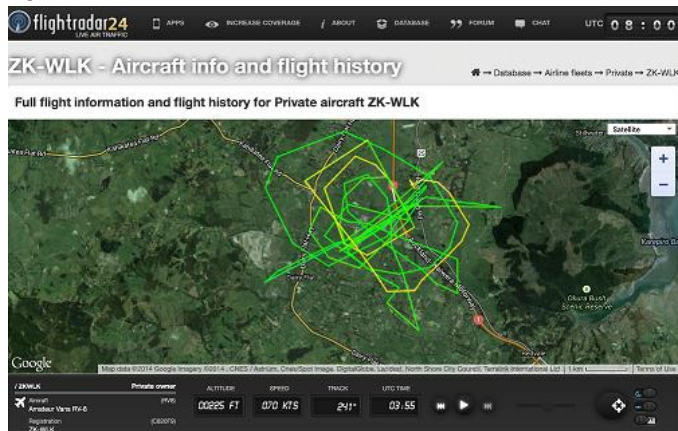
Since fitting this both Kevin Paulsen and Colin Alexander from Solo Wings have both commented that this bracket is a poor design and should really be attached to the engine, not the firewall. Colin said to expect it to break again.

ZXZ is currently at Solo Wings in Tauranga having the Rotax engine rubber components and engine driven fuel pump replaced as they have a five year life and are overdue to be replaced. This should all be complete by June 28.

## MEMBER NEWS

## ZK-WLK Transponder Track (28 May)

By Dave Wilkinson



## MEMBER NEWS

## Barry Gillingwater

By Gavin Magill

As some members will be aware Barry Gillingwater recently went into hospital for an op to remove a portion of his bowel. Barry sent an update email last week to say the op went well and he is on the road to recovery. He wrote.

"The lump in the length of bowel removed was not cancerous, although definitely pre-malignant and would in all likelihood have turned 'evil' within a year. Holes in the tum (5) have all healed well and I am slowly regaining strength and mobility. Also took out the length that has the appendix so I can guarantee I'll never get appendicitis. All in all a pleasing result."

## ARDMORE NEWS

## Military Operating Area Incursions

By Steve Chilcott

As the Airspace User Group liason for the Chapter, Steve Chilcott received the following email from the Ardmore Unicom. If you use Ardmore airspace please take note.

Hi Everyone,

*I have received a complaint from a senior officer in the NZDF regarding a number of aircraft that infringed Military Operational Area (MOA) M200 south-east of NZAR while live firing was in progress and flares were in the air yesterday afternoon (Friday 20/6/2014).*

*We have had several complaints from the Army over the last few months regarding aircraft infringing M200.*

*Could you please remind your pilots that M200 is restricted airspace and is permanently active day and night up to 1700ft AMSL (currently). According to the officer there are only two days over the next month where there is not going to be live firing. The area is used by the military extensively day and night for live firing and explosive demolitions.*

*You should also be aware that Ardmore Airport Ltd and the Ardmore Flight Operations Group (AFOG), following our submission to CAAs airspace review, are currently negotiating with the NZDF a Memorandum of Understanding that will hopefully permit limited access through M200 when the boundaries change with the new chart issue. The north-west boundary of M200 will be relocated closer to Ardmore with a vertical limit of 2300ft AMSL. (see link below)*

*Having pilots infringe the existing MOA does not help our case; not to mention being hazardous to the aircraft involved.*

*Auckland Airspace Review – additional request for NZM200 Papakura amendment  
Thank you for your assistance.*

*Kind regards*

Allan Bostock

General Manager

Ardmore Unicom Services Ltd



## PIKES POINT NEWS

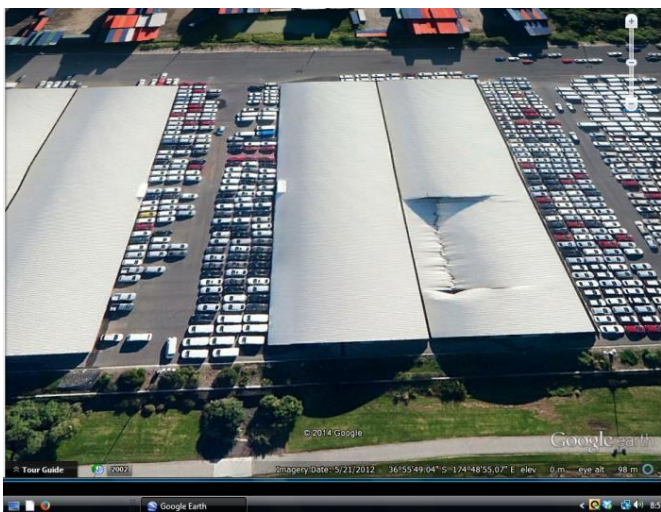
## Pikes Point

**By Nev Hay**

Whilst looking at a nearby address I thought I would look at Pikes Pt to see what was happening.

