

BRISBANE VALLEY FLYER

MARCH 2013



Watts Bridge Memorial Airfield, Cressbrook-Caboonbah Road, Toogoolawah, Q'LD 4313.



Mal McKenzie's pristine Skyranger Swift, waiting to get air under its wheels for the first time.

On Tuesday 5th February 2013 Greg Robertson completed the first test flight on Mal's new-born. By all accounts Greg is fine and the new one is thriving. See page 4 for details.

- Brisbane Valley Flyer -

Greetings fellow members, I'm Rob Knight.

Let me introduce myself.....

First, I am a pilot. I grew up on a New Zealand farm in the 1950s and 60s with a crazy urge to fly. Employed by my parents', my wage was minimalistic and I turned to writing to provide an income to support my flying addiction. As a result, in the period 1967 – 68 I was commissioned to provide numerous articles for overseas aviation magazines including the *Plane and Pilot Magazine* in Santa Monica, California. The proceeds from these writings went a long way towards paying for my CPL training.



I did my CPL at Ardmore in Auckland in 1969 when I enrolled as a student on Course One of the NZ College of Aviation. With a flash new CPL in my pocket, my first career move was in the crop-dusting industry but I became disillusioned and left the industry soon after my buddy, friend, and mentor was killed in a dusting accident. I was engaged to be married at that time and it dawned on me that a wife was a better prospect than a widow so I started a second career, this time as a flying instructor.

For the following nine years I worked for the Waitemata Aero Club at Ardmore, and then a further five years in Hamilton (NZ) as CFI, first with the Waikato Aero Club and then with the Rukuhia Flying Club. In 1984 I was appointed Chief Pilot/Chief Flying Instructor for the Wellington Aero Club Inc. in New Zealand. At this time I was also a contracted Flight Examiner for the New Zealand Civil Aviation Authority issuing and renewing pilot licenses and ratings.

Alas, like all good things, it came to an end. I was forced to retire from commercial flying in 2000 after a motor accident left me unable to renew my Class 1 Medical Certificate and I couldn't retain my Commercial Pilot Licence. Absolutely lost, I took to writing and photography to try to fill the gap.

In 2001, whilst managing the Aviation Theory Training Section at The Open Polytechnic of New Zealand, I took up the additional position of Illustrator and provided photographs, drawings, sketches and cartoons for many of the courses offered by this tertiary college. I also ran photography courses for other staff members. I was still writing; at this time I also published books on Meteorology, Flight Theory Training, and Flying Instruction in both fixed wing and gyrocopter aircraft.

I now work in Brisbane where I am employed by an international company as their Senior Technical Writer and I run a photography business as a sideline. I still fly, although now as an RA-Aus pilot. I hold a number of endorsements including that of an RA-Aus endorsed Ground Instructor – alas my diabetes won't allow me return to flying instruction in spite of my pile of 8 logbooks spanning 47 years, recording nearly 10,000 flying hours. Oh yes, and I still write books.

Now that you know who I am, I'd like to know about you. My Email address is kni.rob@bigpond.com and my mobile is 0400 89 3632. If you are building an aeroplane get in touch. I'd like to see it and write it up to for the FLYER to display your hard work and endeavours. If you own one that is flying, how about we do a report on it and make a feature out of it? If you have it based off-field from Watts Bridge, I'd love to fly in and meet you – I used to fly off strips for a living and still enjoy it.

I need your help to provide interesting and informative articles. If you have an item of interest which can be an article you have written yourself or an idea for me to take up, please contact me. I am also keen to hear of any aviation items that you want to sell – I'll advertise them for you.

My contacts, again, are:

Email: kni.rob@bigpond.com,

Tel: L/L 07 5467 3148, Mobile: 0400 89 6463.



**WATTS
BRIDGE
MEMORIAL AIRFIELD INC.**

25th May 2013
9:00am ~ 4:00pm

Catering By: Beyond Limits
Supporting youth for education

All-In Fly-In 2013

All pilots and aviation enthusiasts are invited to the Watts Bridge Airfield Open Day, showcasing the diversity of all forms of recreational aviation.

The All-In Fly-In is an all day event with on-field catering and coffee available.

Entry is free with no landing fees.

Aviation fuel is available on the airfield.

CONTACT

Richard	Liz
0412-317-754	0419-369-963

Or visit the website for more information.

If it flies - It's welcome at Watts Bridge !
www.wattsbridge.com.au

Or visit the website www.wattsbridge.com.au

(If you haven't been to one of these you can't know what you've missed)

- Brisbane Valley Flyer -

Test Pilot Report Maiden flight Skyranger Swift 19-8082.

