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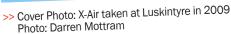


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President's Report

ROD BIRRELL

Handing over

Ramp checks

RAMP checks are one of those police-type functions that some aviation authority officers seem to love. Ramp checks, however, are also universally disliked by pilots. The reason is the premise, that the pilot is guilty until proven innocent. Officials with flouro jackets, ID tags, and dark sunglasses check your paperwork, pilot certificate, endorsements, flight plan, fuel calculations, maps and their validity - and the list goes on.

They claim it improves flight safety for Australian sport pilots - unfortunately this has not been substantiated by any independent study. Alternatively that it keeps away the rule breakers. There is no evidence, either, that this occurs. Using the telephone and SMS, many pilots just avoid the times that the ramp checks are being conducted. And it's the safety conscious pilots who have begun to stay away from RA-Aus events because they know there will be ramp checks. Most pilots do not like the embarrassment of a ramp check, even if they believe they have followed all the rules.

So what is the result? Because of the ongoing CASA compliance checks at public events, private fly-ins (sometimes known as feral fly-ins) have started springing up. All arranged by email or SMS, known mates only, away for a day or a weekend without any hassles. This is not good for our sport, or flight safety, because no one

knows what is going on outside the closed circle.

At RA-Aus we need intelligent flight safety initiatives, not more ramp checks. Pilots universally support education seminars when they are available. I hope and trust we can encourage more of this type of safety initiative from CASA to improve pilot skills and knowledge. I submit we need more intelligent CASA flight safety initiatives, and with respect, less time and taxpayer's money spent on counterproductive ramp checks.

Compulsory Biennial Condition Reports

RA-Aus has been in consultation with CASA over Level 1 maintenance qualifications and the proposal for compulsory biennial aircraft condition reports. It's not completely settled so I can't give you a definitive answer, however we will need to provide testing and checking for Level 1 holders and we do not expect to be obligated to implement compulsory Biennial Condition Reports (BCR) for RA-Aus aircraft. The cost of the BCR would have been in the vicinity of \$1,000,000 p.a. for aircraft owners and our administration. With our ever-increasing costs and little additional income it's a relief we have an optimistic outcome expected with at least one of these issues.

President Retires

Last year RA-Aus was in trouble. We were faced with an effective ultimatum from CASA to either $\ensuremath{\mathsf{CASA}}$

meet their RAAO (Recreational Aviation Administration Organisation) requirements or walk away from the administration of our sport. We allegedly had senior aviation representatives describing RA-Aus as dysfunctional, showing signs of allowing 'jobs for the boys' and that administrators should be appointed. It was a not a good place for us to be.

Not wanting to see our organisation fall over, I stood for the President's position. With some really dedicated work by our GM, our Managers and some hard work from a number of key Board members, RA-Aus has managed to stabilise its position and secure its role as a competent and capable RAAO.

The Board members of RA-Aus are all volunteers. The workload increases as your responsibility within the organisation increases. As they say, you realise the commitment when you stand for the position, so I have no complaints. As I now manage three aviation related businesses, I am really getting burnt out. So it's time for a change of the guard. No politics - it's just time for me to go. By the time NATFLY is held there will be a new President (I will remain as a Board member). I wish the new President well continuing the task of looking after the best interests of the organisation and all its members. I also look forward to meeting many of you at NATFLY.



Calendar, of events



24-25 April

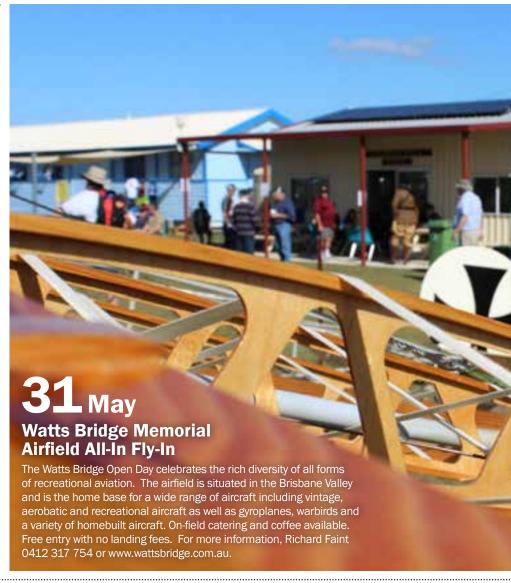
Easter Fly-In Starke Field, **Townsville**

Accommodation, camping, food, music, ample aircraft parking. For more information, Steve O'Donnell 0414 304 893.

26-27_{April}

Bjelke Petersen Dam Weekend Fly-In

Burnett Flyers will conduct their first weekend fly-in to a private strip on the banks of the BP dam. Lunch provided Saturday, camp oven dinner Saturday night plus breakfast Sunday. No landing fees. There is also a grassed area among the gum trees to put up a tent. Relax, fish, swim, take a canoe for a paddle or watch the birds. The airstrip is 900m. There will be ground crew. Call on 126.7 if you have trouble finding the strip (S 26.21.3 E 152.01.2). For more information burnettflyers.org or ralphdeb05@activ8.net. au or (07) 4168 6248.



26-27 April

Jindabyne Aero **Club Open** Days/Fly-In

S211 jet high-speed fly past and manoeuvring display. Adventure flights, TIFs. Vintage, experimental and model aircraft on display. Full catering. For accommodation 1800 245 141. For more information, 0400 196 115 or 0467 783 011.





23-25_{May} **Old Station Fly-In, Air**

Display & Heritage Show

The Capricorn Helicopter Rescue Service will again be the beneficiary. Open to aircraft of all sizes and designs. Highlights include a truck show with the public judging 'The Truck of the Show', tractor pulling events and lots of heritage gear on display and working. Biggest drawcard this year will be Australia's Red Bull Air Racing Champion, Matt Hall. Matt will speak at the Friday night dinner and conduct displays over the weekend. The Roulettes have also been invited. Booking for Friday night dinner essential. Camping under the wing with showers and toilets available, but no power. For more information, Leonie Creed (07) 4934 6562 or 0438 346 563.



Casino Beef Week Fly-In Muster

Part of the Casino Beef Week Festival. A fun weekend on and off the aerodrome. Fly in Saturday for Beef Week activities including main street parade, whip cracking, rodeo competition. On Sunday a Family Fun Day next to the aerodrome - kids activities, damper making, entertainment and more. Flying, adventure flights and aviation chat all weekend. All amenities at the aerodrome including catering, sausage sizzle, coffee and cake. For more information, Russell 0427 627 477, Debbie 0438 627 607 or www.casinobeefweek.com.au



7-8 June

Queen's Birthday Fly-In

Sunraysia Sport Aircraft Club will hold its annual Fly-In at Wentworth Airport. The popular club room dinner and social evening will be held on Saturday with a three course meal. Book accommodation early. For more information, Brian Middleton 0408 690 650 or brianmiddleton12@ceinternet.com.au.



Burdekin Fly-In

At YAYR. Come and experience the dry tropics. Glorious scenery, massive river system. Great crabbing & fishing. Good fellowship. Camping or courtesy bus to town. Rotary Club Community Day Sunday. For more information, Richo 0429 144 921 or www.burdekinflyin.com.au.

May Wings Over Illawarra

Illawarra Regional Airport, Albion Park Rail. The theme for this year's event is Centenary of Military Aviation. For more information, www.wingsoverillawarra.com.au.

4 May **Isis Flying Club**

Childers Wings & Wheels. Dinner provided Saturday for early arrivals. For more information, Chip 0407 645 682.







LETTERS THE EDITOR

From the president

Dear Editor, Thought this would make your day. Regards **Rod Birrell**

Ed - It did.

Rod.

I have had an opportunity to read the full February 2014 edition of Sport Pilot and I think it is the best ever.

I know it is personal what views one has to opinions, but it was very good, including extra sales/market section.

Well done team, Gary Rowe

In praise of GPS

Joshua Schuessler quoted some research about the inaccuracy of 'cheap' GPSs like the iPad (Sport Pilot February 2013). He said he was worried about using an inaccurate GPS when navigating 'to narrowly avoid controlled airspace'.

I have recently started flying with an iPad Mini on my knee using one of the great local Apps. I have used both my phone (using XCsoar) and my iPad (SeeYou Recorder) to record .igc log files of my flight which I then view on Google Earth. These plots typically bring me right on to the runway in the satellite view, so I have a pretty high confidence in their GPS accuracy. But I was very interested in Joshua's quoted research so I downloaded the paper and read it.

Yes - a Garmin GPS is about eight times more accurate than an iPhone. But the average error of the iPhone (in this test) was 8.3 meters (1.0m for the Garmin). The maximum error was 18m (1.4m for the Garmin). I am sorry Joshua but if you are trying to narrowly miss CTA by less than 18m using your GPS you are a brave pilot.

I should note - I usually fly a low-wing aircraft so GPS performance in a metal-skin high wing might be different, but you can do your own tests in your own plane. I also have an external GPS if needed and I imagine it has more Garmin-like accuracy.

The iPad I use for flying was not chosen because it was cheap - I actually thought it was pretty expensive. It provides a fantastically increased situational awareness. The chance of me inadvertently doing the wrong thing is much lower when I am using the iPad (and yes - I have my paper maps open and cross check). I can find the information I need much faster on the iPad so my head down time is reduced. Even if the GPS error can be up to 18m, that is still orders of magnitude better than I can judge looking out the window at the ground.

I don't understand why there is so much aversion to the adoption of this fantastic technology. I hear ATC trying to warn VFR pilots they are about to enter CTA and I can't help but think 'well they don't have an iPad on their knee.' Rather than blindly resisting with pretty groundless arguments (I thought the Ops team's response to some articles last year was very weak), our organisation should be pushing to develop integrated training programs for these great (CASA approved) tools so more pilots use the technology appropriately and without the guilt that seems to be applied today. **Barry Hendy**

From myths author

Thank you to all those who responded to my series of articles on aeronautical myths (Sport Pilot September, October, November 2013). It's great to see so many intelligent, knowledgeable pilots willing to contribute to this interesting discussion. The good news is that all those who disagreed with me are right, and so was I. I hope you don't mind me explaining what I mean in detail.

Sam Todhunter's defence of the Bernoulli Principle is valid, although the bit about air going upwards causing lift is incorrect. Newton's law applies, but it doesn't matter what happens in to the air around the wing, whether the air goes up down or sideways. What matters is what each parcel of air is doing once the wing has passed. In all cases, to create lift, the air has to be lower after the wing has passed.



However, the myth that I busted was not 'lift is caused by Bernouli's principle', but '..top is curved... has further to go... so goes faster... Bernoulli...'. I think the single image in that article which shows the air at the top and bottom of the wing do not meet up, is enough to bust this myth. Something else is going on. David Houston gave a great explanation of Bernoulli's Principle, which is very good at describing lift, especially when using area integration as David implied.

But I'd like to take it right to the basics. Bernoulli quantifies, but does not explain, lift. Why does a wing generate lift? Because the pressure above is lower than below. Why the pressure difference? Because air is faster above and lower below, so Bernoulli applies. But WHY is there a difference in

air speed? The answer, as described by both myself and David, is that the air below is slowed by Newtonian impact, and the air above is sucked backwards into the space where the air has been removed by the bottom of the wing. You really do need to think of the air molecules to get to this last point. Newton's laws really are the bottom line here (no pun intended), with air thrown downwards and the aircraft staying up.

Cory Jeacocke's image of a wing is very informative, but note the wing displayed is not at zero angle of attack. If you look at the chord line (from the middle of the orange glow to the trailing edge), the wing has a very definite positive angle of attack. A flat plate with the same AOA will also generate lift, although (as David Houston explains) the lift will not be as high and the drag will be higher. Notice the streamlines just above and just below the wing have both dropped nearly one streamline distance. There is definitely a downward deflection of air, both below and above the wing. Newton rules!

Finally, David Daniel is quite right about yaw. To accurately describe the rolling effects of yaw you have to include dihedral, yaw velocity (wing speed) and rudder force. But the dihedral force dominates by at least an order of magnitude. The quote from Stability and Control is quite right, but describes only a small part of the cause of roll. So for the average pilot, the following statement is correct: 'yawing causes roll mostly because of dihedral'. To say it is caused only (or even mostly) by the difference in wing speeds is just plain wrong, and I believe I have busted that myth.

Thanks again to all who contributed to this lively discussion.

Thomas Bisshop

Ed - Thanks to Thomas for the series. Because of the amount of discussion he generated with just three myths, I've asked him to consider busting even more.



I just wanted to pass on my thanks to the North Queensland regional representative, Ross (Maj) Millard. He helped me when no one else could (diagnosing an electrical problem is no easy feat). Through his experience,



perseverance and professionalism he came to the rescue for me.

It's good to see our reps getting out there and helping the members. Thanks Ross.

By the way that's me back in the DTA Voyager 912S with the Dynamic 150 wing.

Graham Pemberton

Pig Latin

Congratulations on resurrecting our magazine and keeping the standard high.

I would like to comment on Professor Avius.

It seems to me that he is having trouble keeping up with the work load of providing a column each month and is going for the high tech research information, which is all well and good, but does it apply to RA-Aus pilots?

Most of us are aware of spatial disorientation, even if we do not recognise the name. Plus it is always good to learn something new.

But his latest column (*Sport Pilot* February 2013) is going to have us worrying about what our senses are telling us - unnecessarily in my opinion. That is OK and Instrument pilots will know it all anyway. He didn't think to mention that the Attitude Indicator is also fooled just after take-off.

What really upsets me is that, in putting his point of view (that we need to keep our heads still when manoeuvring), he may be encouraging us to fly contrary to our training.

I was always taught to keep a good lookout, especially before and during a turn. How does restricting head movement in a turn help safety? In the Professor's view we obviously can't see what is happening because our ears are blinding us. It all seems to be the old pig Latin saying 'Excreta taurus frustratum'.

Ian Borg

L1 Maintenance

I am totally perplexed as to how we are going to get the L1 or any other kind of maintenance training as required by CASA, considering the number of pilots who will need to do this (Tech Talk *Sport Pilot* February 2014).

I have been trying to get on a course for two years now and almost made it last year. But due to the popularity and over-subscription of these courses, I am still waiting. There appears to be nothing else out there that will do. I am an owner/pilot and desperately want to do the right thing. Are there any plans to provide this training and if so will it be available to the regions?

Ingo Steppat

Response from the Tech Manager - The new courses will be openly available to all RA-Aus members. We understand the roll out may take some time, but as you will see from this issue (Sport Pilot April 2014) there is a clear

and defined path that will address the short fall in training requirements and will allow you to operate. CASA is aware of the current plan to roll this out and has been working to provide an alternate means of compliance. While we work on the current plan, we also have the intention to become an RTO as well. All notifications will be communicated to the members via Sport Pilot, the web and mail outs.

Insurance issues

(To the General Manager)

I'm sorry but I found your email disrespectful and insulting (Email followed announcement of changes to RA-Aus insurance policy – *Sport Pilot* News February 2014).

Why weren't FTFs given notification in advance of the changes to be made?

Isn't it disrespectful that RA-Aus had not communicated to CFIs and FTFs the change to liability insurance until after the insurance was removed? I do not think I missed any communication from your office and I have learnt just now from your email, that FTFs have no liability insurance.

On another note, I am not sure what cover was previously applicable to FTFs and what is missing now the cover has been removed. Being a CFI and a paying member of the organisation I have insurance. One of my student pilots with paid RA-Aus membership has it also. Almost 95% of all schools are one man operations with an occasional student or two. So what was that FTF's mysterious "...up until now, ... afforded the full benefits of our Member Liability insurance cover without contributing to the annual premium cost".

What was it and what supposedly are we missing now? I think it is a reasonable expectation, when one is asked to pay money, to have an explanation as to what the payment is for. It is particularly crucial when dealing with insurance policies with tons of small print, loopholes and handy for insurers 'exits' written between lines.

The issue of insurance is one aspect of your email. Another is an expressed general view that FTF's do not contribute to RA-Aus.

Statement ..."FTFS and SFTFs make no recurrent financial contribution towards the organisation's running costs".

This may sound right from your point of view, but is far from reality and insults operators of small schools where CFIs cannot break even financially and, in fact, invest money earned elsewhere to supply services to RA-Aus and its members.

I was hoping the RA-Aus board and management would recognise that schools are servicing RA-Aus and not the other way around.

You get new paying members from nowhere

else but schools. You send members to schools for BFRs. You ask schools to pass on operational changes, new regulations and procedures to pilots and former students. In a normal world whoever supplies a service is paid for it. In the recreational flying world it is somehow opposite. Why? Is it because schools are called commercial operations? Is it because facility owners get rich from training students and TIFs?

I think it is worth having a closer look at the financial situation of CFIs and schools since you are going to ask schools to pay extra money for fees and service charges.

I looked at my school's financial performance over the past four years and found out, on average, the school turned over between \$27,000 and \$48,000 a year - with running costs related to the school operation being just over 50%.

It left between \$13,000 and \$24,000 what could be called profit. Since I am a full time instructor and the school is available for training every day, that is my taxable income. I asked a couple of other instructors running similar schools to look at their finances and they came with figures comparable with mine. How does that stand against the average Australian wage of \$72,800?

The conclusion is simple. I constantly add from my earlier savings and my spouse's wages to survive and to run my flying school.

Paying for auditing a school? Auditing is done to satisfy regulations imposed by RA-Aus requirements with which I agree and obey. But if you want to check me or my school, you do it at your cost. I am not asking for an audit and am definitely not going to pay for one.

Extra payment for FTF membership and not having member liability insurance extended for one man schools adds to an already unsustainable situation for most of the 172 RA-Aus schools.

If any of your proposed changes takes effect, I will most likely close my school. Charity work has its limits.

I believe it would be in the interest of members and RA-Aus management to maintain a current status quo of FTFs and reinstall Liability Insurance at no extra cost to CFIs.

Richard Tabaka Byron Bay Microlights

Response from the GM - Space doesn't allow here for a full response to all eight questions, and nor is there sufficient time, before publishing (for me to try and get all these answers for you from the Board). I can however offer the following comments:

Advance notice - I agree with you that FTFs should have been given advance notice of this change. Renewal discussions were initiated some months in advance however, the final

LETTERS TO THE EDITOR

decision (vis-à-vis renewal terms) was delayed.

What are we missing? - FTFs have been covered by our Members Liability policy since 2009. It is a requirement of the Group Purchasing Body Legislation that we notify all members if they are or aren't currently covered by the Association's Liability policy. I am unable to account for why this never has occurred, prior to my February 2014 notice.

Fees for FTFs and SFTFs - At its last AGM the Executive undertook to review all the Association's prescribed fees and charges. This particular matter is scheduled to be discussed by the full Board in the coming weeks, before determination at the Natfly Board Meeting.

Online log books

As to online log books (Editor's Choice Sport Pilot October 2013) I think these responses to me from CASA answer the question clearly. **Michael Swan**

From: CLARC@casa.gov.au

Subject: RE: log book [SEC=UNCLASSIFIED] **Date:** Tue, 17 Dec 2013 00:17:17 +0000

UNCLASSIFIED

Hi Michael,

Thank you for your email. Unfortunately CASA requires that you will need a paper log book. This is because if you need to supply us with certified copies of your logbook we need those copies to be of your paper file.

If you have any further questions please do not hesitate to contact us.

Regards,

Amy Tipler

Licencing Processor - Flying Operations Team - Permission Application Centre (Canberra) | CASA

From: Mailbox.FCLTechnical@casa.gov.au Subject: FW: log book [SEC=UNCLASSIFIED] Date: Tue, 14 Jan 2014 00:06:54 +0000

UNCLASSIFIED

Michael

Not legal for a tablet, stick with paper logbook for now. You may log with an electronic logbook as per our definition as follows:

Requirement to hold a log book

A pilot must keep a personal log book [Civil Aviation Regulation (CAR) 5.51]

A log book consists of a number of pages permanently bound together in such a way that pages may not be replaced or removed;

An electronic record is not acceptable as

a log book, however, a computer printout bound together in the form of a log book and maintained up to date is acceptable;

All manual entries to the log book must be made in permanent ink;

This log book is to be produced to the Civil Aviation Safety Authority (CASA) when requested;

Falsification of a log book is a criminal offence;

There is no regulatory requirement to carry a personal log book on a flight.

Miles Harris | Snr Assr/ASR Flying Operations Team - Permission Application Centre (Canberra) | CASA

NATFLY judging

In my mind the main objectives of the aircraft competitions at NATFLY are:

- to recognise the excellent work carried out and achievement by the builders involved;
- to encourage owners of high quality aircraft to display their aircraft at NATFLY for members and the public to admire and create interest;
- to encourage new builders to also bring their aircraft for display.

During the early 1980's I owned Skybolt VH–DDO which was a small biplane built to the state-of-the-art, with most metal parts either polished stainless steel or chrome plated, with paintwork and finish to match and powered by a Lycoming IO 540 260hp engine.

This aircraft attracted attention where ever it went and did much to promote sport flying and amateur building. It won prizes where ever it was exhibited (Mangalore 1983 and 1984 and prior to that when owned by the late D Darbyshire).

I know from experience the cost and effort required to maintain an aircraft like this in mint condition and can understand the disappointment and frustration felt by previous winners, when they were disqualified at the last minute after all the preparation.

On the other hand, it has been evident that in more than a few cases awards have gone to the same aircraft repeatedly. This can make new builders apprehensive about entering their aeroplane.

I believe there is a compromise solution which may fulfil all the objectives.

Instead of 'Disqualifying Federer' as was stated in a letter to the editor (Sport Pilot May 2013), elevate the winner to a 'Masters' class, along with all other winners from the past years and judge them to find a winner of the Masters.

This would encourage new builders to enter their aircraft and should result in more entries and interest in the competition, while at the same time encouraging previous winners to attend, compete and show what can be achieved.

I do not think this would be dumbing down the level of competition, but would enable builders with less experience or resources to compete at a more reasonable entry level rather than having to compete with Federer in their first match.

Let's face it. To build any aeroplane to completion and fly it is a major achievement for anyone and worthy of recognition. More exhibits would mean more interest and promotion of the sport.