Check out the attached 2012 Google Earth image. I wonder what happened?? It looks expensive.

Do you think it could be the work of Zeus – the God of flight???



## AIRFIELD NEWS

## Naika Mike High Club

**By Bill Hancock**

We would like to inform you that final stages of the \*Naika Mile High\* Club is near completion.

In around 3 months we will have the grand opening of our new extended runway.

But in the meantime, Graham and Amanda welcome you to come out and have a look for yourself at the great Naika experience.

Free camping, stay as long as you want. Bring the sleeping bag, bring the tent, cabins available. Kitchen, with all cooking facilities.

Visit our website, it has all the details. We will keep it regularly upgraded.

We welcome all your ideas and feedback...

<http://grahamsmilehigh.wordpress.com/>

Bill Hancock (Project Manager)

## MEMBER NEWS

## 787 Brake Assembly

**By Gary Briggs**

Some info on the B787 brake assembly.

It has 4 electric brushless motors which are connected to a gearbox each. They drive a ballscrew actuator which can produce a clamping force of 6.5 tons each. That's 26 tons total force on the heat pack. The brake uses 130 volts DC and when the aircraft is parked and shutdown, the brakes will adjust themselves for up to an hour for cooling as the brake shrinks.

The heat packs rotors and stators are made out of carbon to keep the weight down, but they still weigh around 120 kgs each.



## PROJECT UPDATE

## Pearce Replica

**By Nev Hay**

Nev provided the following link to a Radio NZ interview that Ivan did recently.

<http://www.radionz.co.nz/audio/player/2598957>





**SPORT AIRCRAFT ASSOCIATION**  
www.saa.org.nz  
**NZ Inc.**

## Winter Technical Courses 2014 Omaka Airfield - Blenheim

SAANZ is pleased to announce the following training courses. We extend a warm invitation to anyone interested in the subjects – you do not have to be a SAANZ member to attend. The courses are being held at the Marlborough Aero Club, Omaka Airfield, Blenheim. The Marlborough region offers a huge variety of interesting activities for families and partners, and the airfield itself is home to the superb Aviation Heritage Centre. Registration is essential for all courses; please see below for the contact details.

**26<sup>th</sup> – 27<sup>th</sup> July 2014**

### **Microlight Maintenance Essentials**



Owners of microlight aircraft are entitled to carry out ongoing maintenance on their own aircraft. This course aims to empower owners who have not built their aircraft or had other aviation industry experience with the knowledge of safe aircraft practice. The aviation industry has some odd quirks which are known to catch out even those with an experienced mechanical background. We will look at technical best practice, the legislative environment, recording maintenance and legal responsibilities. As with all SAA courses, we keep the tone informal and practical, with lots of hands – on interaction and practical examples.

**Cost \$120.00 (SAA Members \$100.00)**

**2<sup>nd</sup> – 3<sup>rd</sup> August 2014**

### **Introduction to Homebuilt Aircraft Construction** **(The “Pre-Build” course)**

Constructing a homebuilt aircraft is a serious undertaking – but also an extremely rewarding endeavour. If you are considering the leap into homebuilding, this is the course for you. This is an intensive but fun 1.5 day course covering all the useful things to get you enthused and ready to cut metal or wood. This covers factors to consider when starting a project, aviation best practice, hardware conventions, what you are allowed to do, setting up your workshop, documentation and dealing with CAA. In addition specialist workshop session with experienced builders will introduce you to the fundamental techniques of the main construction methods. This is strongly practical and will use some of the great projects underway at Omaka as examples. There will be plenty of time for asking questions of our experienced presenters. Be warned – you will come out with a strong desire to start building!



**Cost \$120.00 (SAA Members \$100.00)**

**For more info and to register: e-mail [admin@saa.org.nz](mailto:admin@saa.org.nz) or phone 09-4050553**  
**Prior registration is essential – places may be limited.**

Courses start 9am Saturday and finish early – Mid afternoon Sunday. Bring writing materials. Tea and coffee facilities on site, Lunches can be purchased on the day.