I have never thought it a good idea to do the initial test flight in an aeroplane that you have just completed. That is unless you are very current and very familiar with the type.

Mal McKenzie has the same belief so he asked me to do the initial test flight in his brand new Skyranger Swift for him. All just part of the service you might say but having seen Mal's workmanship and attention to detail, I was sure that it would be a pleasure.



8082. Why are we waiting?

Mal built the Swift in the same hanger that houses my Nynja at Watts Bridge, so I had watched the entire build. I was happy with the meticulous work he had done and the test flight preparations, system

checks, engine runs and taxi tests had all gone without a hitch.

With so many Skyranger Swifts and their Nynja sisters flying all over the world, their flying characteristics are well known and I am no stranger to them having a Nynja of my own, so this test flight was not like test flying a completely new design. Nevertheless, there are still plenty of things to go wrong and even more to look out for so I treated the exercise with considerable care. To treat any flight let alone the first flight ever made by a newly built aeroplane casually is only to court disaster.

Malcolm and I had agreed that Tuesday 5th of Feb would be the day as long as the weather co-operated. Although it dawned a bit cloudy, the wind stayed away and the conditions were quite flyable. 8082 got a very thorough pre flight by both of us and we put 30 litres of fuel into the tanks - enough but not too much. I didn't want the machine weighed down any more than was necessary. After start-up the engine ran very sweetly and a thorough check on all the new systems showed everything operating exactly as it should. I advised the traffic that I intended to do several taxi runs prior to letting air get under the tyres and moved out onto the runway.

Three taxi runs were sufficient, with my allowing 8082 to accelerate to a slightly higher speed each time. On the 3rd run I actually allowed her to get up to flying speed. The wind was not ideal as there were several knots of crosswind from the right to contend with. I had planned to do a short hop down the runway and allow the plane to settle again but the cross wind made me reconsider. However there are very few planes that handle a cross wind as well as a Skyranger so there was no real concern. I decided to do without the hop.

The first take off was angled across Watts Bridge's wide runway to get as closely into wind as possible. With



Greg on his return. What a lovely little aeroplane.

full throttle 8082 took to the sky and climbed out at 1000 fpm with the ASI nestling sweetly against 70 knots. As I climbed I ran through the initial test procedure To my great pleasure and Mal's credit, 8082 handled just as I expected her to, apart from wanting to fly with her left wing a little low. I left full power on and did a spiral climb over the field to 3500 feet to check that the temps and pressures stayed where they belonged and, sure enough, they all remained well within limits.

I carried out stalls, both clean and with full flap, and again there were no surprises. 8082 stalled as expected with a slight nod but with no wing drop. A clean stall (no power, no flap) occurred at 35 kts

- Brisbane Valley Flyer -

IAS and full flap stalls at 29 kts IAS. At her MTOW I would expect her to stall at 39 and 34 kts respectively.

In the cruise I found that Mal had his prop pitched a tad too fine and the maximum straight and level speed was only 95 kts IAS. I would expect that, with some adjustment to the prop pitch on the ground, this will increase to 100 to a 105 kts at 5500 rpm. This would be the typical maximum level flight IAS for a Skyranger Swift with a Rotax 912 ULS. Achieving this will give a cruise speed of about 90 knots at 5000 rpm.

I returned to the hanger and congratulated Mal. He is now the proud owner of a very nicely built aeroplane. He has a few little things to adjust but that is what the 25 hour test flying period is for all about. Congratulations Mal. And Happy flying.

There are nearly 1500 Skyrangers and Nynjas flying all over the world and more, as Mal shows, are joining their ranks. Their flying characteristics are well known and much loved which is why they are used by so many flying schools overseas, especially in France and the UK. I congratulate Mal on joining the Skyranger Swift ranks and I wish Mal well in all his future flying in 8082. He has put together an aeroplane to be proud of.

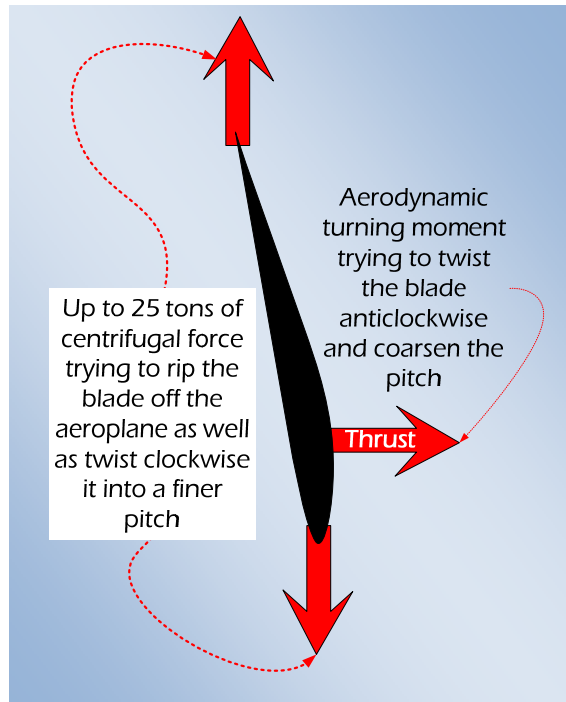
Greg Robertson.