Graeme Serjeant

Ed - There was an announcement in Sport Pilot (March 2014) that previous winners would again be eligible this year.



Got something to say?

The state of the organisation is reflected in the Letters to the Editor columns.

The more letters – the healthier the organisation.

So don't just sit there – get involved. Your contributions are always welcome, even if no one else agrees with your opinion.

The Editor makes every effort to run all letters, even if the queue gets long at certain times of the year.

editor@sportpilot.net.au

(By the way – the Editor reserves the right to edit Letters to the Editor to shorten them to fit the space available, to improve the clarity of the letter or to prevent libel. The opinions and views expressed in the Letters to the Editor are those of the individual writer and neither RA-Aus or Sport Pilot magazine endorses or supports the views expressed within them).

NEWS



New Executive

SINCE Rod Birrell's announcement that he was stepping down from the President's role and resuming his position as an ordinary board member (see President's column this edition) the Board called for nominations for a new President.

There was only one nomination and on March 12, the board announced that the role of President would now be filled by Michael Monck.

Michael, Rod and the rest of the board have since been working to transfer responsibilities in a timely manner.

Tony King has since taken over the Secretary's position and Jim Tatlock remains as Treasurer.

NEW ASSISTANT OPERATIONS MANAGER



RA-AUS has a new Assistant Operations Manager.

Neil Schaefer defeated a record field of 26 applicants for the position.

The interview panel of Operations Manager Jill Bailey, General Manager Mark Clayton and CEO of Regional Aviation Association of Australia (RAAA) Paul Tyrrell chose a short list of five candidates to interview. However this was reduced when one became unavailable because of personal commitments. The panel reports the calibre of applicants was outstanding, with any of the four assessed applicants capable of com-

pleting the job requirements.

Neil has been involved in aviation in one form or another since 1976. He started out gliding with the New England Soaring Club, before moving to hang gliding, trikes, parachuting and eventually RA-Aus aircraft.

Neil has held an RA-Aus CFI approval for more than three years and in November last year was appointed as an RA-Aus Regional Operations Coordinator.

RA-Aus staff welcomes Neil to the team and wishes him all the best in his new role. He was due to begin work on March 17.



Happy birthday 912

ROTAX will celebrate the 25th anniversary of its legendary 912 engine family with a big fly-in.

The only thing is that you will have to be in Austria to attend. The fly-in on June 5-7 will be at Austria's Weis airport and will be held in cooperation with the Aero Club Weisse Moewe Wels.

Rotax says if you are in the area you will be able to meet passionate Rotax pilots from around the world, visit the BRP-Powertrain factory in Gunskirchen and see where Rotax engines are developed and produced and be able to join Rotax pilots for the ultimate celebration dinner on Friday, June 6.

It's a long way to go for a party but if you are in the area, detailed information like how to register, GPS coordinates of the airfield Wels, hotels etc. can be found at

 $\label{linear_http://www.flyrotax.com/additional/rotax-fly-in_2014/Information.aspx.} http://www.flyrotax.com/additional/rotax-fly-in_2014/Information.aspx.$

Holiday closures

MEMBERS are reminded that the Head Office will be closed on the following days.

Friday 18 April 2104	Good Friday
Saturday 19 April 2014	Easter Saturday
Monday 21 April 2014	Easter Monday
Friday 25 April 2014	Anzac Day



Young Pilot winners

by Paul McKeown

HE Young Pilot Scholarship was a company initiative of the Recreational Flying Company at Gympie in Queensland (it is not part of the GYFTS program).

We invited applicants between 15 and 25 with a passion for aviation to undertake a selection process including an interview, a written story and a flight test.

The winner was award a full RA-Aus Pilot Certificate course of 20hrs flying training and 10hrs theory. The two runners up were awarded part scholarships of five hours flying training each.

We are pleased to announce that the winner, Callum Jerrett, has completed his Pilot Certifi-

cate. He passed with flying colours.

Both runners up, Max Clark and Tim Williams, have used their five hours, done additional flying and both have now achieved their first soles.

The team at the RFC is incredibly proud to be supporting young Australians with a dream to fly. We were incredibly impressed with the dedication and enthusiasm of all participants in our Young Pilot Scholarship program and congratulate the successful candidates on a very fine performance.

For more information, www.recreationalflyingco.com.



Did you know that you can now buy Avgas at Warwick (YMIO) in south-eastern Queensland, or that mogas might soon be available airside at Albury (YMAY)?

These are just snippets of the vast knowledge which remains largely uncollected, and undiscoverable, for the bulk of our members. For the most part you wont find this information in either your ERSA, or in AOPA's Country Airstrips Guide or National Airfield Guide.

But just imagine how much easier flight planning would be, and how much safer flying might become, if you did have access to this largely unwritten lore. Ralph Burnett (the person behind YMAY's mogas initiative) is keen to try and move this beyond the realms of fantasy, and with your input, we just might be able to transform this initiative into a reality.

What we envisage, initially, is an interactive online map, similar to that which already records the location of our current members (see http://www.raa.asn. au/?page_id=5025&preview=true). That's the easy bit. What's needed now is the content (i.e. location, contact, and fuel type details). Over to you. Inputs to office2@raa.asn.au.





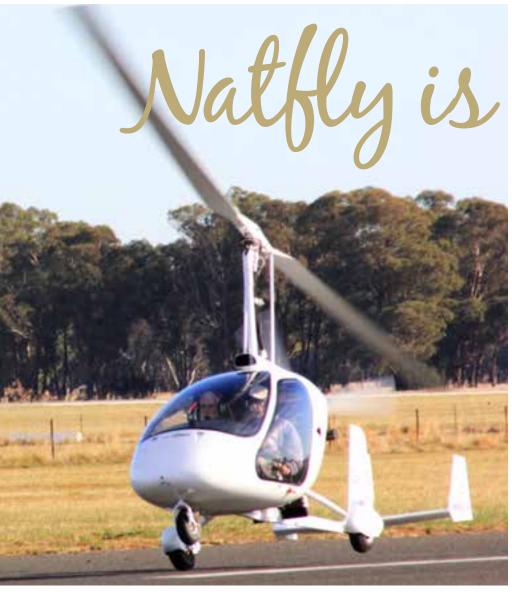


>> Top, full scholarship winner Callum Jerrett with Paul McKeown and Marty Power of the RFC; left, part scholarship winner Tim Williams with Peter Stanton of the RFC; and right, part Scholarship winner Max Clark with Peter Stanton of the RFC









NATFLY Temora April 17-20

ots to see and do at NATFLY. Here's some of what you'll miss if you're not there:

Flying displays

- •Formation aerobatic display by Paul Bennet
- •Solo aerobatic display by 2009 Australian Unlimited Aerobatics Champion, Paul Bennet;
- Solo aerobatic display by Red Bull Air Race pilot Matt Hall;
- Spitfire flying display;
- Model jet flying display;

Forums and presentations on a huge variety of aviation related topics

- •Pilot decision making and risk management;
- •When to trigger an EPIRB or PLB and what happens when you do;
- •Rotax engine maintenance;
- •Weight and balance workshop;
- How to repair fabric:
- How to work with fibreglass;
- •What's involved in building an aircraft.

O&A sessions with the people who run RA-Aus

Technical Manager;

- Operations Manager:
- •General Manager:
- ·Board.

Hands on opportunities

- •Trial Instructional Flights for \$50;
- •Cessna 172 simulator flights with a GA instructor - half hour for \$50;
- Propeller balancing have your prop balanced by a professional for less than \$200.

Trade show features all sorts of aviation products

- New aircraft:
- · Parts and accessories;
- Flight planning and EFB software;
- · Pilot shop.

Entertainment for the non-aviators in the family

- Kids club;
- Markets:
- •Tours of the district and its attractions:

Walk the flight line, catch up with old friends, make new friends, learn something. There are plenty of opportunities for everyone at NATFLY 2014. See you there.

The envelope please

VERY year at NATFLY recreational flyers from across the country bring their aircraft to be judged by their peers.

This year Chief Judge, Dave King, has been researching the history of the NATFLY awards. That information will be on display, along with the

The categories to be awarded this year are:

- Best Single Seat Ultralight the Ligetti-Labahn Memorial Shield
- Most Innovative Design the Scott Winton Memorial Shield
- Grand Champion Single Seat Trike the Solar Wings Pegasus shield
- Best Two Seat Trike the Ian Hodgson Memorial Award
- Best Soft Wing Aircraft the Mike Valentine Award
- Best Powered Parachute the Hawkesbury Powered Parachute Perpetual Shield
- Best Jabiru sponsored by Jabiru Aircraft
- Best Presented Tecnam sponsored by
- Best Prop and Spinner Combination sponsored by Bolly Props
- Best Auto Engine Conversion sponsored by **Cummins Spinners**
- · Best Amateur Built Aircraft The AUF Perpetual Shield
- · Best Factory Built Aircraft
- Most Outstanding VH Registered Aircraft
- Grand Champion 95.25 or 101.55 Class
- Concourse de Elegance Best Overall Aircraft

All aircraft (including previous winners) are eligible as long as the aircraft registration and the pilot's membership are current.

Also this year there will be an award for the Longest Flight (in hours) to get to NATFLY. To be eligible you must have flown by a direct route from your home base. Stop offs on the way are OK, but no more than two days and no diversions of more than 50nm from a direct route. In other words, if you call in to NATFLY towards the end of an around Australia trip you won't be eligible, but if you've come pretty much straight from home you will. Your flight plans and log books will be examined to confirm eligibility.

Finally, anyone who flies more than five hours to get to NATFLY (by a direct route), together with anyone who flies from Tasmania, will go in the draw for a prize in recognition of the commitment required for such a trip. First prize will be a \$500 gift card (because we can't raffle cash), second prize a \$250 gift card and third prize a \$100 gift card. The draw will be conducted at the presentation dinner. For full details www.natfly. com.au. 🕡

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GYFTs winner says thanks

HE GYFTS scholarship fund is one of the best funds ever. Without it, I would not be sitting here saying what endless opportunities it has given me.

My first flying lessons came in December 2012 and I struggled financially, working four jobs at one stage, and still not able to fly as much as I would have liked. I first heard of the scholarship fund when I was introduced to a young pilot in the Temora region and he happened to be one of the first recipients. I looked into it and liked the sound of it. So when the time came, I applied for the scholarship. It was a nervous few weeks waiting for the result of my application. Until one night, I walked out of the football change room at a nearby town and I decided to check the time on my phone. Once I hit the home button I saw there was a message from my instructor, Guy Bowley, saying these exact words "Congratulations you have scored a GYFTS scholarship, well done".

I jumped with excitement and couldn't wait to get home to tell everyone. My family and friends were so happy that I had been awarded the scholarship, and I was over the moon.

by Lloyd Galloway

Many flight lessons later in the Skyfox Gazelle, I was asked whether I would like to do a circuit on my own, to which I replied, 'no'. So I went up for another circuit with my instructor. The next time round, I recall him saying 'go and do one on your own' as he unlatched the door and climbed out without waiting for me to reply.

My heart started racing and my nerves started to build. I sat at the end of the runway, completed the pre-take off checks, and thought to myself 'well, this is it'.

I made a radio call and then it suddenly struck me-I was by myself. It was up to me to get this thing off the ground and back on it. The best feeling was sitting there by myself then pushing the power up and gently raising into the sky.

Before I knew it, it was time for me to do my downwind checks - it had all happened so fast. I turned base and knew I had to get the machine on the deck. I don't think I have ever focused so hard on a landing as I did on that one.

I taxied back in as people came out of the aero club to congratulate me - and it was all over. My first solo done with. For any student pilots waiting to go solo, I can assure you this is one of the best feelings in the world. And you only get to experience it once.

I have had the opportunity to take my mum flying around Temora before I was even eligible to drive a car. I am glad to say I am one of the few who have been able to do that and it is so much fun. Being able to take friends and family up with me is one of the best experiences, especially when they have to drive me home afterwards because I can't legally drive a car on my own.

I would like to thank everyone involved with the GYFTS scholarship fund for all the support they have given me. It is a worthy cause and I urge everybody to donate to the fund. Without this I would not be where I am today.

And finally, good luck to all the GYFTS applicants for 2014. If successful, it makes your training so much easier. Thanks again to everybody involved.



by Arthur Marcel

OUR notable aircraft designers lost their lives helping develop the sport we now call recreational aviation. They were Scott Winton, Charles Ligeti, Sander Veenstra and Robert LeBahn. We honour the memories of three of these men every year with NATFLY awards bearing their names. Why not the fourth?

Sander Veenstra was born in Dieman, the Netherlands, on January 16, 1943. He came to Australia by sea when he was about 11 or 12. He was the eldest child of the family and had a sister and brother. Like all 'new Australians', as we lovingly called them in those days, the family first went to live in the Bonegilla camp near Albury. Quickly finding their feet in the land down under, the family soon moved south to Dandenong. Sander, his brother and sister went to Dandenong High School.

Sander was very technically minded, but like most young people in those days pre-free education, he did not attend university after leaving high school. Instead, he went to work with his father in a wholesale fruit and vegetable business at Footscray. This involved very early starts but left him with time in the afternoons to earn other income by buying and selling motor bikes, cars and old tractors.

Sander had always had a big interest in aviation. With his own income, he soon set about getting a Private Pilot's Licence. He began training with the Royal Victorian Aero Club



at Moorabbin. His first solo flight was March 26, 1966. After getting his licence, he became interested in owning his own aircraft, and by 1974, when he married Judy, he owned a Victa Air Tourer and a Tipsy Nipper, both of which he had on the line at Casey Field at Berwick. He later acquired an Auster J5F (an aerobatic model) and a Fuji 200, which he also cross hired. Judy became interested in aviation as well, and the couple joined gliding clubs in Benalla and Tocumwal. They became friends with World Gliding Champ Ingo Renner, who



READERS' STORIES





The entire RA-Aus community needs to be grateful to Sander for his groundbreaking efforts



became their instructor. Sander quickly became fascinated with aerobatic gliding, while Judy contented herself with soaring firstly in a Blanik and then an IS28.

After his father's early death, Sander ran the fruit and vegetable business for a while, but, in 1978, he and Judy began importing vintage aircraft from the UK. Sander had retained his Dutch citizenship, so it was relatively straightforward for him to operate commercially out of the European Economic Community (as it was called at the time). They based themselves at Biggin Hill in the UK and travelled around the country looking for aircraft to buy.

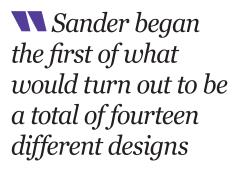
Altogether, Sander and Judy imported fifteen vintage aircraft into Australia. They would take them to Biggin Hill, disassemble and pack them into sea containers, and, once a UK Export Certificate of Airworthiness was obtained, ship them to Melbourne. With each consignment, they would toss a coin to see who would travel back home to liaise with the Department of Aviation (pre-CASA) to get the aircraft onto the Australian register. These aircraft included a Dragon Rapide, a DeHavilland Hornet Moth, two Thruxton Jackeroos (Tiger Moths converted to four seat cabin configuration), a Piper Cub, lots of Austers, a Stinson Voyager and a Piel Emerade. As the 70s drew to a close, and with the proceeds from this successful venture in their pockets, the Veenstras returned to Australia together to turn their attention to the new aviation frontier of ultralighting.



A NEW VENTURE

They began in modest surroundings in a small factory in the Melbourne suburb of Officer, near Berwick. It was here Sander began designing the first of what would turn out to be fourteen different models, a total of thirty individual aircraft sold in all, between 1980 and 1985. The first design, the SV1 was the Bluebird. It had a wingspan of 12.1m but was powered with just a 10hp 210cc two-stroke motor. Yet it could cruise at 75 miles per hour and was stressed to +6/-3g, Only one Bluebird was made. The SV2 was known as the Hotrod. Power increased to 15hp, wing span came down to 10.6m. Again, this aircraft was a prototype and only one was made.

As design and construction work progressed, the couple decided to move the operation firstly to Tocumwal and later to their own property at Nagambie, about 20km north of Mangalore. The next designs were the SV3, 4 & 5, much better remembered as Thermites, the main difference between the three designations being



wingspan. Thermites were high winged, strutted, pusher designs with inverted V tails, single glider-type main undercarriage members and outrigger wheels on the wingtips. Thermites were powered by 15hp Robin two-stroke motors but had climb rates of 600-700fpm at MSL.

Following the Thermite series came the SV6 and the Twomite. As the name suggests, this was the Veenstra's first two-seater. It had an open cockpit and a twin pusher engine configuration. The SV6 was designed as a training machine with full dual controls. Side-by-side seating was chosen to ease communication between pilots. The aircraft proved quite practical with excellent performance from two directdrive Robin 244cc motors. Empty weight was 192kg and the aircraft could lift its own empty weight at 400fpm. Sander envisaged this plane with a streamlined enclosed cockpit being used to train ultralight pilots throughout Australia. At the time, though, regulations did not allow the use of two-seat aircraft. These were the crazy days of ultralighting when your first flight was your first solo!

After the SV6 came the SV7 Brolga, a motor glider type of aircraft. Then, the SV8 was a very handsome, strutless pusher with an upright butterfly tail. The SV9 (XC) was a one-off Thermite made for Bert Flood with regular tail surfaces and a two-wheel undercarriage. The SV10 was called the Tardis and was a two-seat, twin en-









gine pusher but, unlike the SV6 Twomite, it had an enclosed cockpit. This aircraft obviously had great potential.

The SV11 series were the Farmates. The name obviously suggests these aircraft were designed with agricultural purposes in mind. There was the A model, which had an open

cockpit, the B model which was semi-enclosed and the C model, which was fully enclosed. These aircraft all had two-wheel conventional undercarriages and upright butterfly tails.

The SV12 had no formal name, but was very similar in design to the Farmate series. It had an open cockpit. The SV13 was a glider type of aircraft with no engine. Finally, the SV14 was the first Veenstra to have a tractor engine configuration. It had an enclosed cockpit with side door entry and, apart from the upright butterfly tail, it looked very conventional, obviously designed with pilot training in mind.

Sander and Judy had several dedicated assistants, notably Glenn Lyon, Ross Nolan and Robert LeBahn. Robert was an aircraft designer in his own right, his most notable aircraft being the Hitchhiker, a Thermite lookalike with a crucifix type of tail and single wheel main undercarriage. Sadly, Robert later died while flying this aircraft.

Just as sadly, Sander was to die before Rob-

READERS' STORIES









ert, also at the controls of an aircraft of his own design. The accident occurred at Nagambie early on the morning of March 6, 1985. The plane was the open cockpit version of the Farmate. The weather was fine with no wind. The aircraft appeared to take off normally but the left wing soon began to drop as the aircraft climbed. The roll to the left continued until the near inverted plane hit the ground. A subsequent investigation by BASI determined the accident caused by reversed connection of aileron cables. This was also the cause later assigned by a Coronor's Court. Sander was 42 years old at the time of his death.

The entire RA-Aus community needs to be grateful to Sander Veenstra for his ground breaking efforts in helping to make our sport what it is today. Imagine if Sander were still alive. What a magnificently innovative aircraft would be the SV100.



Jabiru cold starting

by Mark Pearce

HE cold, wintery starting issue of Jabiru engines has become the stuff of folklore. I hope this article sheds some light on this subject, for those who may have been directly affected by this phenomenon.

I built my current 19 registered Jabiru around seven years ago. Jabiru aircraft are arguably the most common and easily recognised recreational aircraft throughout this country. Whether it's in training schools or the many flyins and events which populate our calendar, the ubiquitous Jab can be seen dominating the skies and flight lines. It is also evident many of Jabiru's airframe competitors specify Jabiru engines as standard fitment for their own aircraft.

Why? Simple. They are cost effective to buy and operate, reliable, robust, easy to work on, easy to start, etc.

Some of these modern attributes may not have been so clear cut in the early days. One of these - cold starting - has been the bane of many owners. However, like any progressive company Jabiru's R & D effort never stops.

As a result, there have been many advances over the years in this area, including:

- 1. Starter motors were increased in size to the present day silver unit. This newer model has 500 watts more grunt than the older black one and spins the motor faster.
- 2. Battery sizes have increased from the Odyssey 245 Cold Cranking Amps (CCAs) unit to the 265 CCA one as supplied by the Jabiru factory. However, many owners are installing DEKA 330 CCA units or similar themselves at replacement time.
- 3. Jabiru leaned out the Bing carburettor main jetting initially to satisfy a major customer's desire for even more economical running. This seemed to introduce unwanted side effects, including making cold starting more difficult. Subsequently, the factory has provided free upgrades to the newer, slightly richer ietting.
- 4. Closing spark plug gap to around 19 tho' for a few plugs assisted by giving a bigger spark at lower revolutions.
- 5. The main earth cable which leads from the firewall mounted lug to the rear alternator mounting spider was relocated at this end to under one of the starter motor retaining bolts. Less resistance, more current, faster starting spin.
- 6. Drilling out the choke jet to 1.5mm. I didn't have a drill bit that size so I took mine to 1.9mm.

Check your own setup. Missing any? If you



have ever found yourself standing in an empty aircraft parking area with your Jabiru-powered baby at a fly-in, after everyone else has gone home, then you probably are.

All of these improvements added something to ease the cold starting issue. But personally, $\bar{\mathbf{I}}$ was still having to often take off the top engine cowl, disconnect the 'cobra head' and throw a fuel sampler of fuel down the carby. Then put everything back together again. This would always give me in an instant fire up, but what a hassle.

Two years ago I sourced a fuel primer off Ebay. Piper and other aircraft companies have been using fuel primers seemingly forever. My unit was advertised as being for a snowmobile but, after reading the specs, I could see it would clearly do the job. To find one, simply search on Ebay for snowmobile fuel primer.

I fabricated a dedicated housing for the primer from scrap fibreglass layer plate left over from the initial airframe construction. Fortunately, the Jab aircraft kits come with plenty of leftover additional material for situations like this. The housing was glassed onto the centre console under the instrument panel, out of the way, with left over fuel line looped into it after the fuel filter.