Phone : (09) 405 0553  
Fax: (09) 405 0553  
(phone before faxing)

National Administrator  
Adrienne Fillery  
[admin@saa.org.nz](mailto:admin@saa.org.nz)

870 Omaunu Road  
RD 2  
Kaeo 0479

# 10 NZ Warbirds D-Day Airshow Photos



The apron at Ardmore reminiscent of Ohakea in the 80's



The Venom from Tauranga paid a visit.



Doug Brooker flew his Spitfire and his MX2.



Dave Wilkinson and Des Barry launch for the RV display.



Des Barry performed his solo aerobatic display.





# 11 NZ Warbirds D-Day Airshow Photos



Kevin Paulsen leads in the RV's after their display.



The Roaring 40's performed their excellent routine.



Chipmunk and Ryan display.



Yak 3 roles on take-off.



The Ryan in profile above. Yak 52 Below,



DH aircraft displays above and below.



# 12 Taylor Coot Restoration Project

The story so far...

In 2014 Mercury Bay Area School students will embark on a second aviation project, once again under guidance from members of the local community. The new project is the restoration of a Taylor-Coot amphibian aeroplane and will be significantly different from the building of the new VANZ RV12 the school completed last year.

The Taylor-Coot project is a direct result of the RV12 project. The plane has been donated by Martin Farrand, a friend of Alan Coubray, who's a member of the Mercury Bay Aero Club and who acted as the test pilot of the RV12. A team of mentors led by Jim Evans headed to Kaipara Flats, dismantled the wings and brought the plane to Whitianga.

MBAS and the Mercury Bay Aero Club have now formed the Mercury Bay Student Aviation Trust and the plan is for this Trust to own the Taylor-Coot and sell it once it's restored. It's projected that the amphibian plane will generate sufficient profit to buy another RV12, or similar, kitset for another new-build.

All these new developments are very exciting and offer the possibility of aviation engineering or aviation studies as an ongoing option for students attending MBAS.

"At the moment students participating in our aeroplane projects can gain NCEA Level 1 credits through the Gateway work-readiness programme. If we can have an ongoing aviation programme, we hope to attract students from further afield. It really will be something that will set us apart from many other schools, not only in New Zealand, but around the world. It will also add to and enrich our existing range of unique learning opportunities, like our marine academy and marine science, outdoor education and horticulture courses." Karlos Bosson, teacher in charge of the aviation project.

A key component of the success of the RV12 project was the involvement of members of the community who guided the students and acted as their mentors and the success of the RV12 has resulted in approaches from people other than the RV12 mentors who are eager to help.

The Taylor-Coot which is being restored is registered ZK-ECL. It was built in New Zealand in 1975. It changed hands in 1991 and Martin became its owner in 2004. The plane is of a low wing design, making it a stable aircraft and unlikely to capsize during take-off and landing.

<http://www.mbas.ac.nz/index.php/events/special-programmes/taylor-coot-project>



# 13 Taylor Coot Restoration Project



## Mercury Bay Student Aviation Trust Taylor Coot Project Restoration Log

Date	Hours	Number of students	Job reference
7 May 2014	12.30-4pm 4-5pm	6 6	Removing the fuel tank from the cockpit. Stiffening lightening holes. Pressing out new skin panels for the elevators.



### What's happening this week?

This is the first week back for Term 2 and the team is revitalised from the holidays. After a motivational brief from Jim we launched into this week's tasks. Kiel, Bernadine and Oliver are taking parts out of the cockpit. At the same time Stormi, Ruby and Emily are working on parts that need to be pressed out on the Hydraulic Press.

### Removing the fuel tank from the cockpit

All of the images on this page are related to the removal of the fuel tank at the rear of the cockpit. In images 1 and 2 you can see Kiel about to lift the tank out. Oh it won't move! Hang on. There are two pipes under here! Image 3 shows that once the pipe unions were disconnected, the fuel tank came out easy peasy. Easy does it Brian.

A moment of triumph! Kiel hoists the tank above his head to prove that they met the time limit imposed by me. They had to have the tank out before afternoon tea.





# 14 Taylor Coot Restoration Project



## Stiffening lightening holes

Here Emily and Ruby are removing the ribs from the horizontal stabiliser. These parts are sanded and the lightening holes in the ribs are stiffened by pressing the edge of the hole to form a flange. In the next image Stormi is helping Ruby to attach the flange forming tool before it is taken to the hydraulic press.

## Pressing out new skin panels for the elevators

The last three images show Emily working with Alan Coubray and Ruby to press out the new skins for the elevators. As you can see, the flat material is lined up in a die that forms a crease at determined intervals. Each sheet needed seventeen creases for the specified length.