Shining up your prop

Your propeller is one of the highest stressed components on your aircraft. During normal operations centrifugal force applies between 10 and 25 tons of effort trying to pull your blades off your hub. At the same time, the aerodynamic forces on the blades are adding bending, flexing and twisting loads due to thrust, torque, engine, aerodynamic and gyroscopic vibratory loads. While a properly maintained propeller is designed to function in spite of these loadings, when propeller components are damaged by corrosion, stone nicks, tip damage, etc., additional stress concentrations beyond the design limits can be imposed rendering design safety margins quite inadequate. The potential result of such excessive stress is propeller blade failure or crankshaft bearing failure due to vibration.

**What was that?
25 tons of force on the
propeller did you say?**

Figures published by the US FAA indicate that prop failures occur across the entire gamut of aircraft engine-propeller combinations from highly sophisticated turbine engined machines to basic, fixed pitch ultralight aeroplanes. So, what should we as proficient pilots be doing better to protect ourselves and our machines? What should we be looking for?



Centrifugal forces try to both tear a propeller apart and twist it into a different pitch.

First we must identify damage. While this is not always obvious, an inspection of your propeller blade should not reveal any nicks or pits to either the leading or trailing edge. This type of damage results in several undesirable changes to your propeller operation.

First it creates inefficiency so you lose thrust and therefore performance. Your take-off runs will lengthen and both your rate and angle of climb will reduce. The propeller will also suffer added vibration which further loads the blades as well as the bearings in the engine, and in the gearbox if your aeroplane has one.

The propeller blade is an aerofoil and as such has a centre of pressure acting from its cambered surface. This is never at mid blade chord so there is always a twisting force present whilst the propeller is functioning. If either edge is damaged, the blade will no longer meet its design strength and part of a blade may, over time separate. The resulting propeller

- Brisbane Valley Flyer -

imbalance is quite capable of completely removing an engine and cowling in flight which will do terrible things to your centre of gravity and therefore controllability. Obviously, tip damage can, over time, have the same result. It really doesn't bear thinking about, does it?

However, for loss of propeller performance, damage doesn't have to be present. Just dirt, quick-dried slow insects, and bits of dried wet grass stuck to the blade face can provide a noticeable reduction. These attached foreign bodies disturb the airflow where a smooth airflow is the name of the game.

When crop-dusting, cleaning the propeller tips and blade faces at lunch time could reduce the take-off distance afterwards by 30 feet. When there was only 10 feet of runway left as the aeroplane flew off in the heat of the day, that extra 30 feet was pretty important. It's also important for YOU to have the performance you expect.

So what was it that we should look for? Apart from always having wooden propellers horizontal when the aircraft is parked or hangared, all propellers must be checked thoroughly and frequently to ensure there is no damage and any damage discovered should be repaired, or at least checked and cleared by an appropriate engineer before flight. Obviously the materials from which the propeller has been manufactured will be another factor in the repair or otherwise. Metal propellers suffer corrosion issues which have hair-raising consequences if unresolved. However, whatever the materials in question, some owners get peace of mind from having their propellers balanced periodically. Not only does this help keep it all running sweet up at the sharp end, but removing the propeller is a perfect opportunity for a complete examination.

You can also give your prop a wash every time you clean your windscreen. Get rid of all that wind-blown dust-and-dirt-and-insects-and-grass and leave it all smooth and shiny so it can do its job properly.

For an extensive treatise on this topic, GOOGLE *FAA Aircraft Propeller Maintenance*, and click on the advisory circular [PDF]. It does make for very sobering reading.



Irreparably damaged wooden propeller blade.

FLY-INS Looming

Sat/Sun March 09/10	CLIFTON - Darling Downs Sport Aircraft Assn Fly-in
Saturday March, 16:	STRADDIE fly-in-for-breakfast. These are great – I have attended same in the past.
Sunday May, 05:	TOOWOOMBA - David Hack Classic Aircraft and Vehicle Meet.
Sunday May, 05	CHILDERS - ISIS Fly-in (poster in next month's issue).
Sunday May 5th	INGLEWOOD – 2013 Fly-in [TBC]

QUESTION: Why don't we have a trip away ourselves? We could have a trip to Ballina and a tour through Howie's Lightwing factory. Or we could go to you tell me! Contact me with your suggestions and I'll do a mail-out and see what numbers we can get. kni.rob@bigpond.com.