I made the primer jet from a pan head rivet,



73AS 5-8, by simply removing the head flange and polishing to remove any burrs. This left an aluminium tube which was then glassed at an acute angle into the cobra head to directly squirt fuel straight down the throat of the carby. Two or three pushes on the primer does it. Simple and crude, but it works. Since installation, I have never had to resort to the old method of airframe dismantling to get started. Even temperatures down to low single figures have not prevented a start within one propeller revolution using the primer.

Why didn't I do this earlier?

I should say that my particular original cold starting issues may have been exacerbated because I didn't accept Jabiru's offer to change the carby jet to the current richer one. After due consideration, I decided the advantages of my lean setup outweighed the negatives associated with it, including difficult cold starting, which seems to have disappeared now with the addition of my primer.

If you think you still need something more, Rotec and Jabiru have also released a cold start kit - an aftermarket option. These kits are designed to give a fatter spark at low revolutions when your battery may be too cold or too old to spin the engine at the required 300 rpm.

POSITION REPORT



Same as it ever was

IN his Australian Ultralights Editorial, twenty-five years ago this month, the normally sanguine Allan Essery (Treasurer) let fly at the membership with both barrels.... "getting a response from the members of this Federation ...is the greatest difficulty I have encountered....what is wrong with you?....The AUF is YOU, and any member who can't understand that has got to be thick..... the members control the AUF, so why aren't you people controlling it? Why aren't you doing something to help yourselves?" And so he continued for almost two pages. "In almost every matter that has come before the AUF over the past few years the membership has been conspicuous by its silence." From this distance his final plea seems almost prophetic... "There has got to be something that will stir you into action." But of course there wasn't, and with the vantage of hindsight, that should come as no surprise to us.

This last is not intended as criticism of Mr Essery (with whom I can empathise) but rather, as an objective statement of fact. The harsh reality is that most members are not the slightest bit interested in participating in the affairs of their organisation. They're content for the most part with just the benefits of organisational membership, and altogether uninterested in abstract notions such as democracy, governance, continuous improvement and regional representation.

This was forcefully expressed in February 2013 when, despite the widespread and deep-felt dissatisfaction, only a few hundred members (with not many more proxies), turned out for the Extraordinary Meeting in Queanbeyan. By the time of the next AGM, seven months on, that number had dwindled to just 56 members. While the democratic machinery was seen to be working well, it would be a long bow to claim that those attending were either representative, or representing the majority interest of our 10,000 members.

To dispel any doubts you have as to whether our regional representation model is working effectively, then just take a look at the composition of our current thirteen-member Board. More than half were appointed simply because there was no one else moved enough to want to contest their regional vacancy. Such is the nature of our Constitution, and non-participatory nature of our electorate that by simply nominating they were, in effect, guaranteed a seat on the Board. Here again I intend no criticism of our elected representatives who forego much and, I have no doubt, are motivated only by the best of intentions. Indeed, I suspect that they too would prefer to know that they'd earned their place on the Board rather than had it handed to them on a platter, as it were. My purpose here is simply to illustrate that the incorporated association model which we've relied upon to ensure that members' interests are represented by the most capable representative (as determined via electoral contest), doesn't appear to be working. Indeed, our Constitution even facilitates non-regional representation (vide Item 13 iii) by allowing non-residents to be elected as regional representatives - this situation having prevailed as recently as mid 2013.

And the more you investigate this idea, the more compelling becomes the evidence. If you further consider for example those minority instances when electoral contests have occurred, it emerges again that the reality is far removed from what the Constitution was intended to deliver. The successful candidate in the most recent by-election (North Queensland) was elected by fewer than 5% of that region's eligible voters, a similar margin having been recorded by the winner of the preceding by-election in August 2013 (ACT-NSW). It would seem little has changed since the Editor threw down the gauntlet, a quarter of a century ago.

It would appear from this that our Constitution has failed to deliver the effective, participatory regional representative we'd hoped for. Compounding this is the huge cost we expend, year-after-year sustaining the unproductive, monolithic machinery of our incorporated association. In the past year alone we've had to plan, administer and report three Board meetings; one Extraordinary Meeting; two General Meetings; three by-elections; one group election; and numerous Executive elections. This requires a very substantial recurrent cost both financially and in terms of staffing administrative effort. To this must be added the effort and expense of promulgating Special Resolutions, fifteen of which were debated at last AGM (with another seven set down for Temora this month).

Why are we bothering to maintain this cumbersome and costly incorporated association apparatus, when there's abundant evidence to show that it isn't now – and probably never has – worked either as a participatory mechanism or, as a way of guaranteeing stable and effective regional representation? There are more efficient not-for-profit alternatives. Even if the Board numbers were slashed by half, or even two-thirds, we'd still be left having to sustain the incorporated association's costly and arcane electoral system.

While Treasurer Essery's frustrations might persist, all these years later, the question which

needs to be asked has fundamentally changed since then. Perhaps the question which needs to be asked now is not "what will stir you (the members) into action" but rather, "why are you (the members) even persisting with this incorporated association model"?

It's patently obvious that 95% couldn't give a toss about regional representation, so why persist with wasting vast amounts of money, time and effort every year indulging the democratic interests of the 5% who are?

In effect the organisation isn't being run by elected representatives, so why not acknowledge that this is just an expensive illusion and move directly to non-elected directors? Imagine the member benefits that could flow then from all that freed-up time, effort and money.

You'll likely find the answers to these questions in "Yes Minister".



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In the air in the first Light Wing First registered, that is

by Shane Trezise, Capricorn Plane **Spotting and Brian Bigg**



AIRCRAFT FEATURE

IGHTWING LW1 25-035 was manufactured by Howard Hughes Engineering in Ballina, New South Wales and first registered on September 8, 1986.

It was reportedly airframe No.2 of this model, however according to RA-Aus records 25-035 was the first LightWing to be registered, 21 days before airframe No.1 which is said to be currently hangared somewhere in the Mackay/Proserpine area.

Of interest, the original registration was changed from P35 (hence 'Papa 35') to 25-035 for the purpose of conforming with RA-Aus require-

Papa 35 began its flying career with a Mount Gambased aero club and predominately

used for training. However, it is believed its original power plant was underpowered for it, leading to an incident in which the engine was cooked. Upon minor modifications, Papa 35 was retrofitted with a larger, more powerful Rotax 532.

The aircraft was eventually onsold to become a resident at Parafield in South Australia. Sometime later, Roger Porter, who is associated with the Gold Coast Sports Flying Club at Jacobs Well, purchased it and flew the aircraft to its new home from South Australia. Apparently the new Rotax 532 also 'died' (cause unknown) and was replaced with a new 'grey head' Rotax 582.

Papa 35 then changed ownership yet again when Rex Koop, of Theodore, Central Queensland purchased the LightWing in 1989. However, an engine failure caused an outlanding resulting in substantial damage. The aircraft was steadily rebuilt before being fitted with a 'blue head' oil injected Rotax 582 in 2008.

In May 2009, Papa 35 was purchased by Callide Dawson Flying Group Inc member, David, and flown to nearby Frogs Hollow which is only a short 10nm hop from Theodore where to this day it continues to fly regularly.

Since taking ownership of 25-035, Dave See reports he has thoroughly enjoyed a number of memorable flying adventures with the aircraft which include two trips each to South Grafton, Childers and Dunwich on North Stradbroke Island, three visits to Moonie as well as hops to Emerald and the nearby community of Clermont.

Dave has also flown to a 'Wings & Wheels' event at Maryborough, visits the annual Old Station Fly-In at Raglan while very rarely missing any of the regular Callide Dawson Flying Group Inc Fly-Ins and hangar chats. Additionally, Dave proudly reports he was among the first to arrive and leave at both the 2010 and 2012 Monto Fly-Ins.

With just over 3100hrs now recorded on the airframe and 530 hours on the current engine, Dave reports 25-035 continues to fly beautifully.



A FANTASTIC MORNING FLYING

I thoroughly enjoyed a two-day road trek to the Central Queensland communities of Biloela/ Thangool (taking in Smoky Creek Airfield) and Theodore in January for the purpose of, not only meeting members of the Callide-Dawson Flying Group, but to learn more about aviation in the region.

Dave See, took valuable time out of his day to not only familiarise me about the aviation industry/community in the region, but took me for an aerial sightseeing tour of the local area in 25-035. He picked me up at Theodore Aerodrome after a short hop from Frogs Hollow.

Theodore Aerodrome is located nearly seven kms from the township with an 1,100m sealed runway (17/35) providing ample landing and take-off real estate, however, the runway is rather narrow.

Departing off RWY 35, Dave wasted little time climbing to 1,000ft allowing for a comfortable



AIRCRAFT FEATURE











but safe height to take in the truly spectacular sights of the local area which included the township of Theodore, Dawson Mine operation (North, Central and South pits) and local farming / grazing land which at the time were pleasantly green from recent rains.

Dave uses the LightWing for small hops of 30-40nm usually and likes its honest flying characteristics.

"I used to fly a Fisher," he says. "So this felt like a truck by comparison when I first got in it."

"But once I got used to it, I came to appreciate its light feel and most times I can just sit there with my hands on my lap looking out for eagles while it flies on the trim."

Dave admits 035 was not at the front of the line when good looks were handed out, but that it's great for taking passengers sightseeing.

"Two up, I can get 500-600fpm climb and its very stable in flight, perfect for people with sensitive tummies."

It does tend to be a drag queen when landing, though.

"It's very robust, fortunately, because it does have a built in bounce," says Dave.

"The number and size of the bounces depend on how many people are watching me.

"But with the big tail I can slipstream almost all the way to the ground and make it do great three point landings.

"The other advantage of the solid steel framework is that on long flights I can grab on to the overhead steel bars and hoist myself up to relieve a numb bum."

But on this day in the calm conditions, 035 flew lightly and sedately before we touched down, without numb bums, back at Theodore on RWY 17.

A perfect end to a perfect aviation morning. To learn more about the Callide-Dawson Flying Group Inc, www.capricornplanespotting.com/211375540

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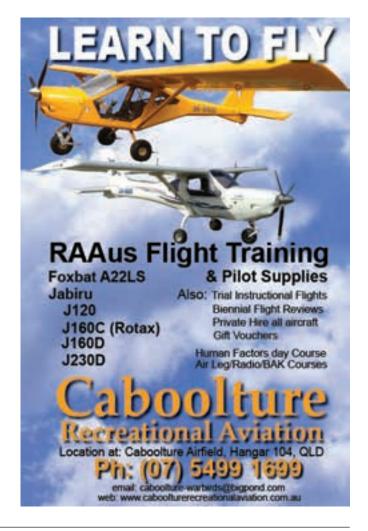
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OME time ago, a pilot was refuelling a grounded aircraft with Avgas from a metal container through a filtered metal funnel, when the fuel in the funnel ignited. The pilot reacted by removing the funnel and the residual fuel inside poured over the wing which then caught fire.

History is full of fire incidents and incinerated aircraft caused by filling through funnels. Look at the Pilot Notes in the (*Sport Pilot December 2013*) magazine. Composite aircraft can make good bonfires. See how they burn.

The reality is that it doesn't matter whether the funnel is conductive and earthed, or of insulating plastic, because either can initiate a fire.

The problem is that there are two sources of static electricity when refuelling aircraft. One we all know about is the static charge built up when you have been flying, which needs grounding. But the other one which many are not aware of is that turbulence from splashing when pouring fuel, also generates static sparks. As our aircraft are often refuelled by hand from containers instead of a bowser, we are more at risk.

Fuel vapour can be ignited by a spark when it is in the region of 15% concentration in air and if the flash point of the fuel is below the ambient temperature. Above and below this concentration it cannot be ignited. A spark inside a fuel tank which is saturated with vapour when refuelling cannot be ignited, but a spark in an open funnel,

where fuel vapour mixes with air and must have at some point the right explosive mixture, is not always safe. Unleaded fuel with its greater volatility and lower flash point is more of a problem than Avgas and hot dry days make things much worse.

But, you say, you use conductive funnels to dissipate the static charge. This is a fallacy because our fuels are an excellent insulator, and only in time will a conductive funnel allow the static to leak away. Splashing generates an instant spark and even grounded metal funnels are not immune to catching fire.

Why does turbulence create static? The simplest explanation is to point out that lightning is caused by friction of ice crystals within a cloud and friction from splashing fuel droplets generates a static charge in a similar way.

So, how do we safely add our fuel?

One answer is to pour the fuel smoothly, so that the flow is always laminar. But this is not easy in practice, as starting it off, or a slip or a jerk, can destroy the laminar flow.

There is a better way.

The idea is to simulate a bowser, by adding the fuel from a nozzle direct into the fuel tank and entirely dispense with the use of a funnel.

The air in the container is saturated and the air in the fuel tanks is also saturated. It doesn't matter if you use a plastic container or a pump, just so the flow is not started until the nozzle is inside the tank. The ideal approach is to buy a noz-

zle with a built in tap for the fuel cans. Some fuel bladders have them built in. Failing that, a finger over the nozzle can help to get it started.

For additional grounding at the air interface, you can use any old rolled up damp towel to closely encircle the filling neck. Water is conductive and cools the air at the neck to help with the flash point. It also acts as a dam if you do spill fuel when starting to pour or if you overfill the tank.

If all else fails, the towel can be swept over the filler neck to instantly damp any fire. A damp towel is like a swiss army knife. It can clean or dry your wings, wipe your dirty hands, cool you on a hot day, and if you do spill some fuel on it, it works wonders for cleaning off oil stains from under your fuselage. This towel can be kept indefinitely damp inside a plastic shopping bag when travelling.

One other useful item is a ultrafine 50 micron nylon filter wrapped around the container nozzle when filling. This removes dirt and even fine dust which can be found in fuel from some garages. Water cannot pass through it while it is wet with fuel, and it gives a fast flow rate.

The benefit of this is that your engine fuel filter can never block up from added contaminated fuel. It can be obtained from Allied Filter Fabrics (www.filterfabrics.com.au) as M0048 x 160 - Mono 48Um x 160cm wide.

A metre costs around \$100 but this can be divided up into several generous pieces and shared with others.

WE'RE FROM THE GOVERNMENT AND WE'RE HERE TO HELP!

O, really. They ARE here to help.
Airservices Australia maintains the
personnel and equipment to keep
order in the skies and furnish communication
between pilots and the ground.

Most sport pilots shy away from contact with the man (or woman) at Air Traffic Control. Sport pilots tend to stay in Class G airspace, outside control zones. Radio contact is with other pilots in a CTAF.

Many don't realise that Airservices, the people who operate ATC, are not connected to CASA. CASA and Air Services went their separate ways some 20 years ago. CASA regulates aviation in Australia. Airservices facilitates it.

ATC's main business is moving aircraft safely through controlled airspace in those categories above Class G. However, ATC encourages all pilots to contact them when the need arises and to maintain a listening watch on the Area VHF. ATC will broadcast information necessary for the safe conduct of a flight for one hour after its receipt on the Area VHF, e.g. "BALLINA AERODROME CLOSED DUE DISABLED AIRCRAFT."

ATC furnishes another very useful service called Flightwatch, (Flight Information Service on Request.) It is available in all classes of air-

by Norm Sanders

space on ATC VHF to provide inflight briefing updates on NOTAMS or weather, and file or cancel SARWATCH

FLIGHTWATCH is good for checking on the status of Restricted Areas, for example:

(Tuned to Brisbane Centre on 119.50)

"FLIGHTWATCH, SONEX 7763, REQUEST PRESENT STATUS, EVANS HEAD BOMBING RANGE, R641B".

Note you have to say it: "SEVENTY SEVEN SIXTY THREE" rather than "SEVEN SEVEN SIX THREE". AIP GEN 3.4 - 20 (para 4.16.2) explains it.

Saying "FLIGHTWATCH" rather than "BRIS-BANE CENTRE" Allows ATC to prioritise calls when providing several services on one or combined frequencies. This puts the communication at the bottom of the list when other traffic is being handled. Requests are dealt with on a first come - first served basis, but generally without much delay.

ATC frequencies can be found in Airservices publications such as charts and ERSA. Every aerodrome in ERSA has a section on 'ATS COMMUNICATIONS FACILITIES'. Radio frequencies

are listed under FIA (Flight Information Area,) along with height needed for communication. This is dictated by local terrain or distance. In some places it is on the ground, sometimes at circuit height and sometimes higher. At Kempsey, NSW, it is 3,500ft. Out west, in can be as high as 10,000ft.

One great inhibition in contacting ATC is the natural human aversion to public speaking. Most pilots get over it to a certain extent, and are happy enough talking to their friends on the local CTAF. However ATC is a different matter to them. At first, they are inclined to talk too fast out of nervousness, to get it over with as quick as possible. The controller may ask them to repeat, which makes them even more nervous and ties up the frequency. While it is true most ATC communication is by use of standard phrases, controllers will make every effort to work with a pilot in plain language. It is helpful for a pilot to tell them if they are a student or unfamiliar with the area.

Sometimes standard phrases are simply inadequate to cover a situation. Some years ago I was flying from Santa Barbara to Los Angeles at night in a Cessna 150. I intended to overfly the middle of LAX in the VFR corridor (which still exists), and as a courtesy I contacted the Northern Approach controller. I told him I would be using the corridor and landing at North American's Hawthorn Airport, and added that I would be taking a taxi to his building for a conference. He



came back with, "Why don't you land here and save the taxi fare?" I replied that I was not about to land a Cessna 150 at LAX at night, thank you. He explained that the two 8,000ft North runways were closed to jets because of night time noise restrictions, and I might as well use them, because there was no other Northside traffic. The growl of an airline captain came over the radio with, "Don't let that fart cart in here!" "Why not," said the controller. "He pays his taxes."

The controller then gave me vectors for downwind, base and final before handing me off





to the tower. I landed and found myself on a sea of concrete punctuated by masses of blue taxiway lights, but finally made it to my destination after some amused guidance from the ground controller, and no taxi fare.

In those days, radar was all primary, with signals bouncing back from the aircraft. Now, using secondary radar, transponders transmit signals themselves, which include altitude data. Primary radar is still in use around major airports and can pick up non-transponder equipped aircraft. This is another area where communication is important.

I am located just south of Gold Coast Airport. Sometimes I fly up the coast at 1,000ft, below the 1,500ft step on the way to Murwillumbah. The tower sees a plane on the radar apparently about to plough into its airspace which would cause great consternation and require readjustment of traffic. A simple radio call to the tower to inform them of my intentions to stay OCTA is all that is needed to resolve the situation. Similarly, a pilot who has strayed into controlled airspace should immediately contact ATC who will direct him or her into the clear. Controllers are there to help. It is much better to ask ATC for assistance than to make an airspace infringement.

In an emergency or unusual situation, it is best to establish communication as soon as

possible. Forget about being too embarrassed to ask for assistance. For example:

"BRISBANE CENTRE, SONEX SEVENTY SEVEN SIXTY THREE, EXPERIENCING NAVIGATION DIFFICULTIES IN DETERIORATING VISIBILITY. REQUEST NAVIGATION ADVISORY".

ATC will guide the aircraft to safety, even if it involves landing at a Class C aerodrome.

In an extreme emergency, the MAYDAY call should be given immediately. A MAYDAY call takes precedence over all other traffic. ATC does not monitor 121.5, although RPT aircraft do. ATC frequencies should be entered into the aircraft radio's memory for instant access. The form is:

(Spoken slowly and distinctly)

"MAYDAY, MAYDAY, MAYDAY, BRISBANE CENTRE THIS IS SONEX SEVENTY SEVEN SIXTY THREE, SONEX SEVENTY SEVEN SIXTY THREE, ENGINE FAILURE, INTEND FORCED LANDING IN PADDOCK. ESTIMATED POSITION TWO ZERO MILES NORTHWEST OF CASINO, HEADING EAST, NOW DESCENDING THROUGH THREE THOUSAND. TWO POB. SONEX SEVENTY SEVEN SIXTY THREE. MAYDAY".

If the aircraft is transponder equipped, the code should be set to 7700, even beyond ATC radar coverage. Code 7700 will present an alarm to any radar interrogating it, (civil or mili-

tary) and alarm at every console that can see it, which is often well beyond the range of many airspace boundaries.

Transponders are valuable pieces of equipment, but must be used correctly. In Mode A configuration, no altitude data is transmitted. Because that information is not given, airliner TCAS systems can be activated causing confusion. Mode C (Alt.) does include altitude information. The transponders should thus be set to On. Alt. VFR code outside Class G airspace is 1200. ATC may give another code by saying "Squawk 1234." They may also ask for Ident which sends a discrete signal to their screen for positive identification. The Ident button should never be pushed unless requested.

The best way to become acquainted with ATC is to actually visit a centre, or a tower, or both. Air Services is happy to arrange for groups to visit a facility, meet the people and see what aviation looks like on the other side of the screen. Email address is: pilotinfonight@airservicesaustralia.com for more information.

Byron Gliding Club members recently visited Brisbane Centre and the Gold Coast Tower. We found the controllers were actually quite pleasant human beings and not ogres at all. In addition, we were given free sandwiches and beverages. Can't ask for better service than that.



IVE miles from home with my strip in sight. It was a great feeling after a flight like I have just had.

Four days earlier I had flown north to a major fly-in, where I was scheduled to conduct TIFs. The weather had been slightly better than forecast but not much and so numbers were down.

However it was, all in all, a very successful fly-in.

Over the three days I conducted about 20 TIF's and considered there was a likelihood of three or four of those becoming students. I also knew that I had introduced a number of interested people to recreational aviation and some of them will probably take it up in years to come.

Overall, I had enjoyed the weekend but now it was time to go home. Everyone had packed up and was leaving early because the forecast was not good. I was approached by one of the volunteers who had not had a chance to fly during the weekend and asked if I could fit in one last TIF. No trouble, I said, but first I had to see my wife off in the 4 x 4 and caravan – her trip home was six hours and mine was two. She really hates that.

By the time I got packed up, most aircraft had left. I conducted my final TIF and then a mate arrived in his RV6, having flown from Old Station. We waved off the big biplane which had been doing joy flights during the weekend and then prepared to leave. We discussed the lowering ceiling and decided on a track which should be safe. Of course the RV6 with 1½ times my cruise speed would be out of sight very quickly, but this was a route that I had flown a number of times. I was quite comfortable as I took off and headed for home.