In the last image the male part of the die has been removed and you can see the crease that was formed.

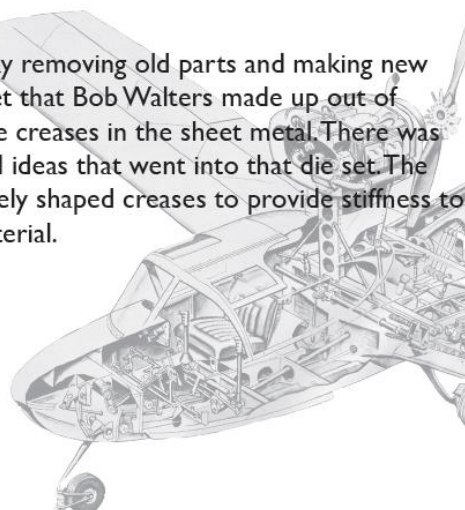


## Final Word

It was a productive day removing old parts and making new ones. I liked the die set that Bob Walters made up out of hardwood to form the creases in the sheet metal. There was a lot of discussion and ideas that went into that die set. The end result formed nicely shaped creases to provide stiffness to the surface of the material.



Karlos Bosson





# 15 Mystery Aircraft Quiz by Barry Gillingwater

A test for all those plane spotters out there.

Identify the mystery aircraft in the picture below and email your answer to the editor at [gavin.magill@gmail.com](mailto:gavin.magill@gmail.com) before the next Chapter meeting and the first person to correctly identify the aircraft will earn themselves a chocolate fish prize.

Note you will need to turn up to the meeting to collect your prize. ☺



## ON THE WEB

## Beaver Video

From Nev Hay

Hi Guy's

You both might be interested in this one doing the rounds again if you did not see it last time

Nev

A very cool video about the Beaver...

[https://www.youtube.com/embed/3w\\_v0k57KhE](https://www.youtube.com/embed/3w_v0k57KhE)



## ON THE WEB

## Cheap Flights

From Norm Bartlett

May or not be interesting. - Norm

Make sure you watch past the first applause because it keeps going... watch the red line on the bottom if not sure. Make sure you watch right to the end. Good Laugh

<http://www.youtube.com/embed/HPyl2tOaKxM>



## ON THE WEB

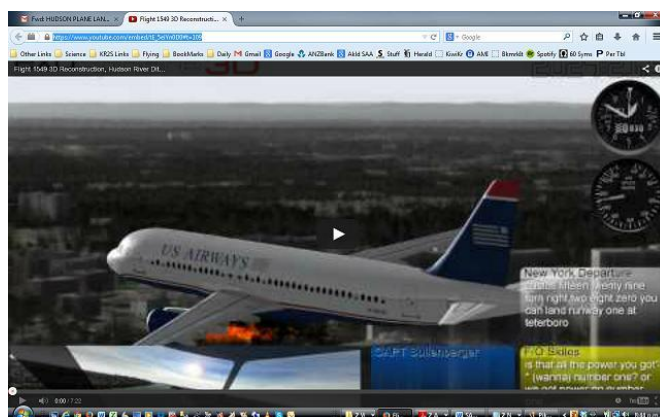
## Hudson Plane Landing

From Bob Keith

There are some other good videos after this ends.

Black Box Generated View of Hudson Plane Landing

[https://www.youtube.com/embed/tE\\_5eiYn0D0#t=109](https://www.youtube.com/embed/tE_5eiYn0D0#t=109)



## ON THE WEB

## Inflight Movie

From Robin Hickman

The hummingbird doing rolls chasing a bee is not to be missed. Be sure to watch closely (around 2 min 40 sec) and check out the baby bat under its mother. If you never knew what goes on in the garden, you'll know after watching this !!

Some of the finest photography you will ever see.

<http://www.youtube-nocookie.com/embed/xHkq1edcbk4?rel=0>





## ON THE WEB

### Old Video Site

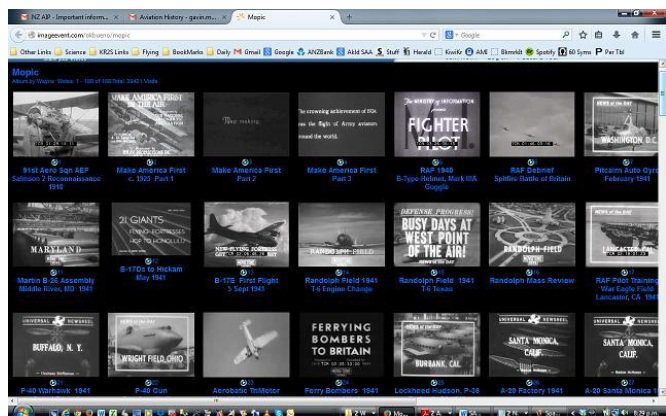
**From Nev Hay**

Hi Gavin

Here is a site that will give hours of 'lost time'

<http://imageevent.com/okbueno/mopic>

Nev



## ON THE WEB

### Space Jump From 125,000 Feet

**From Norm Bartlett**

Breathtaking photography.