Alternatively, we could arrange to have a quick jaunt down to see John Walmsley at Coominya, a time that suits John. With a picnic lunch that could go very well indeed.

- Brisbane Valley Flyer -



Mystery Aircraft

What is this aircraft? Last century a number were imported into Australia as crop duster/sprayers.

Email your answer to me at kni.rob@bigpond.com

Photo Competition

Send me up to two (2) images to enter the BVSAC Photographic Competition. The rules are simple, no photographs may have been published before, and the photographs must be aviation related. Two winners will be selected each month, first and second. First place prize will be the honour and the glory of being selected the winner, and the second prize will be the glory and honour of nearly making the winning place. High res images would be preferable, just email them to me at kni.rob@bigpond.com. Maybe we could make up a calendar next year using the winning shots?

Joke for the Month

On roll out after instructor demonstrates an approach and landing

Jack-ass Student: "...You were a bit to the right of the centreline on that approach."

Instructor: "You are absolutely correct; and you were a bit to the left while I was doing it".



FOR SALE

1 only camera bag. Slingshot 300 AW. Used just once. Can be worn on the back or on the chest for easy camera access. Has room for 1 or 2 DSLR camera bodies plus lenses and filters.
\$120.00

Contact Rob Knight 0400 89 3632 or email

kni.rob@bigpond.com

Also selling assorted tripods and filters.



- Brisbane Valley Flyer -

BRISBANE VALLEY SPORT AVIATION CLUB Inc

MINUTES OF THE 2nd FEBRUARY 2013 GENERAL MEETING

MEETING LOCATION:	Watts Bridge Memorial Airfield – BVSAC Clubrooms
MEETING DATE:	2 nd February 2013
MEETING OPENED:	10:25 AM
MEMBERS PRESENT:	17
APOLOGIES:	Liz Cook, John Innes, Dave Watson
VISITORS:	Max Bain
NEW MEMBERS:	Nil
MINUTES:	November meeting of the BVSAC Inc. Proposed: Richard Faint Seconded: Mike Smith Acceptance motion carried.
PRESIDENT'S REPORT:	Neil reported that the Christmas Party 2012 was a great success. Thanked Peter Freeman and Richard Faint for procuring and erecting the BVSAC signage at the Watts Bridge entrance.
SECRETARY'S REPORT:	Richard advised that the new newsletter editor is Rob Knight and gave a brief summary of Rob's aviation background.
TREASURER'S REPORT:	Priscilla advised the BVSAC Bank Account Balance is \$10,695.55 and provided a summary of the major income and expenditure items.
WBMA REPORT:	WBMA President Bruce Clarke advised the airfield is still too wet for any flying. Bruce spoke to the WBMA requirement that to be at the airfield a person needs to be a member of WBMA because they are using the airfields facilities. He suggested that clubs needed to clearly explain to prospective members the WBMA membership requirements, so that there is no misunderstanding about the need for a BVSAC Member to also be a WBMA Member to regularly attend BVSAC meetings.
BUSINESS ARISING:	Nil
GENERAL BUSINESS:	Neil advised he will not be chairing the next meeting and will appoint a replacement. Mike Smith spoke to several articles in the February Newsletter. He went on to propose the club write a letter of thanks to the outgoing editor Arthur Marcel for his exceptional effort with the club newsletter over the last 4 years. Motion moved Mike Smith, seconded Peter Ratcliffe. Motion carried. Richard discussed fair usage of the BVSAC Mailout Forum. Scott Meredith addressed the meeting about the flood devastation in Bundaberg and advised of a charity he is organizing to supply much need supplies to the people who have lost all. Donations of equipment, consumables or cash will be gladly accepted. Richard appealed to the members to help the newsletter editor by supplying stories, photographs, whatever. A discussion followed regarding what content would be of interest to readers of the newsletter. Suggestions included, Club Activities, Member Activities, a section called "Notes from the Work Bench", a Q&A Section "Bill's Baloney", Member advertisements for aircraft and materials, an Event Calendar for the SE Queensland area, an interesting aircraft "Picture of the Month", a "What The F**" photograph which invites readers to submit humorous captions and comments, Flying Articles, Cartoons such as those in Kit Planes and Barn Stormers. Several members requested there be no political content.
NEXT MEETING:	2 nd March 2013 in the BVSAC Clubrooms Watts Bridge at 10:00AM
MEETING CLOSED:	There being no further business, the meeting was declared closed at 11:00 AM A BBQ lunch was held after the meeting.