The first hour of my trip I was able to maintain 1,500ft AGL and as I do whenever I'm flying this low, I flew strictly from landing site to landing site. Flying a Savannah helps here as almost any flat ground is okay. I monitored the area frequency and talked to pilots operating near my destination to get updates on weather. The ceiling height was generally reported as 1,500ft AGL and at times even less. Another call to an airfield $\frac{1}{2}$ hour ahead had the ceiling 1,000 – 1,500ft so I decided to continue that far and then make further decisions.

I had to fly around a couple of showers but had a good road and lots of paddocks below

me. So I got there okay and landed. A few moments later, my wife arrived so I had a rest, a feed and coffee and waited for the showers ahead to lift.

The remaining ½ hour flight to home was just more of the same, low ceiling but no problems. And so here I was five miles from home and getting ready to land. After a long flight I like to go through my pre-take off checks, as much to get my head in the right space as anything else - trim, throttle friction, pitch, mixture, fuel, flaps, switches, instruments, controls free (nothing to jam the stick) harness and hatches. I could see the wind sock - five knots crosswind from about 60° left. My strip is very short and narrow, but I have done probably as many as 800 landings on it and I'm starting to get it right. Pre-landing checks, then two stages of flaps on final and 40kts on the dial. Near the threshold I started to flare - hold off hold off, mains on, lower nose, relax, oh hell, what are those trees in front of me? I realised I had forgotten the crosswind and was now heading left. Experience told me not to hit the right rudder too hard. It took a lot of wrestling to get back onto the strip and avoid hitting a





ditch and then I was stopped. I sat for a moment and said to myself 'wow, that was close'.

This all happened over a year ago but I have been reminded by two recent events:

Firstly, a mate's aircraft came to grief when the pilot, having heard his engine make a strange noise, headed home, called a straight in approach and did a downwind landing. He reported that, on roll out, when he looked over at his passenger the aircraft suddenly headed to the right. He pushed left rudder and too much toe-brake and the aircraft turned sharply left. The nose wheel collapsed, resulting in significant damage.

The other event was another pilot, with reasonably low hours in the book who was flying in gusty conditions and who also was low on recency. The pilot reported he was concerned about landing in the gusty conditions but seemed to get it down okay, only to have a gust of crosswind turn him left and into an embankment, also resulting in an expensive repair job.

I have given this a great deal of thought and have come up with some expanded reasoning.

When a pilot has done a lot of flying over a short period, is tired, and has been flying in challenging conditions as I had, then during final approach we get an adrenalin kick. This would also happen when an engine starts to run rough or if you're trying to land in gusty conditions.

This is a natural occurrence which enables our bodies to operate at the required level of performance to complete the task. However, when the adrenalin high has passed, we get an immediate low and this can lead to disaster. My experience leads me to believe that the higher the stress prior to landing, the greater the adrenalin kick and consequently the deeper the low afterwards.

There will always be flights which cause more stress than usual, so there will always be times when we are susceptible to this high/ low situation. I haven't come across a way of limiting these effects, however we can train ourselves to identify and deal with them. Taildragger pilots have been doing it since the earliest days of flight.

So as I always ask my students - when is it time to quit flying?

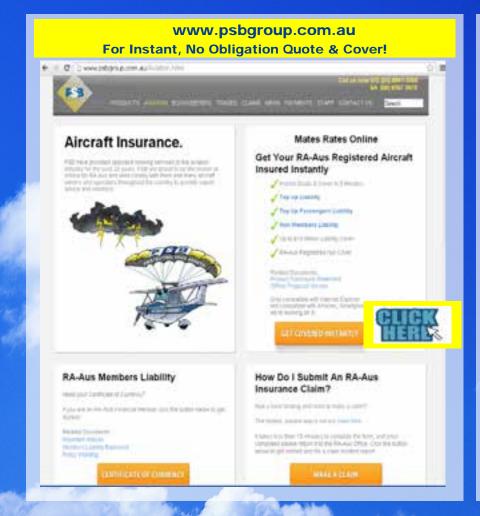
Not until the aircraft is in the hangar.





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PILOT TALK

Jill Bailey - Operations Manager

Controlled airspace

A RECENT increase in enquiries regarding RA-Aus pilots operating in controlled airspace or control zones (CTA or CTR) has made it timely to revise exactly what are the requirements.

At present *Operations Manual* Issue 6 includes a syllabus component for the addition of a Controlled Airspace Endorsement for RA-Aus Pilot Certificate holders. This endorsement has never been enacted and has been removed from the draft *Operations Manual* Issue 7.

Operations certainly intends to pursue these privileges, however there is at present no process which permits RA-Aus Pilot Certificate holders to fly an RA-Aus registered aircraft into controlled airspace.

The only legal means permitting an RA-Aus Pilot Certificate holder to operate RA-Aus aircraft into controlled airspace is if the pilot also holds a Private Pilot Licence (PPL) or higher, which includes CTA privileges and is current (meaning an Aircraft Flight Review (AFR) and medical requirements have been met). This will also be the case when the proposed Recreational Pilot Licence (RPL) is enacted by CASA in September 2014. The aircraft must be factory built or LSA, have completed CAO 100.5 maintenance requirements in regard to instrument calibration, carry and operate a Mode C or S transponder and use an approved engine.

There are CASA exemptions available for a proportion of RA-Aus Flight Training Facilities (FTFs) which operate at Class D aerodromes

Stories abound of RA-Aus pilots calling controllers, requesting a clearance and merrily flying into the airspace

such as Moorabbin, Archerfield, Camden, etc have. These FTFs operate under a specific exemption which was written to enable solo flights in CTA or CTR by RA-Aus Pilot Certificate holders. The exemption is available with only the Class 2 medical requirement while a student is undertaking training. Ironically, once the student achieves their Pilot Certificate, they are no longer permitted to operate in the airspace because they are no longer undertaking training.

Members who operate 19 registered amateur built aircraft currently have no valid path for approval for operations in controlled airspace as the aircraft does not comply with the requirements listed above and is not permitted to operate over built up areas, which is where most CTA is.

Specific areas where misunderstandings exist include my old stomping grounds of Jaspers Brush (inside Nowra R420 Restricted airspace) and West Sale Air Force base in Victoria. I am sure there are similar misunderstandings in other areas around the country.

Stories abound of RA-Aus pilots calling con-

trollers, requesting a clearance and merrily flying into the airspace, assuming they can legally fly there because they have been given the clearance. But if the above requirements have not been met, this is not the case and the pilot has just committed an illegal act. In these circumstances insurance entitlements may also be voided, should an accident or incident occur.

Just to be clear, while an air traffic controller may provide a clearance to an RA-Aus Pilot Certificate holder in an RA-Aus registered aircraft, this does not provide them permission to do so if the pilot and/or aircraft does not meet the requirements mentioned above. The controller cannot confirm if the pilot and/or aircraft meets all the requirements and is simply responding to a request from a pilot for clearance.

Specific references, for those so inclined exist in AIP ENR 1.4, AIP ENR 1.1 paragraph 2, CAO 95.55 and CAO 95.32 paragraph 7.1 (d).

If you have specific areas of concern about CTA or CTR, you are encouraged to reference these sections, or contact Operations for clarification.





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Aiming for perfection

IN his letter to the editor (Sport Pilot February 2014), CFI Andrew Campbell felt the need to express his view that it is not a good thing to aim for perfection in your students.

Well Mr Campbell, you never met MY Mother. A non-pretentious, perfect woman, who worked really hard to teach all of her children the solid foundations of personal skills, good attitude and resilience (the equivalent of being able to operate safely in a variety of conditions). Maybe none of us kids turned out perfect. But because of my mother's aiming for the perfect child, we all turned out to be pretty self-disciplined, law abiding members of the community... most of the time.

Isn't that the equivalent of what we all want as CFIs, Senior Instructors or even as the newest of instructors? We are given a great responsibility.

As aviation leaders we must lead the way by example, to help our students strive for a better outcome. To present to those who are following us the safest, most appropriate ways to achieve what is required within the rules and laws of the authorities who set them. To do it better, foster excellence, strive for precision. Maybe even aim for perfection.

A few years back I was lucky enough to have been invited to attend the Oshkosh airshow. I spent an entire week wandering alongside thousands of people, past a vast array of aircraft of all shapes and sizes. I took a flight over Lake Winnebago in the old corrugated iron Ford Tri Motor. I attended many of the brilliant forums. I felt honoured to have spent one afternoon up in the control tower. And on the final day, I attended the spine tingling Sunday Memorial Service, as overhead a formation of aircraft lead by Dougy the DC3 flew the Lost Man Formation to the sounds of a lone trumpeter.

But the one thing I most fondly remember from that week was my chance meeting with an older gentlemen, a veteran US flying instructor. It was on a bus heading back from the seaplane port, where I had spent most of the afternoon drooling over floating Beavers and Cessnas.

The spritely old man was flanked either side by two young men, perhaps in their late 20's early 30's. They could have been father and sons. But they weren't. The younger men were his former students. One of them was Australian. He had been an exchange student to the US in his teens and during his residency, he and his mate decided to take up flying. They had wandered along to a little flying school in Minnesota, where they

had met the veteran instructor and began to learn to fly. The three of them had flown into Oshkosh that first year as part of their lessons. Together, the three of them had attended the airshow as often as they could ever since.

As we got talking, I learned that both young men's flying careers had really taken off. One was a captain with an American airline, the other with Virgin Australia. The old instructor beamed with pride as he rattled off stories of other students he told me he'd had the privilege of teaching to fly.

It was then I asked him for his secret formula. In a gravelly, American drawl, he looked me straight in the eye and stated, "I only ever ask one thing of my students - perfection!"

As the bus rolled back into the grounds of Whitman Airfield, we bid our fond farewells. The old master flanked either side by his loyal charges wandered off into the bustling crowd. It is a sight I carry with me fondly. It is one that I, as an instructor, hope to aspire to.

Maybe there is no such thing as perfection in this less than perfect world. But surely it is up to us to grow the discipline, foster excellence, strive for precision. Do it better. And maybe even aim for perfection.





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EARNIS TO FEV By SHANNON LEGUSE



T was Emergency Manoeuvre Training (EMT) day at the Jaspers Brush airfield and everyone was excited. We were all hanging around the clubhouse watching aircraft fly in and out, waiting for the team from Red Baron to arrive from Sydney.

Then we heard the call come across the radio – "here they come". The excitement grew as the aircraft passed overhead, two Red Baron Robin Alpha 160A's in perfect formation. EMT day had officially started. We stared in awe as they landed and taxied back.

It was only a short time after that, the official tent was set up and we started the training. Matt from Red Baron led the session by talking to us about statistics on stalling and stall incidents. He then moved on to a discussion about stall techniques - what they are, how to recognise them, how to recover from them and how to avoid them. It was very interesting and important information to know.

After the theory session we had a BBQ lunch and then those of us who were scheduled to fly were led in for a pre-flight briefing. It was explained to us what we were going to do and what we could expect. We were also told we were going to be able to try out some aerobatics. After that announcement you could feel the excitement grow even more.

Having only two planes available meant

we all had to wait for our turn. Looking around you could tell everyone was on the edge of their seats, fidgeting with excitement. Finally my turn came around. Red Baron instructor Marcus came and found me. He led me to the aircraft we would be flying, explaining to me along the way what we would do. After preflight checks were done we were ready to go.

I was allowed to taxi the plane, take-off and fly out to Seven Mile beach where we would do the training. My instructor will be pleased to know Marcus told me I flew well. Once we were over Seven Mile beach, Marcus explained to me about the stall speed and how it is just a recommended speed not a solid line. He demonstrated this by telling me the stall speed of the aircraft, then slowing it down below that speed. The aircraft continued straight and level flight. Then Marcus increased the airspeed to well above the stall speed and stalled the plane. He explained to me how the aircraft will not always stall at one particular speed. As a pilot, I should not assume that just because I was travelling faster than the published stall speed, the plane would not stall.

After that introduction, the fun grew tenfold. I got to have a go at stall recovery. First Marcus demonstrated the procedure. He then stalled the aircraft and asked me to recover it. I decreased the angle of attack and applied

power - easy. He then put the aircraft in some unusual attitudes, demonstrated how to recover from them, then passed the controls over again. Again I got the plane flying again with minimal height loss.

After I had mastered those recoveries, Marcus decided we could have more fun. He rolled the plane upside down, caused it to stall and then demonstrated the recovery procedure. By this point I was bursting with excitement. It was my turn. Upside down we went. Into a stall, then Marcus handed over the controls. I did exactly as I was shown, rolled to the blue, reduced the angle of attack and applied power.

The fun continued when we tried spin training. As before, Marcus first demonstrated the recovery procedure and then handed over the controls. He put us in a left spin and got me to figure out which way we were spinning using the turn coordinator. Once I found out we were in a left hand spin, I neutralised the controls, stopped the spin, broke the stall and flew away safely.

After the stall training we did some loops and some aileron rolls, then it was time to head back so the next person could have a go. The EMT day at Jaspers Brush was a fun day for us all. Not only did we learn valuable skills we had a great time doing it.



This is the first of a new regular column by Dave which will cover all the technical aspects of designing your own aircraft

DAVE DANIEL

mad?' It would certainly be an accurate summary of most people's response when I tell them I'm designing my own aeroplane. I'm fairly sure it was what my wife was thinking when I enthusiastically informed her of

F I'm honest, this article should probably be entitled, 'Are you quite

my plans. Although she was polite enough to restrict her response to the special slightly pained expression she reserves for whenever I reveal one of my fantastic ideas.

Even if you have no aspiration to design for yourself I hope these articles will at least give you an insight into why an aircraft looks and flies the way it does. Either way, I'm inviting you to join me and come along for the ride.

So I want to design, build and ultimately fly my own aircraft. But before diving headlong into the details I should probably introduce myself and answer a few fundamental questions.

I'm a self-employed engineering consultant. I studied Mechanical Engineering at university 15 years ago, but never actually did it for a living. So I'm really just a frustrated design engineer with an overwhelming desire to create something.

WHAT DO I WANT TO BUILD?

A two seat ultralight; under 600kg MTOW with a stall speed not exceeding 45kts - i.e. one which I can register through compliance with CAO95.55.

HOW LONG WILL IT TAKE?

I've estimated about two and a half years to design, and maybe another seven to build - but I'm really not in any rush. If you want to follow this particular path, the process itself has to be the reward. If your desire is to fly, then just buy a plane and go flying. It would definitely be quicker and a sound, second-hand plane would probably be a whole lot cheaper.

WHY DESIGN MY OWN?

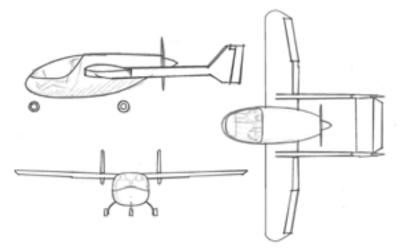
For me it's mostly just because I relish the challenge, plus I like the feeling I get from having created something unique. Although I must admit, just a tiny bit, it's because I want the airfield kudos (come see me at NATFLY 2024).

SO WHERE TO START?

The engineer in me calls for a Requirements Specification - simply put, a list of what I want the plane to be able to do. But there is a reality check required. I'd love to cruise at 300kts, climb at 2500fpm, take off and land in 50m and fly coast-to-coast on a single tank of fuel. But unfortunately the laws of physics and my budget are not going to allow for that. So more realistically I need some target numbers I'd like to achieve, and short of that, what threshold values I'm willing to accept.

As a sanity check, it's reasonable to assume that other designers have done a pretty good job, so I'll also find a similar design to what I have in mind and compare the numbers. I'm thinking of something slippery, with good performance from 80 to 100hp:

	TARGET	THRESHOLD	JABIRU J160	CTSW
RANGE	1300km	700km	1575km	1266km
CRUISE	115kn	95kn	100kn	112kn
STALL	45kn	45kn	48kn	35kn
PAYLOAD (CREW & LUGGAGE)	280kg	190kg	220kg	154kg
RATE OF CLIMB	1000fpm	400fpm	500fpm	960fpm
TAKE OFF DISTANCE	200m	350m	210m	160m



It's mostly just because I relish the challenge, plus I like the feeling I get from having created something unique

So now I have a realistic benchmark to design against, but what is my creation going to look like?

In a commercial setting this 'first drawing' stage comes surprisingly late in the design process. All the initial sizing calculations can be done without knowing what the plane looks like. I'm not going to delve into the maths here, but if you know how far and how fast you want your aeroplane to go, and what speed you want to stall at, you can determine the size of the wings, the required horsepower of the engine, plus the payload and the take-off weight. All that, without so much as a sketch.

That said, I'm not a multinational aircraft manufacturer; my aircraft's weight, stall speed and number of engines is mandated by the regulations; I've already decided on a 80 to 100hp; and as a non-commercial venture, the only person I have to please is myself (so there!). As such, I am going to start with a sketch, but before you bombard me with mountains of emails about the many and obvious faults, I must point out that aeroplane design is truly the art of compromise, and there will undoubtedly be a great many changes before I get to my goal of a safe and workable aeroplane.

PROJECT-X

So here it is. A two seat, twin tail boom pusher. Hopefully it falls somewhere between two of my favourite aircraft: A Sadler Vampire and a de-Havilland Vampire. It's a bit bigger and faster than the Sadler and a lot cheaper and more practical than the deHavilland.

NEXT MONTH

I'll take a look at configuration and layout and start turning this napkin sketch into a practical aeroplane. 🐌



DARREN BARNFIELD RA-Aus Technical Manager

Skills, knowledge and experience

OUR organisation was founded by a group of enthusiastic individuals, most of whom had a high skill set when it came to repairs and maintenance. Today's RA-Aus needs to cater to a wide range of knowledge and experience among our members, while maintaining the privilege for everyone to own and maintain their own aircraft. Over the past couple of years, we have lost friends and colleagues to fatal accidents. This has resulted in some less-than-favourable coronial reports which have ultimately led to CASA moving to act.

CASA's latest safety move is to require RA-Aus to increase its focus on maintenance privileges and additional training.

After many hours of discussions with members from all over the country, I approached the Board with a proposal. I want to allow members to have the same privileges and responsibilities they now have, but increase their knowledge of what these responsibilities involve.

What does this mean? RA-Aus members maintaining their own aircraft would become personally accountable for the maintenance they conduct and would have their competency assessed and measured. What better way to achieve this than to use their own aircraft, which they have been maintaining, as their resume? I have been told by a large number of members they don't require training - I largely have to agree. But the new process would provide a means to prove their competency.

On January 30 I had a meeting with the Associate Director of Aviation Safety, Dr Jonathon Aleck and the Team Leader of the Self Administering Sport Aviation (SASAO) section of CASA, Lee Ungermann. Backing me was RA-Aus General Manager, Mark Clayton, and the support of the RA-Aus Board. I was granted an opportunity to pitch ideas to CASA for the continued operation and assessment of our current maintenance privileges.

CASA has previously told us certain regulatory requirements must be met. At this meeting we were able to offer our own plan as an alternate to the one CASA is considering.

In this day and age, safety is measured in terms of risk mitigation, organisational safety assurance and personal accountability. RA-Aus has asked to be given 12 months to implement a Registered Training Organisation (RTO) process and time to establish a process for all current owner maintainer's privileges to be assessed until formalised training is introduced.

We told CASA we want to proceed down a path to provide a training course that will be nationally accredited to our members, turning RA-Aus into a Registered Training Organisation. It would allow us to tailor very specific training requirements for our owner maintainers and, in the future, for all our members.

As of November 27 last year all new Pilot Certificate holders have been limited to Line Maintenance only (IAW CASA Schedule 8) and are unable to maintain their own aircraft until such an RTO process is established. At the moment, if you buy an aircraft, only an L1, or L2 - L4 assessed as competent, can maintain that aircraft.

PROPOSED CHANGES

RA-Aus proposed to CASA that all current L1 maintenance privilege holders be required to complete the following process to assess their competency for ongoing privileges.

The only exemptions would be those Pilot Certificate holders who elect not to maintain an aircraft. These aircraft must be maintained by L2 maintainers (L2s must re-validate their maintenance privileges every two years) or LAME maintainers.

When RA-Aus does become a Registered Training Organisation, members will be given 12 months to complete a competency assessment. (The initial competency assessment process is therefore only an interim measure). For those who do not comply, the assessment process could become an annual assessment of competency.

SUCCESSFUL ATTAINMENT

A theoretical competency assessment would allow members, who choose to maintain their own aircraft, to continue to enjoy L1 maintenance privileges. Details of this will be provided soon.

A practical assessment of the aircraft's maintenance via a proposed new process called the Recreational Aviation Aircraft Review (RAAR) would be undertaken by the owner/maintainer (assessment and validation undertaken by L2).

The RAAR would be a simple identification process to aid the member (see *Technical Manual v.4* extract page opposite). It lists the requirements in the RA-Aus *Technical Manual* for maintainers. If items are identified as deficient, the aircraft would revert to single seat operations until the deficiency is corrected and validated by an L2.

If the requirements are completed and owner/maintainer assessed as competent, the current maintenance privilege would be continued.

UNSUCCESSFUL ATTAINMENT

If a member who wants to maintain maintenance privileges is found by the theoretical knowledge assessment test not to be competent, the member's aircraft would revert to single seat operations.

The Technical Manager would provide assistance for members to become competent via the L3 Regional Technical Officers (RTO) process.

If the aircraft is found not to be of an acceptable standard, this would not prevent the competent pilot from operating with a passenger in another compliant two seat aircraft which has been assessed as maintained in accordance with manufacturers' and other requirements. This process is intended to identify that the aircraft is being maintained to a known standard.

I must stress again most of the changes outlined here are still only at the proposal stage, awaiting CASA approval. It's important however you are apprised – in advance – of these potentially significant developments and to this end, I'll continue providing you here with regular updates.