Hold your breath & watch this, also watch the Odometer as the speed increases and then decreases as he enters the earth's atmosphere. What a view!

First-Person-View Of Felix Baumgartner's Space Jump

<http://www.flixy.com/first-person-view-of-felix-baumgartners-space-jump.htm#.Uu5KxEhDi7Q.gmail>



## ON THE WEB

### X47B

**From Bob Keith & Robin Hickman**

Just a few months ago (July 10, 2013), the Navy successfully conducted take-offs and landings from a fairly new nuclear aircraft carrier, the USS George W Bush, with a new stealth jet called the X-47B.

What is so different about this plane is the fact that it is a 'drone'. Yes, it is completely unmanned. Drones come in all sizes, and the X-47B is likely one of the larger ones.

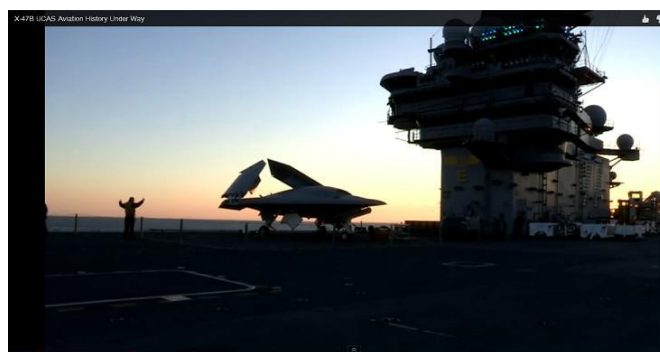
What is so ironic about all of this is, the fact that the enemy cannot detect a plane like this in the first place. In the unlikely event they get lucky at shooting one down, there will be no human loss of life or captivity.

As you view the flight deck crew signalling the plane, they are simply signaling the on-board cameras, who in turn are being manned by staff inside the command intelligence center (CIC) onboard the ship.

Also check out the short distance this plane needs for a takeoff. Impressive indeed.

X-47B UCAS Aviation History Under Way

[http://www.youtube.com/embed/WC8U5\\_4Io2c?feature=player\\_embedded](http://www.youtube.com/embed/WC8U5_4Io2c?feature=player_embedded)



**Jun 29 Auckland Chapter**  
**Speaker:** Chris Auret  
**Title:** Aircraft Corrosion Prevention  
 Engineer ex SAAF and now in NZ running a corrosion prevention service for aircraft and other toys needing looking after.

**Jul 31 Auckland Chapter**  
**Speaker:** Gary Allport  
**Title:** 737 Pilot with Jet connect  
 Will tell us of his career flying Carabou's for the UN in Africa. Oversize Bush plane flying.

**Aug 28 Auckland Chapter**  
**Speaker:** Grant Benns (tentative)  
**Title:** Aerobatics  
 The NZ Aerobatic Club, getting started in aerobatics, how it is judged and the skills and disciplines involved.

## Aviation Calendar

2014

**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 on the web at [http://www.flyingnz.co.nz/club\\_pages/dargaville.html](http://www.flyingnz.co.nz/club_pages/dargaville.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.

**3<sup>rd</sup> Sun Turangi Aero Club Fly-In**  
**Each** All welcome for a BBQ lunch.  
**Month** Contact Tony on 027-453 3740

**Jul 11-13 AOPA NZ Winter Fly-In Omarama**  
 Take your thermals (underwear, not air currents) if attending, you'll need 'em. More info at [www.aopa.co.nz](http://www.aopa.co.nz).

**Jul 27 EAA Airventure**  
**Aug 3 Oshkosh Wisconsin**  
 Full info at [www.airventure.org](http://www.airventure.org).

## Aviation Calendar

2014 Continued

If members are aware of other events that could be of interest to others please pass the details to Gordon Sanders - [gordon@sanders.gen.nz](mailto:gordon@sanders.gen.nz).