DATE:	RA-Aus REGISTRATION NUM	BER:	
tions Manager or delegate) who h	as no legal or financial interes	rmed by an RA-Aus Approved Person (L2, L3, L4, or as authorised by Technical or Opera st in the aeroplane. Neither the RA-Aus, nor the person completing this report assumes ne. This document is an assessment of compliance requirements only, and is not a	-
AEROPLANE TYPE:	MODEL:	SERIAL NO:	

1.	Does the aeroplane have a correctly completed logbook?	Yes/No
2.	Does the aeroplane have a Flight Manual?	Yes/No
3.	Are all Service Bulletins and airworthiness requirements completed and entered into the aeroplane logbook?	Yes/No
4.	Does the aeroplane have a separate engine logbook?	Yes/No
5.	Is the aeroplane maintained by the owner or LAME / L2?	Yes/No
6.	Does the owner have a system of maintenance for the aeroplane?	Yes/No
7.	Is the aeroplane being maintained IAW the system of maintenance?	Yes/No
8.	Has the altimeter and static system been checked IAW the Technical Manual?	Yes/No
9.	Is the aeroplane Type Certified or Amateur Built?	Yes/No
10.	Is the aeroplane a Light Sport Aeroplane?	Yes/No
11.	Does the Light Sport Aeroplane (LSA) aeroplane contain a correct and valid Special Certificate of Airworthiness?	Yes/No
12.	Does the aeroplane have any modifications? Are the details recorded in the airframe logbook?	Yes/No Yes/No
13.	Does the aeroplane have a weight and balance report?	Yes/No
14.	Record the MTOWof the aeroplane.	
15.	Record the engine make model and type	
16.	Record the propeller make model, type and serial no	

Certification:

I, the undersigned, have inspected the aeroplane referred to in this Recreational Aircraft Review {RAAR}, the aeroplane Log Book and Flight Manual and other documentation available. I certify that the information in this Recreational Aviation Aircraft Review {RAAR} is complete, accurate and correct to the best of my knowledge. This certification does not contain any implication that I consider the aeroplane to be airworthy or otherwise.



CAB Wasp

This aircraft, built in 1984, was the third of sixteen built by CAB Engineering in Gunnedah, NSW. It was designed by the owner of CAB Engineering, Neville White, who was a glider pilot and also raced go karts.

Like other ultralight aircraft of its time, the Wasp was built from aluminium sections used

for marine applications, the bracing was either stainless steel or galvanised wire and the wings were made of sailcloth. The fabric was cut and sewn by Mrs White using a sail maker's sewing machine especially purchased for that purpose. The propeller was belt driven rather than chain driven by a 250 cc single cylinder

Fuji Robyn engine.

The Wasp also has spoilers on the wings which allowed the aircraft to bank and make balanced turns. It also had a very basic flap system.

This aircraft is only one of two still thought to exist and is on display at the Australia Ultralight Museum at Holbrook in NSW.





ATIE JENKINS National Safety Manager

Setting up an SMS

ICAO defines a Safety Management System (SMS) as a "series of defined, organisation-wide processes which provide for effective risk-based decision-making related to the daily business". RA-Aus' new SMS focuses on maximising the opportunities to continually improve overall safety within our systems and processes.

Our SMS will benefit RA-Aus by providing for more informed decision making processes. It will attempt to reduce the risk of accidents through improved safety and it will allow resources to be better allocated to increase efficiencies and reduce costs. Finally it will endeavour to strengthen RA-Aus' organisational safety culture.

ICAO says aviation organisations which have implemented and run an effective SMS all have a top-down commitment from management and a personal commitment from all employees to achieving safety performance goals.

For RA-Aus it will also establish a practice of open communication about safety which is comprehensive, transparent and, where necessary, nonpunitive. It will also promote an organisational culture which continuously strives to improve safety.

The SMS is not a new concept in RA-Aus, but is built on processes currently already in place. By integrating with the current accident and incident reporting system (see http://www.raa.asn.au/safety/accident-incidentsummaries-2014/) it has been tailored to be a flexible regulatory framework demonstrating good business practices for all RA-Aus members.

To give you more detail, in the next few editions of Sport Pilot I will provide an overview of the SMS manual.

The document is divided into four components:

- 1. Safety Policy and Objectives:
- 2. Safety Risk Management;
- 3. Safety Assurance;
- 4. Safety Training and Promotion.

SAFETY POLICY AND OBJECTIVES

An organisation's ability to conduct effective risk management is dependent upon having an appropriate risk governance structure and well-defined roles and responsibilities. The following positions detail the key players in RA-Aus safety accountability and responsibilities:

The Accountable Manager (AM) is the General Manager. He is accountable for establishing the SMS and allocating resources to support and maintain it. The Accountable Manager has overall responsibility for the performance and supervision of SMS.

The Safety Manager (SM) is appointed by the Board and reports directly to the Accountable Manager and must ensure that the AM is kept properly informed on safety matters. The SM is not the sole person responsible for safety; however they are responsible for the administration and facilitation of the SMS.

The Safety Committee (SC) is chaired by the AM and includes the SM. Operations Manager, Technical Manager and the Administrative Coordinator. Among other duties they are responsible for implementing, maintaining and adhering to SMS processes, overseeing organisational, operational and technical safety and managing hazard identification activities.

The Regional Safety Officers (RSOs) are appointed by the Accountable Manager (AM) and report directly to the Safety Manager (SM). They are primarily employed to conduct assessments on reported hazards and identify potential risks affecting all members in RA-Aus activities.

The staff and members of RA-Aus must ensure they comply with all RA-Aus safety policies, procedures and practices, are responsible and accountable for monitoring the organisation for hazards and for reporting each identified hazard through the organisation's reporting system. All staff and members must report each incident or accident in which they are involved, witness or become aware of.

It is important for all members to be aware of their individual and collective risk management responsibilities. In order for risks to be effectively managed, it is essential to have people behaving in a way that is consistent with the organisation's approved approach. This indicates that risk management is not merely about having a well-defined process, but also effecting the behavioural change necessary for risk management to be embedded in all organisational activities.

The RA-Aus Safety Policy embeds the strategic safety perspective of the organisation. The policy states that:

OUR COMMITMENT IS TO:

- develop and embed a safety culture in all our recreational flying activities that recognises the importance and value of effective aviation safety management and acknowledges at all times that safety is paramount;
- clearly define for all members their accountabilities and responsibilities for the development and delivery of flying safety strategy and performance;
- minimise the risks associated with aircraft operations to a point that is as low as reasonably practicable/achievable;
- ensure that externally supplied systems and services which impact upon the safety of our operations meet appropriate safety standards:
- actively develop and improve our safety processes;
- · comply with and, wherever possible, exceed legislative and regulatory requirements and standards;
- ensure that all members are provided with adequate and appropriate aviation safety information and training, are competent in safety matters and are only allocated tasks commensurate with their skills;
- ensure that sufficient skilled and trained resources are available to implement safety strategy and policy;
- · establish and measure our safety performance against realistic objectives and/or targets;
- achieve the highest levels of safety performance in all our recreational activities;
- · continually improve our safety performance;
- conduct safety and management reviews and ensure that relevant action is taken: and
- ensure that the application of effective safety management systems is integral to all our activities, with the objective of achieving the highest levels of safety standards and performance.

Risk management is not a stand-alone discipline. In order to maximise its benefits and opportunities, it needs to be integrated with existing business processes.

NEXT MONTH Risk Management Processes to be implemented into RA-Aus, reporting requirements and the processes that take place when Safety Occurrence Reports are received.

The Safety Manager is looking for Regional Safety Officers (RSO). Details in Sport Pilot March 2014. For more information, safety@raa.asn.au.



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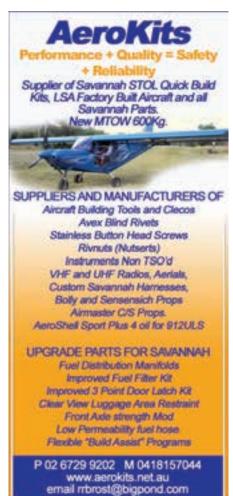
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MEBUILDER

DAVID EDMONDS

This is the first of a new regular column by David in which he talks about all aspects of building your own aircraft

F you want to build an aircraft, you should first go to Oshkosh, Wisconsin. I know this because I built one before I went and that was a mistake.

Oshkosh is the venue for the Experimental Aircraft Association (EAA) annual week-long aviation event. Around 10,000 aircraft fly in. It provides an opportunity to view and experience almost anything you can think of in aviation. It is a must for any enthusiast. At Oshkosh you will be able to see the aircraft you are thinking of building, as well as talk to owners and pilots and the manufacturer.

If you cannot find the aircraft of your dreams there you need to be very cautious about your decision. There will be a reason why it is not represented.

Around twenty years ago I decided to build a Teenie Two, a single place, low wing aluminium aircraft. The plans were first published in the 1970s in Popular Mechanics. The aircraft had a considerable following due to the popularity of the magazine.

I borrowed a set of plans and spent a couple of weeks studying them to work out if I would be capable of following them. I also carefully examined the published flying characteristics.

Eventually I decided that I would never get it finished, if I did not get it started. And in any case, because the aircraft was to be built from plans, I could just buy bits and pieces as I could afford them.

The plans I borrowed to study were beautifully drawn on eight large sheets - but were wrong. That is, there were numerous bits and pieces which simply could not fit together. None of these errors stopped the project, but it did require a considerable amount of redesign. Fortunately the plans, when I finally did buy my own, were accompanied by a twenty-page booklet which purported to tell me everything I needed to know about building the plane.

So, lesson one is that - in this day and age,

still be errors, but most CAD programs now are designed to pick up a wide range of internal contradictions.

It took me ten years to build the plane. There were periods of a couple of years at a time, when pressure of employment meant I could not find the time to work on it. If I worked at home after dinner, I found that I was simply too tired to start on the plane at ten o'clock.

So, I finished the aircraft when I semi-retired. It took 1,500 hours of workshop time, and probably not much less in additional research. It is hard to overestimate the amount of time a firsttime builder will require to research a plans-built aircraft during the building process. Just sourcing materials is, in itself, a considerable job.

While I live in Canberra, I finished the aircraft at Goulburn airport. This is a likely topic for another article. While working on the aircraft at Goulburn, I had the enormous pleasure of meeting the late Dick Nell, a local character and much-loved aviator.

Dick took an interest in the plane and offered to test fly it for me, an offer I gratefully accepted because I certainly did not have the experience to do so. Dick had test flown a number of aircraft, including his own kit-built Rans Coyote.

Dick worked with me on taxi tests and provided advice as I sorted out such things as ground handling. Finally, Dick advised me to do more high-speed taxi tests, lift the aircraft into ground effect and gently try the flight controls, then pull the power and let it settle back onto the runway.

Unfortunately, when I attempted this maneuver, I must have increased the back pressure on the stick too much. Because the aircraft took off and I realised I did not have enough runway left to land. So I flew the circuit and landed a bit more heavily than I would have preferred. The aircraft flew well, straight and level with no control input required. That was a special day.

I realised I needed to sort out the landings. The instructions which came with the plans adfirst circuit, I deliberately came over the threshold above 65kts, a margin I thought would provide sufficient buffer if it stalled at a higher speed than advertised.

I still wanted Dick to do all the test flying for me, but thought that because I had flown the first circuit okay, perhaps I could just sort this little landing issue first. So I flew a second circuit.

I came in over the threshold at perhaps 10m, cut the power and brought the speed back to around 60kts - whereupon the aircraft fell like a stone and pancaked onto the runway before I had time to restore power, breaking off the nose gear and sliding along on its cowl. I stepped out, unhurt.

Like all accidents, there are a number of things I did wrong, but the worst of them was believing the published flight characteristics.

There was an active user group that I followed and the enthusiasts on this group had not discussed flying characteristics. So I assumed they must be as published. Shortly after my crash, a discussion started which advocated flying the aircraft on approach at 70mph and continuing flying to the ground on half-power.

I never flew the plane again, but another pilot with considerably more experience than I restored the aircraft and this is how he flies it.

Ben Franklin said there was no point in trying to become humble, because he would take excessive pride in his inevitable success. I believe this experience did instill a certain level of humility in me which readers need not feel they need to reinforce, but I was still proud of having built an aircraft which flew straight and true. I loved the building process and the gradual accumulation of skills. I felt I would dearly love to build another.

It is a human characteristic for people to become committed to their decisions and dismiss the shortfalls of their decisions. So while we all believe what we read on the internet, it is not much use for finding objective information on the experience of building a particular aircraft.

do not attempt to build a plane from anything vised me to bring the speed back to 50mph over Go to Oshkosh instead. other than computer-genthe runway threshold and allow the plane to seterated plans. There might **NEXT MONTH Batteries** tle. Which all sounded nice and gentle. On my 19-5145



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Stewart & Gladys Smith would like to assist with your RA-Aus or GA aircraft insurance, or hangarkeepers public liability policy needs. The only insurance we handle is aviation, we do it well, and we are both friendly and economical to deal with!

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werLinx can assist.

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HIS year's Darling Downs Sport Aircraft Association fly-in at Clifton Airfield was well attended, with over 70 RA-Aus and GA aircraft turning up. That was despite a category one cyclone off the Far North Queensland coast which brought low cloud to the south eastern end of the state, and thereby preventing aircraft from Northern NSW, Southport, Kilcoy and Caboolture from getting over the ranges.

The event began as usual with an excellent dinner for early birds on Saturday night in the main hangar, followed by an equally delicious breakfast on Sunday morning. Twenty knot easterlies gradually diminished to about 10kts as the morning progressed with the east/west orientation of the airstrip proving to be perfect for arrivals and departures. Peter Williamson from Moree did aerobatic practice over the field on both days. Also, as is becoming more and more the norm, the Savannah contingent almost outnumbered the ubiquitous Jabirus.

Clifton Airfield will soon be streaming live video of the airstrip (in both directions) over the internet. Pilots will be able to check conditions, even cloud cover over the Cunningham Gap, enroute, by tuning their mobile phones to http://www.loneeagleflyingschool.org.au/ or by finding Lone Eagle Flying School on Facebook

As the largest RA-Aus club (both membership and geographical area), the DDSAA clearly continues to lead the way in making our sport safer and more enjoyable.





THE SPECS

- 4 stroke 2 cylinder Horizontally Opposed OHV 2 valves/cyl. **Twin ignition**
- **BORE 94.0mm**
- STROKE 69.0mm
- CAPACITY 957cc (58.40 cu.in)
- COOLING Forced Air
- COMPRESSION RATIO 8.75:1 130-140 psi
- OUTPUT 50-60hp
- TBO expected 1000 hours.
- WEIGHT approx. 35kg (77 lbs), with the Aerotwin gearbox approx. 45kg (99lbs) total. Plus oil tank
- The engine will be naturally aspirated, but can be turbocharged for altitude compensation





The Aviator by Bert Moonen Quicksilver Aircraft Aus Ouicksilver Aircraft Australia

OR those of you who have had a Rotax 503 engine in your aircraft for years (some of you curse, some of you rave), the reality is that sometimes it is the only engine that will fit into your lightie.

Being a flyer of Quicksilvers for many years, I found the Rotax 503 to be a good engine, as long as I respected it from new and looked after it.

A couple of years ago Rotax (in its wisdom) ceased production of the 503. From what I understand, it was pressure from the Californian EPA laws. They also had plenty of stock at the time. Eventually, though, the stocks ran out.

I have been involved with the development of the new Aerotwin 65hp engine in New Zealand and I found out the company, while developing the Aerotwin, also had a 50hp 4 stroke

engine on the backburner.

With the demise of the 503, I suggested there was an opportunity to tap into the lightie market as the 503s now in service started getting towards their TBO time.

The Aviator HFA is a 4 stroke fuel injected naturally aspirated boxer engine with 1000hr TBO. The engine will use most of the electronic components and gearbox of the Aerotwin 65hp engine. The earlier version of this engine has already run for around 300hrs, with 150hrs on an aircraft without any major issues.

The development of the Aviator HFA had slowed a bit due to a delay in getting the engineering done for the wet sump engine mountings and the exhaust setup. Christchurch, where the designer is based, is still getting aftershocks daily (the count is up to 30,000), which slows getting anything made, because many in the engineering trade deserted the city.

The long term plan is that it would ideally bolt straight on where the 503 was previously installed.

This engine will be installed into my Quicksilver GT400 hopefully before NATFLY, after we have done extensive dyno and wind tunnel testing in New Zealand.



members' market

2671 JABIRU SP 500/6 19-3717



Well maintained hangared. 449.5 hrs. 123kts @19ltrs hr. Sweetapple cruise prop, custom extractors, 10 ply mains, 85ltr tank. STD gauges electric turn coordinator, volt meter, fuel flow meter. XCom VHF & headsets, + UHF & 2xGPS. Grim voltage regulator, Anderson jump start plug. Deliver anywhere. \$48,000 . 08 9921 8790

3028 FLIGHTSTAR 11 SC



Brand new 2 seater. Protective covering still on doors and windscreen. Airframe 0 hours. Engine 0 hours. HKS 80 HP fuel injected turbo with intercooler. Aerolux 3 blade adjustable prop with spinner and individual blade covers. Hydraulic disc brakes. Carpeted interior. Easy clean Mylar flying surfaces. ASI, VSI, Tacho, Manifold pressure, Slip indicator. \$38.000 complete or if desired,\$28.000 minus engine and prop. Ph.0419439976.Email formefitness@bigpond.com

3176 STORM 300 SPECIAL



Level 2 owned and maintained. 912S 100hp Rotax 780 hours. In flight adjust prop, KT79 transponder, 2X VHF radios Lightspeed ANR headsets, carb heat, AH (Vac) Garmin 196 GPS, Man pressure, ASI, ALT, CHT, plus heaps more \$55,000 no GST for quick sale 0419348288 or pbugg@onthenet.com.au

3268 EUROPA XS 19-7850



Europa XS. Reg. 19-7850, 170 Hrs. Jabiru 120 HP, 130 Knots cruise, long range tank, 20 Cu Ft baggage. Electric trim, A-Horizon. Reg custom built trailer. \$50,000 Phone 0428 988 662

3276 AIRBORNE MICROLIGHT XT



tourer trike. Rotax 912, 4 stroke engine, Streak 3 wing, Microair M760 dual comms radio, large windscreen, log book, manuals, registered RA-Aus til 27/9/2014, always hangared, always privately owned. excellent condition, lots of extras. \$35,900. Ph 0429 61 99 87 flblainey@

3301 SAVANNAH - STOL



Rotax 912 80hp. DUC bipala prop. Slats fitted. Has extra instruments and new MGL trans and coms system fitted. King transponder, wheel spats. Fully maintained and never had an accident. Ideal aircraft for low hours pilot. Always hangered. \$45,000 Situated at Mandurah, contact Garth at garth.lb@ bigpond.com or 0409 599 845.

3380 SKYRANGER V- MAX U K.

Skyranger v- max u k. nil hours, rotax 912 80h.p. all instrutments. green/ white. to be completed and test flown soon. sale due to ill health \$40.000.00 o.n.o. phone 0438909665 or donlee@y7mail.com.

3398 THRUSTER T500



Thruster T500 always hangered. Rotax 582, 230 hrs since overhaul. UHF and VHF radio with intercom and 2 headsets. Heavy duty undercarriage and large fuel tank. Very reliable. Reduced to sell at \$12,500. Phone Paul 0427622176

3415 SUBARU EA81ENGINE PACKAGE



58 hrs since complete rebuild and cam mod. 100 HP. Electronic Ignition. Rotec TBI fuel injection. Autoflyte geared re-drive. Carb heat. S/steel exhaust. Will consider sell components separately. Full package price \$5,500. Ph 0429 810 008

3416 JABIAU SP500 - 3300



TT 250hrs. This beautiful one owner aircraft has had no expense spared. Excellent GA Panel, Quallity Radio + Icom with headsets. Artificial Horizion. Garmin 296. 2 Pac Paint Leather Trim, Quick realease wings, Lame 2 Serviced Price Reduced \$45.000 0418573212



Cheetah XLS 24-7072. 80 hrs airframe and engine. Jabiru 2200 PP. Single owner always hangared. Easy to fly and maintaine. 90ltr tank, spacious cockpit. Digital inst with analogue backup. 75kts cruise. Based Bunbury, WA. Reduced to \$30,500 Contact George on janspo@westnet.com.au or 0406226566

3451 RANS S-14



Single seat high performance ultralight. Rotax 912, full instrumentation. Fighter-like agility and performance. No vices, and will trim hands-off, probably not for the very low hour pilot. A sea change means I have no time to fly it. Inspection will not dissapoint Located near Gatton Qld. \$25,000 Ph Ian 0418880257

3479 JABIRU SP500



Powerful 6 cyclinder set for cruising with 135L wet wings. Well equipped. Always hangared with full maintenance history. All ADs/MSBs current. Comes with spare Thompson prop, headsets, tie downs, chocks, spats, CO detector, 7"GPS c/w all Australian wac & vnc charts. \$39900. Jon 0423377771 (Perth). Consider delivery Australia wide.

3487 JABIRU SPT-6 TAILDRAGGGER



New Jabiru SPT-6 Taildragger, TT 15 hrs, New 3.3 engine, 85 litre tank, STD Jabiru dash, Gloss white ready for your decals. One of only four Jab 6cyl taildraggers. Goes like a rocket, Solo ROC 1800'/min, 125 kts @ 2700 RPM. YBNS airport. \$58000. must go. Phone Martin 0412 617110

3489 JABIRU SP6.



Regd 19-3845 to 27/6/14; TTIS A/F 451 HRS ENGINE 20 HOURS (3300/120HP) HYDRAULIC LIFTER. GARMIN 126/8GPS,ICOMA200 RADIO/ INTERCOM, ASI, ALT, RPM, EGT, TURN CO-ORD, OIL PRESSURE AND LIGHT, VSI, CHT, OIL TEMP, ELEC FUEL PUMP, COMPASS, LOCK, WHEEL PANTS, TWO PLACE, BUILD BOOKS/ EXTRAS VNE 132 RAY 0411 956734/ 03 51555181 rjwheels@gmail.com ASKING \$45000 O.N.O.

RA-Aus head office & Members' Market enquiries

3490 JABIRU 170C



August 2008 factory built. 420 hours TTIS Option 1 panel plus Microair transponder, FC-10 fuel computer, garmin 196 GPS. 10ply front and mains. Always hangared. All AD's complied with. \$67500 Contact Kevin 0417131816

3495 FOXBAT



TT700hr Rotax 912 100hp L2 maintained Excellent condition, New Kiev prop& tyres recently fitted, Hangared near Ballina nsw Transponder, Fuel flow meter, Microair radio, Garmin 196, ALT, ASI, VSI, Flydat monitoring system, AH-Trutrack ADI pilot2, headsetsx2 plus lots of extras PH Evan 0408025381 \$68,000

3504 JABIRU J 250



Jabiru J 250 Reluctant sale. Good as new with only 80 hours TTIS. 10/10 inside and out, comes with spares and David Clark NC Headsets, GPS and many extras, needs to go to a good home, \$65k or best offer. Phone Anthony on 0407 804 503

3509 AIRBORNE 912 TOURER



AIRBORNE XT 912 **TOURER 2007 MODEL** 578 HRS STREAK 3 WING EXCELLENT CONDITION MICROAIR 760 VHF RADIO HELMETS WITH LYNX HEADSETS/INTERCOM PLINKINHEAD COVERS FULL SERVICE HISTORY RAA REG EXP APR 2014 \$34,000 kenj@

jelfor.com.au 0412512457

3510 JABIRU J160-C

Jabiru J160-C 24-5111 in very good condition, always hangared at Bathurst. TT448 hours \$56,000 ono Ph 0402497671 airsurv@bigpond.com



X-air Standard .Reg 19-3322. Rotax 618. Brolga prop.

Doors. Luggage compartment. Full instrumentation with X-com radio with intercom & two headsets. Spats not fitted but included. 255 hours TT airframe & engine. Full maintainance log. New Battery. Always hangered & covered. Excellent condition.Peter 0402599306 or Rod 0448470390. Reduced to \$18.500

3531 JABIRU POWERED BOORABEE MK 2



Good local and cross country flyer. 100 litres of fuel (in the wings) at 15 litres per hour. Would deliver to anywhere in NSW or Victoria.2 seats and all the usual instruments. Good looking aeroplane that has been a past prize recipient at RAA events.

Phone:0408690738 Offers between \$16,500 and \$19,500

3536 JABIRU 2200 ENGINE

Solid lifter motor -250 hours still in plane -always run Amsoil synthetic oil-complete instalation kit(air box, cht egt-sweetapple 58d 48p propeller etc). This is a good motor, only selling to upgrade to larger motor. Phone John 0409 308 232 for more details. \$7000.00

3540 CORBY STARLET



Corby Starlet Total Hours: 346 Engine Hours: 346 Rego: 28-1976 Price: \$25,000 Posted: 21 Jul 2013 Mosler 1835 cc motor 65 H.P. with injector throttle body has ICOM VHF full maintenance log always hangared delight to fly located Serpentine W.A. contact Tony 0433 33 77 33 or tony.mitchell1943@ bigpond.com

3551 JABIRU 230D



Jabiru230D, '09,Factory,TTIS360hrs.Reg8/14, own hangar, immac as new, L2 LAME maint, Redleather, EFISD100, AVMAP EKP IV GPS, 2axis AP, MicroairVHF & Xponder, remote ext plug, MP3 music, full covers nose to tail, wing strobes, all updates, new prop, rotors & pads, MLG wheel bearings, many spares. \$92,500incl GST, 0419555726

3552 JABIRU J230-D 24-5490



Factory built 2008, Airframe & engine 94hrs, Maintained every 25hrs, Nil accidents, Analogue

instruments, Icom IC-200 radio, Garmin GTZ-320a transponder, Booster seats, Sensenich prop, Garmin 295 GPS. Always hangared & runs great. Contact Kevin: 02 4283 2671 or 0408 427 458 Email: kaybee@exemail.com.au \$85,000

3554 THATCHER CX4



THATCHER CX4, - SINGLE PLACE, COMPLETED MAY 2012. SECOND OF TYPE TO FLY IN AUS, 1915CC VW ENGINE, STARTER, ALT, MAGNETO & SEC IGNITION, SWEETAPPLE PROP, TINTED SLIDING CANOPY, DISC BRAKES, STROBE, STRONG UNDERCARRIAGE & FULL CASTORING TAILWHEEL, GREAT TO FLY, \$26K DETAILS CALL KEVIN 0448856983(QLD) (NO TEXTS PLEASE).

3564 RANS S12S SUPER AIRAILE



Reduced to Sell - Multi award winning, 1 Owner/ Builder, Rotax 912, 430 hrs, 2 seat side by side, Lots of extras, Nil accidents, Garmin 196, Stol performance. Great plane. \$40,000. For more info & photos Phone Brian 0418 802 002

3566 SONEX



Plans built Sonex. First flight Dec 09. 95 hours engine and airframe. Stratomaster Maxi single instruments, ICOM radio, separate analogue ASI, Cruise 90-95 kts@16 l/hr. Aerovee engine. Located Colac airfield . \$30,000-00 no GST. Phone 0352338244

3579 CARBON CUB SS 180HP



Carbon Cub SS by Cubcrafters Inc, 200 hours, ready to fly away. 180 hp, optioned up, you will never get one at this price again. Tough, Safe, Powerful, and most off all FUN. Come and fly the most exciting cub ever, Tyabb Victoria. Call 0414 444 971 WWW. cubaircraftaustralia.com.au \$230,000

3582 JABIRU 230 D 2007

190 hours, Factory Built, 24-5221 Private use, excellent condition, transponder, vertical compass, FS-450 Fuel Flow, Garmin 296, MP3 plug, External power socket, Always hangared, regular maintenance, recent new battery, 10 ply mains tyres, Spats included but not fitted. clean, faultless. Bargain Price \$72.000 Ross 0412 484 279

3592 NOOSA AIRSTRIP PROPERTY



NOOSA AIRSTRIP PRPOPERTY Modern 560sqm designer residence, pool on 10 acres. Aircraft hangar (15x18m) with self contained unit, office and workshop. Access (Easement) to 850m and 600m airstrip and taxiways. 25 min. to Noosa main beach. Price \$ 1'750'000. tschoenh@bigpond.net.au, 07 5485 3034

3600 TEXAN 600 FLYSYNTHESIS



Dec 2007,TT:850Hrs 2000TB0,excellent condition,LAME maintained,fully optioned with Garmin SL40 comm, Garmin GTX327 transponder, Trutrak ADI3 artificial horizon, Trio Avionics 2 axis autopilot coupled to Garmin 695 GPSMAP, ballistic parachute, Rotax 912ULS 100Hp,100I fuel, cruise speed 115Knots, carby heat, electric trim, toe brakes, wheel spat, wings and tail strobe,nav light,noise cancelling headsets,canopy cover, hangared at Tyabb, Vic. \$109,000 Ph:Luc 0417371871

3603 AIRBORNE XT TUNDRA 912 S3



2008, 199 hrs *Always hangered *Excellent condition *Skydat GX2 *Two helmets/ headsets *Microair transceiver *Tall windscreen *Maintenance log *Reg. 26/03/14 *Extras incl: *Custom heavy duty trailer *Heavy duty covers *All cross-country bags *Training bars** \$44,000. Test flight avail. w/qualified instructor. Contact Geoff 0409913858.

3605 VANS RV-3



Single seat. No frills (basic VFR panel), quick & agile, attention-grabbing. The RV-3 is Van's original and some-say best. Marge Warnke "the air claw" prop. Currently registered GA, is eligible for RA. 480TT, 0-320 160HP 70SMOH (2566TT). Located YPJT. \$30k obo. Alexis 0477381010 alexisoost@gmail.com

3614 SLEPCEV STORCH



Slepcev Storch 19-3094, private use only 200 hrs, Rotax 912A , Bolly prop , Microair 760 vhf , gme TX 3200 uhf .Plumbed for I/r fuel . excellent condition . Always hangered. Suit property owner or short field operator. Contact Peter 0427958229 \$57500.00

3621 KR2 ALMOST COMPLETE PROJECT



Registration lapsed KR2 99% complete. Needs new prop, new / repaired engine cowlings, redrive reassembly (all parts included), odd jobs and paint. Subaru ea81, flaps, tricycle u/c easily re-converted to tailwheel. Includes fitted intercom and older style GPS. Lapsed licence forces sale. \$10,950 ono. Martin 0419 333 525

3627 PRIVATE AIRFIELD



600m private airstrip, Murrumbateman area, 20 mins Canberra, highway access, 12 x 12m hangar, OCTA. House 5 bed, 3 bath, tennis court, 4 car garaging, established gardens. 40ac income producing property, currently running 70 prime lamb ewes. Shearing, machinery, hay, workshop sheds, large cool room, 2 stables. \$1.3m. Phone 0402413126.

3635 GAZELLE AND TRAILER

with excellent custom built trailer and CASA required wood prop.All documentations from first rego. Lots of extras, gps, spats. For photos and info phone 0888492060 mob. 0417492065 South Australia Paul

3648 SKYDART MK III



Rotax 447, 150hrs TBO, Great little aircraft for low hours pilot. Lots of fun. Sound skins, new tail feathers, all round in good condition. All instruments, ICOM radio. Reliable and ready to fly. \$6,500 ono. Hangared North Queensland. Can be dismantled for transport. Contact Volker at volkerschwerdtfeger@ gmail.com

3650 JABIRU J200B



19-4103, Avalon winner 2007. Aircraft in excellent condition, always hangared. TT440 hrs serviced every 25 hrs - Mircoair radio. Garmin 296 and 95 GPS. Low



fuel warning light 2strobes, manual flaps NIL accidents. \$65,000 ono. Phone: Bevan 0428 536 338 Email: bevanlane@bigpond.com

3651 ALPI PIONEER 300



This is the Ferrari of ultralights. Factory built. Fitted with Pioneer "Super Wing", Rotax 912 100HP Engine, with electric Variable Pitch Propeller and retractable undercarriage. Comprehensive avionics systems fully factory installed. Nil accidents. Only 160hrs airframe time. Hangared since new, meticulously serviced. \$105,000. Michael Bartlett, 0408 719742, mikes560@hotmail.com.

3660 JABIRU J160-C



Immaculate condition factory built october 2006, 560 TT engine and airframe. Well equipped Dynon D10A, Microair transponder and radio, PCAS, Trio autopilot, Garmin 3, cabin covers and more Always hangared, regular maintenance and nil accidents. One owner Jabiru and never used for training. S.A. \$55,000 incl GST. theo@graftedvines.com.au 0418 805204.

3662 CLASSIC SAVANNAH VG AIRFAME KIT

Classic Savannah VG Airframe Kit. New, complete and still in box - has not been unpacked. Extra wing tanks. \$25,000 0419 215 514

3674 VIKING ENGINE 110HP HONDA



New Viking Aircraft Engines Inline 4, Liquid cooling, fuel injection, 110hp @ 5,800 (2,500 prop) Torque (lb-ft @ rpm) 247 @ 4,800, 81kg, dual FADEC, dual fuel pumps & Viking Bus. phone Jon Gooding 0412091487 jgooding@chw.net.au Ballarat \$17990

3680 XT-912 TUNDRA NO WING



Airborne Microlight,NO WING, 2009 XT912 Tundra,Samsung 7"Tab with Ozi explorer & maps, Rotax 80hp 4 stoke engine,Rear disc brakes,Microair M760 radio,Landing light,Bar mitts,Training bars, Engine cover, Log books,All manuals,394 hrs Always hangared, Awesome trike to fly in excellent condition. Located Dixons Creek Victoria. \$29,999. Phone Steve 0419 879 340

3683 DRIFTER



Drifter 25-319, Wire Brace, 582 Blue head, Icom, headsets, Good Skins, Well maintained, Flys well, Front and Rear instrumentation, cheap entry level flying, always hangared, \$12,900 or nearest offer Phone Mark 0418 114 546

3686 CESSNA 120



Cessna 120, 24-8085, 2 seat, Cont 100hp, engine to run approx. 1300hrs, dual coms, transponder, VFR instruments, always hangared, cruise 95kt @ 20lph, Avgas/Mogas, 45kg luggage, 4 point harness, 100 hourly due 07/14, int/ext very good. Suitable for training, Located East Gippsland, \$50000. ono Phone David 0419 503 157

3691 RPL? CESSNA 150M



Certified, proven GA aircraft, 1976, VFR, TT4630, Cont.O-200 ETR1700, 21lt/hr, McCauley PTR1500, fresh 100hr, all AD's, 2PTT/intercom, Garmin 296 in panel, KT76aTxp, MX300 Nav/Com, VOR, strobes, never damaged, always hangared, priv use only, Int & Ext 9/10, flys beaut, great recreational aircraft for RPL, \$49000 ono, Ph 0418719318

3696 **AERO VW**

Aero vw forsale \$2500 400hr in corby starlet Twin mag twin spark heads carby heat prop and spinner Contact matt 0439812282

3703 PARTNERS WANTED - TECNAM TAIL

I am seeking three partners for a group ownership purchase of a TECNAM P92TD. Based in the S.E Qld - attractive rates to group members. Available for training - by experienced TW instructors. Sharecost envisaged \$35,000.00 - \$40,000.00. Further information call 0468333443 or 0412882639 or by email at elsewhere@optusnet.com.au

3704 CORBY STARLET



Corby Starlet TT 130Hrs. Jabiru 2200 86HP mesured on dyno. First Flight Nov. 2010. Built and mantained by L2. Always hangared and covered. Your resonable offer. Must sell Ph 0451517910 or 0352755372

3709 NEW HOUSE AND HANGAR - TEMORA NSW



Council maintained airpark, 3 runways, taxiway to hangar. 18.5m x 13m hangar, power, lighting. New brick veneer home fully serviced set in beautiful park surroundings. Four bedrooms, ensuite, modern kitchen with separate butler's pantry. Ducted heating/cooling. Great community, wonderful life style, don't wait. \$580.000 inc GST phone 0419 389 311

3712 EDGE RED BACK

Edge Red Back in excellent condition with many extras, call Gerald on 0439883433 Price: \$14000

3714 HELICOPTER ROTOR-WAY EXEC



Helicopter Rotor-Way Exec TT101 hours 2 crew, upgrades Empty weight 442 kg Useful load 238 kg Max.takeoff 680 kg Powerplant 150 hp Performance speed: 100 knots Cruise speed:82 knots Range 180 mi Endurance: 2 hr Service ceiling: 5,000 ft hover ceiling,Rate of climb: 1,000 ft/min Price: \$55000 John libertyandassociates@gmail.com 0435802035

3715 HOT AIR BALLOON (RAVEN)



Hot Air Balloon (Raven) Complete with new Honda inflator Fan Flight Gages, 3 Alloy Gas tanks, log books, good basket and envelope. \$9,500 ... Liberty Alliance libertyandassociates@gmail.com 0435802035

3717 FK 14B2 POLARIS



FK-14 POLARIS. 24-8065. \$132,800. LSA. 80hrs. Perfect. Delivered April 2012. NATFLY winner 2013 Best Factory Built. 100HP Rotax. DUC prop. Dynon 100/120. Garmin 695, AP-74, Microair VHF, Transponder. BRS. Full covers. Digital Stratos Headphones. 5 hrs 130kts cruise, stall 39 kts@ 544kg. Bacchus Marsh VIC. 0419136069. Email xtopher@bigpond.net.au

3718 AIRBORNE XTC-582



2006 WITH CRUZE WING TT 100 hrs, EXCELLENT

CONDITION, MICROAIR 760 VHF RADIO, XL, L and S HELMETS, LYNX INTERCOM/HEADSETS, CUSTOM COVERS, LIC TRAILER, FULL SERVICE HISTORY, \$25,000ono, Located in Perth WA, Contact Steve on 0419916032 or email Lchop11@gmail.com

3722 SKYFOX CA22



First Skyfox on the Australian register. Completely rebuilt aeropower engine 65HP.Crank shaft reground, big end, mains and camshaft, 4 new conrods, new rings and valves ground, new value guides.5 new coils, new diaphram, new left brake cylinder, replaced voltage rectifier. Reason for sale lack of use. Price to sell \$30,000 ONO Contact Oliver - 0413 785 265

3725 JABIRU J250



Jabiru J250, great aircraft, 10/10 in & out, only 80hrs TTIS. \$69k as is where is (YHML) with spares. 0407804503

3726 VANS RV 12



Vans RV12, 70,000 price reduced NO OFFERS. As seen in October Sport Pilot. Rotax 912 100HP. 40 hours, TT engine and airframe. Icon flip-flop, transponder, steam gauges. You cannot build it for the asking price. Ring Brian 0755462251

3727 DECEASED ESTATE (WESTERN AUSTRALIA)

Deceased Estate. (Western Australia) Almost completed Taylor Monoplane including new VW engine (cost \$6,500.00). Plus instruments, propeller and most equipment to finish building. \$12,000.00 ono. Ph: 08 9419 3408 Email: chittychittybang@bigpond.com

3728 LIGHTWING GR912S SPORT



Nose wheeled, 550hrs TT, Rotax 912s 100hp, Flaps, Icom A200 VHF radio, Electric turn coordinator, GPS (basic non aviation type, large screen), 3 blade Brolga prop. \$42000 including delivery. Contact Gareth Lloyd on 0402845244 (WA) or blue_sky@live.com.au

3730 SAVANNAH VG



Rotax 912 100hp 290 hrs both carb heat, cabin heat, 140 lt fuel, tundra tyres, strobes, GPS Airmap Xcom VHF headsets road trailer nil accident Corrosion proof. Hanger @ Sandfly Hobart with power water solar or delivery by professional pilot. pics available \$49900.00 aircraft, 19900.00 hanger 0414934750

3731 GARMIN 695 & 2X DC H10-13.4 **HEADSETS**

Garmin 695 \$1,000, new in box, carry case, dash mount & leg strap, all accessories ready 2 fly. (RRP \$2,000), David Clark H10-13.4 headsets and carry bags x2 @ \$300 for both or \$170 each in new condition. (RRP \$ 300 each). Not flying. Contact Julio 0404074311 / giulioleschi@bigpond.com

3734 TECNAM SIERRA P2002JF



This aircraft is in exceptional condition and has been refurbished from ground up 60hrs ago. Engine upgraded to 2000hrs. All ADs up to date including 5yr all rubber replacement. Full GA panel with 2 radios and (1 dual watch) 2 GP's and transponder. \$75,000 Phone Mike on 0408 203362

3735 NORTHERN RIVERS NSW

Northern Rivers NSW. Property 228 acres. 700m airstrip. Hangar, workshop, all usual farm facilities.

Runs 50 breeders, Suit retiree, club, group ownership etc. Dual river frontage. Asking \$640,000. For further details, photos etc 0427 115225.

3736 DELIVERY PILOT

DELIVERY PILOT Do you need your RAA or GA aircraft delivered anywhere in Australia? 18000 hr retired professional pilot and RAA aircraft owner, available, best rate going, just need to keep busy. Recent deliveries to NT, QLD, Tasmania, and Northern NSW. Ring Gus on 0414934750

3737 FOR SALE NYNJA AIRCRAFT KIT **WITH 912ULS**



Brisbane Area -- 1/5th Completed Kit - Nynja Aircraft. -- Comes with Brand New Engine, Complete and Full Instrument Set. Radio, Transponder, Fuel Tank, plus all parts that have been purchased. This is for SERIOUS people who would like to purchase it! Build Log

at 10/2012 at www.markjamesallen.com \$50,000 Negotiable. Email marka@markjamesallen.com.

3738 REVO 912 MINT CONDITION



Magnificent Red Revo, 100HP Rotax, electric trim, Enigma colour display, every conceivable extra, strobe/Nav lights, 3 wheel disc brakes. Flycom full face helmets with intercom, email for comprehensive features

list. Replacement cost \$85,000 plus GST plus USA freight. Custom built 7 metre internal trailer package price \$99,500. gary@eldering.net.au Mobile 0411550280

3739 HANGAR FOR RENT

Goolwa, South Australia 18m+18m with all services 3 phase power, water, toilet etc Easy access to runways and facilities. Phone John 0420884022

3743 SKYFOX TAILWHEELER 912UL ROTAX







HORSHAM AVIATION SERVICES ABN: 65 007 339 451

Now Importing THE EUROFOX AIRCRAFT:

- Quality Factory Built
- Quick folding wing design
- Glider Tow certified to 750Kg
- · Short take-off & landing

And Dynon Avionics Products:

- Now with Autopilot capability
- Solid state sensors
- Checklists
- · Audible alarm capability

PH: 03 5381 1727

Email: info@horshamaviation.com.au

Skyfox tailwheeler with 912UL 80hp Rotax. Airframe TT1789 and engine 430hrs since new, (not rebuilt). Hangered 30 minutes west of Mackay. Delight to fly. All AD's and annual inspection up todate. Wings fold taking about 5 to 10 minutes. Price \$27,900. Phone Mike 0749549818

3746 JODEL D18 ULTRALIGHT AIRCRAFT

Jodel D18 Sovereign Subaru EA81 engine. 132 hours engine/airframe. Like new, always hangared. Warp Drive 3 bladed ground adjustable prop, 6" balloon tyres. Comprehensive instrument panel including satnav. Currently hangared Gulgong, NSW. Owner of 88 years has moved and requires this aircraft to be sold. Price \$24,950 negotiable. Ph. 0429348230

3749 AIRCRAFT ALUMINIUM, ZENITH **PLANS, PARTS**



Aircraft aluminum 6061-T6, Chrome moly, parts, tools, plans. Bruno Wright 0408966181 Price: \$1800

3751 HANGER RENTAL

New 18 x 14.5 meter hanger on Rylstone Airpark. All metal hanger with skylights, painted floor, solar lights, insulation. Available February 2014. Rear bay \$44 per week-Front bay at \$49 per week plus outgoings of \$10 per week . Contact 02-9622-1916

3753 SPEEDY PROPELLER

Speedy Wooden Propeller, suit Rand KR2 53x42. May suit any 2L VW engine. Cruise Propeller, good condition, approx. 50 hours TIS \$480 Contact Des 0438 622 680

3759 REVMASTER ENGINE

2100 cc. Revmaster VW. The engine is disassembled and consists of mostly new components with many used but serviceable items as well. Too much to list here so if you contact me I can supply full details. Dean 08 87331235 Price: \$4500

3764 JABIRU, LSA 55 J3



Jabiru LSA 55/3J,55-3540, 2.2Lt solid lifter, Factory built, Reg'd until July 2014. TTIS 1679 hrs, 263 hrs since Top-end overhaul by L2.Standard Jabiru instruments, New 501 intercom, Up-graded Microair 760 UHF Microair T2000 Transponder, Odyssey battery Anderson jump start plug, Oil-air separator, Jabiru made Cold Start Ignition. All manuals, records. Hangared and covered. Price to sell \$36,000 Phone Charles -03 58252223 A/H Shepparton Area

3765 HANGER WANTED

Hanger wanted, Sunshine coast area, Caloundra, Caboolture, maroochydore, Gympie, Kilcoy. pay up to \$200,000 for a good investment proposition. Also LSA Taildrager, wanted, factory built suit training school. Michael Call Australia (07) 54510165 mobile 0415 623380 or Singapore 65 98934562 email mjgilsenan747@yahoo.com.sg

3770 JABIRU SP500 SIX 120BHP-\$39,900



19-3435 has a new 120 bhp 187 hour engine. This comfortable good looking pocket rocket has superb 2 pack paint finish. Five hour safe 135 litre wing tanks + five litre header tank. Cruise 115 kts @ 21lph. Fly's hands off, full panel with A/H . Condition report completed. Photo's available.0423 377 771 jondevine01@gmail.com Perth.

3772 STING S3 LSA



TTIS 770hrs engine 570 hrs Excellent condition a dream to fly at 110-115kn with a near new Sensenich ground adjustable prop,full set of round gauges including ADI, Zaon traffic alert, Garman 496 GPS, GTX 327 Mode C transponder, SL40 com and Greenline EMS.Based at YBNS. \$83000 neg Phone Mark on 029 390 131

3776 SAPPHIRE



Sapphire 19 3594. 385 hours, 447 Rotex, 3 stage flaps, spats, Microair radio, new paint job, enclosed cockpit, 9 LPH, cruse 80 knots, 60 litre wing tanks. Always hangered, currently hangered at Bendigo Victoria. \$16.000. Phone Ron 0414594022.

3777 EUROPA AIRCRAFT

Unfinished kit. Forced sale due to divorce settlement. Original classic design with tri gear conversion kit. Fin, rudder, tailplanes, anti-servo/trimtab, tailplane assembly, mass balance assembly, spars are completed. The fuel tank and cockpit module including flying controls is bonded to the fuselage. See www.europa-aircraft.com for specs. \$19,000 ono jeplayer@iprimus.com.au Mob:0408985203

3779 JABIRU J120



Jabiru J120 factory built in 2008. 841hrs TT, maintained by Level 2 and always hangared. 100kt cruise at 15 l/hr, latest camshaft fitted, develops lots of power. A great little aeroplane. For more information call Phil during business hours on 03 5389 1541. \$45,000.

3780 JABIRU J230-D



Jabiru J230-D multi purpose Glider Tug plane. Factory built in 2007 with glider towing option fitted. 761hrs TT, maintained by Level 2 and always hangared. A proven performer. For more information call Phil during business hours on 03 5389 1541. \$69,000.

3782 X-AIR 602T



Rotax 582 blue head motor. 3 blade brolga prop. 50 Itr fuel tank. Xcom radio/intercom, 2 head sets. Built 2006, registered until 13.11.14. 215 hours TT. Hangared in Colac, Victoria on private 300m strip. Excellent short field performance, easy to fly. \$19,000. Contact Rod, 0417 573 048.

3783 FLYING INSTRUCTOR

Narrogin Flying Club WA seeks the services of a RAAus CFI or Senior Instructor to conduct training using the club aircraft (J160). Narrogin has excellent facilities and conditions for training. Potential CFI or SIs are also en-narroginflyingclub.org.au> or on 0417 979 611

3784 TERRIER 200



TERRIER 200 Beautifully presented fibreglass wing Terrier. Additional features include: Strathomaster digital dash, 196 GPS, Microair radio, Strobe and landing light. Bolly carbon fibre 3 blade propeller. Eng. Subaru EA-81 100hp. Registered 19-3927 in W.A. Second aircraft and no longer required, needs new home. \$48,500 Contact Gary 0407214412, Dennis 0428844001

3786 JABIRU SP470



Jabiru SP470 Reg 19-3739. 550 hrs Engine and AF. Full height rudder fitted. Wheel Spats included. Reluctant sale. Asking \$35k. Please phone Eddie for more information on 0401006506 or Email eddiemar2133@gmail.com

3787 TERRIER 100



Terrier 100 19-3509 480 hours on 100 hp Subaru EA81 engine and airframe. Standard instruments, Garman 196 GPS, Microair radio/intercom and always hangered. Good condition and is hangered at Woodstock near Townsville QLD. \$45,000 Ph. John 0410857103.

3788 JABIRU J160D



Always hangared, exterior decals, strobe, dual caliper brakes, landing light, adjustable rudder pedals, D10A EFIS, Avmap GPS, 2 x ASI, ALT, VSI, VHF Radio, Transponder. A1 condition. All AD's and Service Bulletins complete. Nil accidents. With Annual inspection. As new condition. \$67,500 Contact Lorraine 0419307768 or Email edgeaviation@yahoo.com

3789 JABIRU 230D



Exceptional condition. One owner. Private use only. Factory built. Meticulously maintained by owner, LAME and Level 3. Always hangared. Nil accidents or incidents. TT380 hours engine and airframe. Option 2 panel. VHF, Transponder, Garmin 296. Located Townsville area. \$79000. John 0414947530.

3791 SV AIRCRAFT

2 seater. Kim Beazley, whilst Federal Minister for Transport, flew in it 1983 & Director of Aviation flew in it 1982. Wings and controls complete, which alone would cost over \$10,000 to build.2 BMW 100HP engines. Propeller, pulleys and belt for reduction gear. Photos and full details by email: evansheadaviation@bigpond.com Best offers over \$6,000 Delivery EvansHead NSW

3796 JABIRU J120



Factory built March 2011, TT 80 hrs, always hangered, standard instruments, elec flaps, Garmin 500, PLB 406 GME, Headsets, Pilot 6' 2" 95kg easy fit. Immaculate presentation. \$49,000. Call Simon - 0411 833804

3797 FLOATING HOLIDAY HOME IN **NOOSA**



Floating home in Noosa with permanent mooring if required 2x25 HP tohatsu, generator. Sale or swap for factory build ,rotax powered Plane. \$59000 Call 0408798011 for more info and pics.

3800 RANDS 6-S COYOTE



Two seater, excellent condition, always hangared, 312 airframe hours, Rotax 912UL, Sensenich prop, radio, \$39 000, text 0408 219 579 or email mbnell@ bigpond.com

3804 WINTON SPORTSMAN \$3600



Winton Sportsman, G50 Zenoah 14L/hr 68kts. Always hangered, very good condition, flys beautifully, located North Vic, Ph 03 5790 5162 0429 598 293.

3805 AIRBORNE REDBACK TUNDRA

Airborne Redback Tundra for sale. Two seat microlight. Only 132 hours total, excellent condition. Rotax 503 Engine. Wizard wing 132 hours. Radio, intercom, dual headsets and helmets, 2 flying suits, stone guard, sadlle bags. Comes complete with purpose built trailer and Pumpkin Patch cover. All manuals. \$12750 ono. Phone 0487340554

3806 JABIRU 230D



2007 J230 D, 24-5245, TT 443 hours, Nil accidents, excellent condition, Dynon D10 EFIS plus analogue instruments, Garmin 296 colour GPS, VHF and UHF radio, transponder, New cylinder heads fitted by Jabiru, Spats included but not fitted. Price \$69,000 Scott 0418 779 586

3807 SPIRIT KIT



WAC Spirit Quick Build Kit. All metal work completed by factory. Already Factory Painted. Requires engine/ prop, wiring, upholstery and instruments. Has engine mount for Rotax 912/914. Adjustable seats, Twin stick, Electric Flaps. Stall 31Kts Cruise 100Kts. Design weight 750Kg. 135L fuel. Get flying soon. \$46,000. Ph. 0418157044 More pictures online.

3808 QUICKIE Q2 LOOKING FOR HOME

Quickie Q2 needs home. Built about 2000, owner stripped top side paint after last flight in 2006 and contracted cancer, passing in 2013. Plane is complete except missing the tail section. New prop and also has trailer. Contact Maurice on mozzieb@ispdr. net.au.

3809 GAZELLE AND TRAILER



Standard 1997 Gazelle, custom built registered trailer, 75kts at 14L/hr. Fits in my shed, soft seats, docile aircraft, spares, GPS Garmin 12XL, rotax 1170 hours -years to run, more info and photos etc Paul 08 8849 2060,m0417 492 065 \$38k Curandero@ aussiebb.com.au S.A. can deliver.

3810 JABIRU J170

J170 hydraulic lifter engine, 355 hrs TT, elec flaps, elec T&B, fuel flow meter, 135L wing tanks, Lowrance GPS plus standard instruments, 10 ply tyres, 2 pak aerothane paint and new Jabiru fibreglass scimitar prop. All in ex cond. \$53K obo For photos please call Tom on 0428562020 or email thomas.odonnell@ olamnet.com

3811 SONERAI 2L



Sonerai 2L 28-3043 113 hours on air frame, 59 hours on engine and prop, neat and tidy plane, always hangered, Rotec carby, 4 into 1 exhaust, rv7 tail wheel 80hp Great Plains engine, \$42000 John 0422285404

3813 FISHER FP 606



3813 Fisher FP 606 Category: 3 Axis (UL) Build Year: 2004 Total Hours: 100 Engine Hours: 101 Rego: 19-3861 Price: \$6800 Posted: 25 Jan 2014, 1 seat, Rotax 503-50hp., 100hrs. Immaculate condition, always hangared, photo build history. \$6800.00 ono, Northern Tasmania, Contact: Jon at jonank@live.com. au or 0457526984

3815 SAVANNAH VG MODEL



3815 Savannah VG Model Category: 3 Axis (UL) Build Year: 2005 Total Hours: 480 Engine Hours: 480 Rego: 194405 Price: \$48000 Posted: 27 Jan 2014 STOL, always hangered and now at Cessnock, kool prop, 100hp rotax 912. tundra tyres, observer

doors, 8 hours fuel, landing light, gps, radio, intercom,

3817 WAC SPIRIT



New all metal WAC Spirit ELSA 100Hp Rotax, Bolly Prop, Adjustable Leather Seats, 10in Dynon Sky View, with 2 axis Auto Pilot, Vertical Power Electronic C/B's. STOL Performance with 100Kt Cruise. 750Kg Structural MTOW. Large cabin and luggage area, great visibility. Lovely to fly. Price \$115,000. Ph0418157044. File Photo.

3818 SABRE KP2U



Rotax 912s, Kasper prop, Fowler flaps. Electric Retracts, Electric trim, microair coms, GPS, cruise 115 Kts IAS @ 15lph stall 28Kts. Exceptional factory built high performance aircraft, amazing short field capability. in excellent condition. inspection is welcome, best reasonable offer: Ray Hill. 0417 362 844

3819 CLEARANCE SALE

If you want to build or restore check these out 1.T300. damage to L main spar, 582 incomplete 2. Javelin, 447, stored 15 years, great condition 3.Mid wing single seat aerobatic (9510) needs finishing ,has flown Any reasonable offer for any of these aircraft Ray 0417 362 844

3822 HOUSE AND LAND WITH AIRSTRIP AND HANGAR

Enjoy a relaxed, peaceful lifestyle at Charlton Gully approximately 20kms north-west of Port Lincoln SA. The 14.21 ha (38 acres) property includes a 3 bedroom brick home, arable/grazing land, bushland, a 400m airstrip, 18m x 12m workshop/hangar and much more. \$355,000. Ring 0437 429 052 for more info and photos.

3823 GR912 LIGHTWING



2 times winner of Natfly Best Overall Aircraft for sale Taildragger Microair radio GPS strobes landing light long range tanks 5 point harnesses aircraft fully refurbished www.youtube.com/ watch?v=MBLQNi7hc2I L2 maintained contact Rodney 0408339806 email wallabyman@ymail.com best offer

3824 LIGHTWING G A 55.



Lightwing G A 55 Aeronower, TT 522hrs Engine & Airframe. Fresh 500hrly completed. (as per RAA requirements). Always hangared. Nil accidents. Registered until July 2014. Located Serpentine W A. Perfect presentation. Regretful sale. Phone John 0418841932 0895939828. \$25000-00.

3825 RV3-B



RV3B 3B Wing A/F 223 hours - electric flaps & trim Lycoming 0-360 engine -3 blade catto prop -160 knots cruise @ 2350 rpm TOTAL PERFORMANCE phone 0409875926 keneyearsrv4@bigpond.com

3826 JABIRU FOR SALE

JABIRU J230C 2006, White. Factory TT 327 hrs, good condition. Garmen GPS, transponder & VHF \$69,000 Hanger - Insulated 12m X 12m at Gawler SA, \$40,000

3827 DRIFTER SB 582



Must sell this aeroplane due to health. Any reasonable offer around the asking price considered as I have ongoing costs to recover . Hangared at Brigalow between Dalby and Chinchilla in Qld. Ring Al at 0419985280, leave message if out of service area. Contact: Allen Railton avrailton@bigpond.com 0419985280

3828 IVOPROP PROPELLOR

IVOPROP Medium 3 blade composite prop. 70" dia. Quick-adjust pitch change mechanism. Brand new. Still in delivery packaging. Ph 0429 810 008

3830 SUBARU EA81ENGINE PACKAGE



Subaru EA81 engine 58 hours since complete re-build. 100 HP. Rotec TBI fuel injection with mixture control and primer. Subaru electronic ignition. Electric Start. Autoflyte reduction gearbox. Carby heat airbox. Stainless steel exhaust system. Will consider selling components separately. \$5,500. Located Scone NSW. Ph: 0429 810 008

3831 JABIRU SK



Like new - only 185 hours TT, 2.2 litre. Serviced and maintained by LAME. Alway hangered. Nil accident. Paint work 9/10. Fuel flow/usage gauge. Sigtronics intercom. Icom A200 radio. Located at Moorabbin. \$35,000 Contact Ross +61428394598

3832 AIRCRAFT WANTED FOR BUSY **FLIGHT SCHOOL**



Busy Flight Training Facility in South East Queensland looking for long term Cross Hire arrangement to suit our expansion plan. Preference will be given to Low Wing and Rotax 912 powered aircraft. Great hours, great returns, and paid fortnightly upon invoice. Phone 0427 500 255 Contact: Robert Fulton cfi@ inspireaviation.com

3835 THRUSTER T300



T300 very good condition 2nd owner never used for training.70L fuel tank. 0419858394

3836 THRUSTER T300



Thruster T300 24 -0779 "Tony Hayes" pod and Airfoil struts, 60 kn. Rotax 582. Great entry ultralight. In vgc. Registration current. TTIS 726.2. TT Engine 146. Hangared at Bange's field Clifton, Old, Level 2 maintained. Included single axle light aircraft trailer. \$14000. PH. Mark 0412649615 or mark_teach@ vahoo.co

3838 AIRBORNE XT-912 TUNDRA



Build Year: 2008 Total Hours: 350 Engine Hours: 350 Rego: 8053 Price: \$35,000.00 Has always been hangered, in good condition. Comes with three helmets, two head sets, a micro air transceiver, windscreen. Great trike. Any good offer considered

Contact: Trent 0427719050

3839 WANTED TO PURCHASE

Wanted to purchase. Jabiru J200 or J230 with time expired, blown, jiggered or no good engine. Willing to pay according to condition of aircraft. Contact Phil 0405382235 email libertyflyte@gmail.com

3841 WANTED TO BUY

WANTED. Info leading to purchase of older hi-wing, 2-seat, t'wheel experimental project with MTOW of 600Kg (prefer Aeronca Chief, Luscombe, Taylorcraft or similar). FWF (engine & prop) NOT required. Some damage/restoration to otherwise complete aircraft is OK. Will travel interstate to inspect/purchase. (08) 9299 8008, <<leenaabob@gmail.com>>

3842 1948 LUSCOMBE SILVAIRE



1948 Luscombe Silvaire One of the best in Australia. A joy to fly - a real eye-catcher. Airframe circa 2000 hours. Engine C85 and prop circa 300 hours. Microair

radio, wing tanks, disc brakes, electric start, and more. Located Moruya NSW, \$60,000. Call Ash 0477009448 or email ashjparker@icloud.com

3846 TECNAM ECHO CLASSIC P92



Tecnam Echo Classic P92 2007, Excellent Condition, Pleasure to Fly, Very low hours on New Rotex 100HP Engine, Serviced every 25 Hrs, UHF, VHF, Mirco Transponder, Siren, Intercom, Many More Extras. Always Hangered, Located In Cunnamulla QLD, Contact Ben, (07) 46554018 ginnenbah@skymesh. com.au. \$100,000 Inc GST ONO

3847 JABIRU SP 500



Total hours 420, 2200 engine solid lifters, new pistons, rings, through bolts, 85 I tank, Icom 200 radio, GME UHF radio, Lowrance GPS, turn and slip, fuel miser, 2 prs Lightspeed 20xl ANR headsets, large rudder, upgraded undercarriage, always hangared, 100 kts cruise. \$46,000. Narrogin WA. 08 98814924 0400014924

3848 EDGE X CLASSIC 582



Exceptional condition 185hrs TT. Grev motor. Full Rotax recommended service at 150hrs by Sea Breeze Aviation in excellent order. Streak11 wing, inflighttrim Brolga propeller. Always hangared. Aircom760 radio, two helmets. training bars.

Punkinhead covers, GarminGPS, steering damper, parkbrake, tall windscreen, stoneguard, assorted spares, oils and manuals. based in Moruya. \$19,500

3849 JABIRU 3.300 PARTS



Jabiru 2.200 T.T. 270 hours. Engine mount complete. Propeller with all hardware. Air ducts. \$530 for the lot. Phone: Ross 0418502270



3850 **LIGHT WEIGHT POW-ERED PARA-CHUTE**

Great little Powered Parachute that fits in the back of a Ute. Motor M21y JPX Cors-Air 173cc two stroke consumption 5 1/2 liters per hr and

holds18 liters. Flown under a 28 meter Paramania Action GT, all up weight of 175kg, Sutable for a pilot of 100kg. \$7800. Rick 0409955089

3852 SPORTSTAR PLUS WITH GLIDER **TOWING HITCH**



Factory built 2007, TT450hrs, 100HP Rotax 912 ULS, Constant speed 3 blade woodcomp Prop with covers, always hangered and never used for training, UHF, VHF, Transponder, Color Garmin 296 GPS, glider/ banner tow hitch. 6 hrs endurance, Maintained by LAME and fresh 100hrly in January 2014. \$85000+Gst call John 0499468090

TO ADVERTISE WITH US EMAIL admin@stampils.com.au

3853 FOXBAT A22 LS SHARE



Syndicate share for sale. This syndicate has been running at Caboolture airfield, Qld for over 10 years. Our current aircraft is a Foxbat A22 LS with 100hp Rotax, Dynon instruments, transponder, tundra tyres and centre stick. One share is currently available. Please call Chris Pfeiffer for details, 0417621097.

3854 LIGHTNING

Arion Lightning, 200 hrs. Dynon 100-120, Garmin Radio-Transponder,795 GPS,Tru Track A/P, H/D Main U/C, Legs,Mk2 Tail,Ground A/D Prop,Rotec Elec Ign,\$79000.North NSW. Ph 0427365460

3857 JABIRU J160 19-4265

Airframe 1042hrs, Engine 1254hrs, 252hrs since full Top Overhaul. Standard panel plus electric T&B, VSI, fuel guage, 85Ltr Tank, 2 Head Sets, Gamin 12 GPS. Been all over Australia never let us down, Always hangared no prangs. Medical reasons for Sale. Asking \$37500. Mildura. Phone Geoff 0488241181

3859 WANTED. FOR BROLGA 4 BLADE-PROP.

Wanted 1 blade for Brolga 60" 4 blade tractor prop. email, namoli@ihug.co.nz. phone/fax 0064-9-4346-232. Allan.

3862 AIRBORNE 503 TRIKE



Airborne 503 trike with Arrow 2 wing. 10-1056 Aluminium 42 lt fuel tank, Prop trampoline. Upholstery a soft brown leather. Four point harness. Two large/ secure storage boxes. Winch for one person load/unload. Brakes. Spare wheel. \$5000 adenwickes@optusnet.

com.au 0402476645 Tasmania

3863 ALPI PIONEER 200 SPARROW



Factory Built 2007, Rotax 912-100hp engine. Cruises at 115 knt's. 17 ltrs Hr. Electric trim, fly's beautifully hands off. Dynamically balanced variable pitch prop, hydraulic brakes, long range tanks. icom radio, GTX 327 transponder, Avmaps, always hangered 506 hrs. \$64,500 Hanger Available! BINDOON WA. Contact: JOHN MITCHELL 0407404585 johnmitchell@ westnet.com.au

3864 TEXAN TOP CLASS LSA 550



Texan LSA 550 2004 model, TTIS 2460 hours, 2000 hour Rotax motor with 1100 hours TSN. Duc propeller 90 hours TSN. ICOM 200 VHF radio with intercom system. Fresh paint, upholstery, new seat belts and carpet. In Emerald QLD. Price \$73,700 +GST. Phone (07) 4987 6558.

3865 FOR SALE JABIRU J200



Airframe TT520 hours, Factory rebuilt Solid Lifter Engine 102 Hours. Recent Jabiru Repaint, Factory Service. GA Panel, Analog instruments, Microair Radio, 2XGPS√¢ÔøΩÔøΩs, Fuel 140Litres. Strobe Lights, external power, Cold Start Adaptor, spare Prop. Lovely plane, cruise at 118kts at 21Litres, Heated Cabin. Located Dubbo, \$72,000.00 contact Jeff, 0418 843954

3867 WANTED - GAZELLE, JABIRU OR **SIMILAR**

Wanted - Gazelle with trailer, Jabiru or similar Must be a high wing 3 axis, 2 seat side by side, proper dual controls and lots of hours left on the engine. Willing to neg up to 30k but not past as that's all I have. Stuart McColl 0411452688 srmccoll72441@ gmail.com

3868 AIRBORNE XT912 TRIKE



For sale trike xt 912 480 hrs registered aug 14 Streak III wing Training bars Bar mittens 2 setsof heavy duty covers Large windscreen Wing carrying trailerplustool ,box Jerry can holders, spare wheel, registered till aug 14 2sets wing packing cover/guards 2

Jerry cans \$30,000 contact Tony 0488197488

3869 JABIRU J160



J160 19-4699 L2 built and maintained. This aircraft is in great condition and is fitted with MGL Stratomastor Extreme EFIS, Microair 760 radio and basic instruments. The aircraft can be inspected at West Sale Aerodrome. Priced at \$45000. Contact Daryl 0466925474, dghooke@gmail.com

3870 SONEX 19-4647



Sonex 19-4647. Fuel Injected turbo charged Aerovee 2180cc, PAC 54/50 P tip Carbon Prop. Approx 45-50hrs on Engine. Cruise 115-120knts@20l/p. Analogue gauges, Icom A210, Electric flaps, Hydraulic disc brakes. Too much to list. Great fun and fast aircraft to fly. \$38,000ono. Phone Simon on 0417793902 or email sccoombs@westnet.com.au

3872 JABIRU 230D



Factory Built TT 600 hours and 7/16 through bolt engine. Engine and Prop only 100 hours old.Garmin D10/D100 UHF and VHF. Factory Approved AutoPilot. Garmin D10 Monitoring 6EGT6CHT Fuel Flow.Garmin 296 Colour GPS coupled to AutoPilot.Always hangared.Owned and maintained by Level 2 Engineer. Located in Broken Hill NSW.\$82,000 Bruce 0407277039

3875 J430 JABIRU



Jabiru J430. t/t 540 hrs top end a/h 40 hrs ago 2006 and flies like new.3blade,fuel flow meter, UHF,can deregister to raa, vert compass. lot of extras, \$68,000.00 phone 0428826551 or arrandale2@ bigpond.com

3876 AUSTRALIAN LIGHTWING SPEED-SP2000S



Fcty. built, Rotax 100HP, inflight variable pitch, Mountainscope Nav. system, GPS, X-Com radio. 105-114 kts. always hangared now at Tumut. Half new price for quick sale. \$70,000 Contact George 0262919912 snowman@snowmaking.com.au

3877 AIRBORNE 503 TRIKE



Airborne trike. Arrow 2 wing. Economical 7lt/hour. Dual carbs, 40lt aluminium tank. Cato prop, prop-guard. Soft leather upholstery. Purpose built trailer. Ramps for easy load/unload. Two large storage boxes. Brakes. Spare tyre. Registered. \$5000 adenwickes@

optusnet.com.au 0402476645

3878 LIFESTYLE PROPERTY WITH INCOME



Lifestyle property with income \$945,000.00 Granite Gardens and luxury cottages Stanthorpe Qld set on 37 acres , 5 acres rose , native gardens , lake , 2 dams , 9 hole Par 3 Golf coarse , 2bed/1bath home , workshop , machinery shed all farm equip / tool , WIWO

3879 FOXBAT A22



Foxbat A22 24-4270 820hrs uhf vhf transponder AH fuel scan lowrance airmap 2000 GPS verticle card compass new prop just completed 500 hrly VGC \$69,500 contact 0438981301

3880 SUIT NEW TRIKE BUYER



Airborne Microlight 2011 XT912 Tundra TT103 hours.Ballistic Chute fitted.Streak3 wing never been folded always been handared. Microair 760 Radio. Two headsets Lynx intercom and helmets. Garmin 196 GPS Pumpkinhead full covers and stone guard. Log books

RAA Registered.Genuine reason for selling.Inspection Invited. Ph 0428456728

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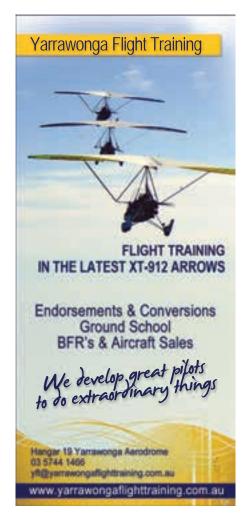
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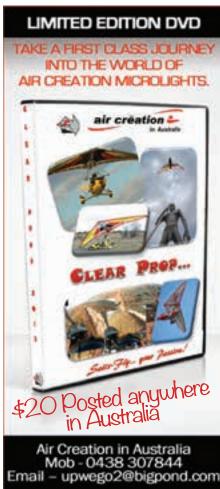
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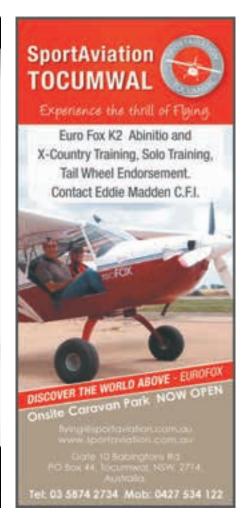
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GYFTS winners

T a meeting in Canberra on Wednesday, March 12, the GYFTS Selection Panel recommended twenty applicants be conditionally awarded flight training scholarships totalling \$40,000.

Launched at NATFLY 2008, the GYFTS (Giving Youth Flight Training Support) programme is designed to introduce young people to the sport of recreational aviation and to assist young people to complete their flying training.

The programme is jointly funded by Airservices Australia and

the members of this Association (via donation). Panel members - comprising the CEO of the Regional Aviation Association of Australia (Paul Tyrrell), the Manager Airline Relations, Airservices Australia (Kerry Bayley), and the Association's General Manager Mark Clayton – were impressed with both the number of applicants and the calibre of their applications.

The Panel has also foreshadowed a number of changes to the programme aimed at improving its effectiveness.

STATE	SURNAME	FIRST NAME	AGE
QLD	BARRETT	Samuel	16
QLD	CROOK	Rachel Louise	15
NSW	FORD	Jack	15
NSW	HITCHINS	Tim	17
SA	HUMPHRIES	Jack	15
VIC	KUGELMANN	Jamie	16
QLD	LOEFFEL	Lauren	19
VIC	MITCHELL	Jack	16
TAS	QUILLIAM	Levi	16
VIC	SMITH	Hayley	16
RECREATIONAL	AVIATION AUSTRALIA	(\$1,500)	
QLD	D'AMICO	Kurt	17
NSW	HERBERT	Travis	18
NSW	HODGES	James	18
NSW	KENDALL	Sam	15
QLD	KIELLERUP	Russel	15
NSW	MANN	Tankaran Singh	15
QLD	MILLEWSKI	Dann Kelston	16
VIC	MURPHY	Siobhan	19
VIC	NESER	Ryno	21
QLD	SCHULTE	Micah	18

NT (Group A) By-Election

As the only nominee for the vacant seat, I declare Mr Mark Christie (00246) the successful candidate for the N.T. (Group A) By-Election.

Mark Clayton, Public Officer

Hang Gliding Federation of Australia www.hgfa.asn.au Operations Manager

The Organisation

The Hang Gliding Federation of Australia Incorporated (HGFA) is a sporting body that administers Hang Gliding, Paragliding and Weight Shift Microlights under the regulations laid down by the Civil Air Safety Authority (CASA). As the administering body it provides standards for pilot training syllabus, pilot and instructor certifications and best practice in operational procedures throughout all of Australia. The HGFA currently has approximately 2,500 members.

An opportunity has become available for an Operations Manager in our Melbourne office.

Responsibilities

You will be responsible to the HGFA Committee of Management (CoM) for conducting the operational affairs of the organisation. You are responsible for the oversight of compliance with government regulation, and the general performance and coordination of the activities of the HGFA sub-contractors and contractual obligations of the HGFA.

Key duties for which the Operations Manager is responsible to the CoM and the Civil Aviation Safety Authority include:

- Compliance with legislation, safety standards, training practices and methods, general flying standards and pilot competency;
- Liaison with CASA, peak bodies, state and regional associations, clubs and members:
- Managing all training related activities including examinations, training courses, approvals, endorsements, inspections and flight training facility approvals:
- Monitoring trends in training and general flying practices and recommending improvements and updates;

- Undertaking investigations in conjunction with CASA, the Police and the Air Traffic Safety Bureau;
- Working collaboratively with the CoM and the Administrative Manager to meet the Milestones of the CASA Annual Deed; and
- Working collaboratively with the Treasurer and the Administrative Manager to prepare the annual operating budget.

Criteria

You will have demonstrated experience working in a business environment with varied stakeholders. Applicants who can demonstrate an ability to liaise with stakeholders from different sectors of the community will be highly regarded. Previous experience working within government bodies may be advantageous but is not essential. An applicant with sports aviation experience is desirable.

You will require:

- The ability to interpret complex legislation written across multiple sources:
- A high level of aviation theory knowledge;
- A working knowledge of the HGFA Operations Manual and related legislation:
- A sound knowledge of adult learning principles and training theory;
- Highly developed interpersonal skills;
- · Strong communication skills;
- Highly developed organisation and time management skills; and
- Ability to coordinate and direct industry experts.

Remuneration

The successful applicant will be offered a permanent position with competitive salary dependent on experience and qualifications.

To apply, email a covering letter addressing the above criteria and a resume by 4:00PM (EST), 16 May 2014.

Applications to:

The HGFA Secretary at peter.allen@hgfa.asn.au
Enquiries can be directed to:
Greg Lowry, President HGFA at greg.lowry@hgfa.asn.au
or Mobile: 0499 984 484



THE Executive Director reported on two world records which had been claimed the preceding month by Scott Winton and his Opal Facet. both of which featured on the April magazine cover. On March 5, 1989, Scott had shaved 1 minute 20 seconds off the World



Microllight Time-to-Climb record, reaching the target 3,000m in 6 minutes 47 seconds.

Within a week of this, on March 11, he'd also set a World Microlight Altitude record of 30,100ft (eclipsing the previous record by 7,134ft). Both records were claimed at Evans Head in New South Wales. Remarkably, both records remain unbeaten to this day.

The Federation's membership then stood at 2,100, 68% of whom were also, notionally, aircraft owners (1,180/95.10 and 249/95.25). Membership had grown a staggering 25% in the preceding six months and nationally, there were thirty-two AUF Flying Schools (and CFIs).

At a joint CAA-AUF seminar held in Victoria that month it was revealed that CAO 95.55 (which accounts today for just 5% of our registered fleet) would be released in draft form the following month. "The new 95.12 would specifically apply to trikes and gyrocoptors" and "CAO 95.10 was being amended to provide greater height access to ultralights and the use of licenced aerodromes was (also) being investigated". Curiously, the CAA representatives attending emphasised that CAO 101.55 aircraft were known within the Authority as 'Light Sport Aircraft', rather than 'ultralights'.

Also featured in this issue was a picture of British pilot Neil Hardiman (who later took out Australian citizenship) completing his 189 day around-Australia flight flying a Rotax powered trike built by world hang-gliding champion, Ricky Duncan. This would be the first land plane to make the entire 8,500 mile journey around the coastline.

Canberra school student Nicole Hine also featured in the March issue, having gone solo at the age of 15 years and 16 days (she earned her Certificate the following year). Among the BASI accidents reported that month were two of particular note, the first being the non-fatal crash of the second production Ligeti Stratos which occurred at Mangalore the previous year (attributed to a binding Bowden cable). Another pioneering Australian designer, Robert Labahn, was fatally injured at Officer (Vic.) when his prototype Hitch Hiker XC experienced aileron flutter in the circuit, his ballistic parachute having also been fouled by the propeller after deployment.

A Lifetime in Longhaul The Bigger Picture

Author: Bill Anderson Web: www.billanderson747.com

Regular readers might remember Bill's first foray into publishing, 'A Lifetime in Longhaul' which Sport Pilot reviewed in November 2012.

The first book was a collection of memories by the men who shared the Qantas Cadet Pilot Training Scheme with Bill in 1967 and how they went on to travel the world in the new Boeing 747.

The stories they told were of left seat Gods, carrying hundreds of souls in and out of the world's far flung places, many times in situations which would make a modern day Captain go pale.

Bill set out only to make a personal record of a group of men pivotal to Australian Aviation at the time the jumbo jet turned international aviation from being a rich man's sport into something everyone could aspire to. But it also became a defacto part of Qantas history.

'A Lifetime in Longhaul' proved to be very popular with readers and according to Bill, it sparked many other people involved in Qantas and longhaul flying to contact him with even more stories and recollections of this important period of history.

Bill says as the stories poured in, it became logical to do another book just like the first one. 'A Bigger Picture' is the result.

There are stories and reminisces from more former Qantas Captains and for the first time, Bill includes stories from several of the airline's engineering staff. After all, as he concedes, the pilot is only a small

cog in every successful flight.

And it doesn't matter how jaded a pilot you might be, some of these stories can set your heart a fluttering. Whether it's dreaming of seeing the world, one airport at a time, or, as in one story here, trying to drag a fully loaded Jumbo into Perth airport at night with 10kts tailwind and 45kts cross wind, they are stories that every lover of aviation will read with delight.

If you liked Bill's first book, this sequel will be a must-buy for you. He writes in an easy, accessible style and the stories are all fascinating. And it's good to support an Australian author.

With Qantas facing an uncertain future these days, it's also lucky Bill is there to record some of its precious history before it passes over the horizon.







Sport Pilot has four books of aviation stories to give away, including both of Bill's Longhaul's, and The Killing Zone by Paul Craig. Email editor@sportpilot.net.au by April 15 and include your mailing address. On that day, I'll draw out four names and send those people a book each.

WHERE IS CAGIT?

Current location is at Royal Aero Club, Western Australia JANDAKOT S32 30.505 E115 49.957

S32 05.764 E115 51.763

Holder: James Murphy Email: murphyjuk@hotmail.com



Number of fatalities in Australian recreational aviation 2003 - 2012.

Source: ATSB www.atsb.gov.au/ media/4355945/ar-2013-067_final.pdf

Time it took Frenchman, Michel Lotito, to eat an entire Cessna 150.

Source: Awesome Aviation Facts

Amount of money saved by American Airlines in 1987 by removing one olive from each salad served in first class.

Source: Discovery.com



X-55 Rhino H.O.T.A.S simulator controller

Inspired by controls found within fighter planes, the next-gen X-55 Rhino H.O.T.A.S. System for PC provides utmost control over simulated aircraft. Built to the same exacting standards of Saitek's award-winning Pro Flight accessories range. Includes a multitude of customisable options never before seen in an H.O.T.A.S. System. Whether flying a modern fighter, single- or multi-engine aircraft, or even a retro single-seat plane, the X-55 Rhino supplies all the control surface options required to achieve the exact level of aerial performance aspiring pilots demand. A ground-breaking, adjustable stick spring system allows pilots to alter the force required to move the stick. Four springs of varying resistance are included to provide a total of five different options. Choose the spring – or no spring at all – which best accommodates your style of flying.



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"It's nice being able to fly home in the summer," says pilot Terry Ryan of rural Victoria, Australia (upgraded Jabiru 3300 engine featured below), "Before liquid cooling, the Jabiru engine had all sorts of heat related problems."

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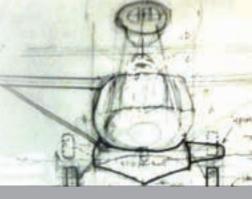
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PILOTNOTES

For a listing of all 2014 accident and incident summaries see www.raa.asn/safety/accident-incident-summaries-2014



Skyfox CA21

Conditions: Wind calm, nil turbulence. Pilot experience: 390hrs, 15 on type.

After touching down in a three point attitude, the aircraft bounced twice and ground looped at a relatively slow speed. It impacted an earth mound supporting a sugar cane train track and came to rest with damage to its propeller.

Brumby 600

Airframe: 341hrs ttis.

Conditions: Moderate wind, light turbulence. While conducting circuits under instruction, the student touched down normally and immediately felt a bump as the aircraft began to pull hard to the left. The instructor called "taking over" and attempted to straighten the aircraft, but it veered off the runway, coming to rest at ninety degrees to the landing direction. An inspection revealed the left main wheel had failed and departed the aircraft. This resulted in further damage to the wing, rear fuselage and tail.

Jabiru J160C

Engine: Jabiru 220, 227hrs since overhaul.

Shortly after the instructor reduced engine power and applied carburettor heat in preparation for a forced landing exercise, the engine ran roughly for a short time and then stopped suddenly. After an uneventful forced landing it was found the crankshaft could not be rotated any more than a few degrees and that the propeller blades had separated at the hub. The aircraft was scheduled to undergo a service to replace suspected defective gudgeon pin circlips and it is suspected a failed clip was responsible.

Tecnam Golf

Conditions: Light wind, nil turbulence. Pilot experience: 976hrs, 80 on type.

An instructor was undergoing a short field approach and landing as part of a flight check. As the aircraft neared the ground the airspeed began to decay. The check pilot applied power and attempted to arrest the sink rate but was unable to prevent the aircraft from landing heavily. An inspection revealed scratches on the tail skid but a later inspection showed scratch marks on an aileron and minor cracking on a wingtip, necessitating repairs to the wing.

Jabiru J230

Conditions: Light winds, slight turbulence. Pilot experience: 180hrs, all on type.

The pilot was landing the aircraft in a quartering crosswind when it began to veer off the runway shortly after touchdown. The pilot applied corrective action but was unable to prevent the aircraft running onto soft ground where the nose gear leg failed and the propeller struck the ground. The propeller and one wing tip were damaged in addition to the nose gear. The pilot was uninjured.

Austflight Drifter A582

Conditions: Moderate to strong wind and turbulence. Pilot experience: 425hrs, 140 on type.

Shortly after take-off the pilot commenced a downwind turn. The aircraft entered a stall and descended into the ground, finally coming to rest after skidding into a fence. The pilot suffered non-life threatening cuts and abrasions. The aircraft sustained damage to the pod, one wing tip and the right hand main wheel.

Jabiru J200

Conditions: Moderate winds and turbulence.

Pilot experience: 648hrs on type.

While overflying some trees on approach to land, the aircraft encountered severe turbulence. It landed heavily on the left hand main wheel and nose wheel and came to rest with a fractured main gear leg and a lesser amount of damage to the nose wheel.

Jabiru J160D

Pilot experience: 331hrs, 27 on type.

Conditions: Light wind, moderate turbulence.

The pilot was landing with a slight tailwind/crosswind component and as the aircraft flared, a kangaroo bounded into its path. The pilot immediately applied power and back stick in an attempt to avoid a collision with the animal, but the aircraft stalled and pitched nose down, struck the ground and came to rest on its nose at the edge of the runway. The pilot was uninjured, but the aircraft sustained damage to its nose gear, propeller, undercarriage, engine mount and cowl with possible further airframe damage.

Morgan Sierra 200

Conditions: Light wind and turbulence.

Pilot experience: 159hrs, 19 on type.

The aircraft was landing after a single circuit and bounced slightly on touchdown. The pilot attempted to recover and land the aircraft but it bounced again and touched down heavily. The nose gear collapsed and the aircraft skidded along the runway and came to rest with further damage to the propeller. Neither of the crew was injured.

DEFECTS

Evektor Sportstar

Engine: Rotax 912ULS, 622hrs ttis.

After experiencing rough running on short final, the engine failed completely just after the aircraft landed. It was able to be restarted but failed again as the aircraft was being taxied back to a hangar. The cause of the failure was a faulty mechanical fuel pump.

Jabiru J160D

The engine in this aircraft experienced rough running on a couple of occasions and, as a result, an engineer undertook a thorough inspection of all systems. No faults could be found and it is believed the rough running was due to carburettor icing.

MAPPI ANDINES

More new flyers

OREE has a second young achiever to qualify for his Pilot Certificate at the minimum age.

by Fred Nolan CFI

15 year old Beau Haddad from Moree in northern NSW qualified for his RA-Aus Pilot Certificate in February.

Beau undertook a demanding 70 minute flight test, touching down just on sunset in hot but smooth weather conditions.

As his instructor I can report he flew well, was methodical and focused.

With two years at St Philomena's High School still to go. Beau is in an ideal position to look at aviation as a career choice.

He was the second 15 year old from Moree to qualify for his Pilot Certificate in the past six months.





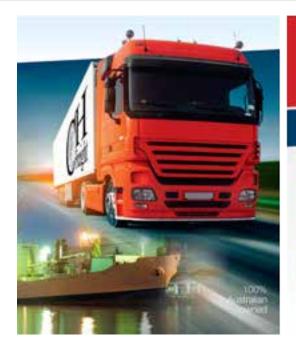
EANWHILE another Moree student, Martin Murray, completed his final navigation flight also in February to qualify for his RA-Aus Cross Country endorsement.

Martin flew Moree to Narrabri/Coonamble/ Lightning Ridge and return to Moree, landing at Coonamble and the Ridge enroute. Martin reports his flight struck head winds on most sectors but was otherwise uneventful.

Martin is a second year student at the University of New England and was working on a cotton property in the district during the summer break.



Got an aviation moment you'd love to share? Your kids or maybe your club get together? Send a photo as a jpeg attachment and a short explanation to editor@sportpilot.net.au



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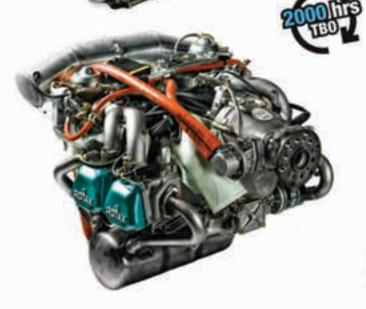
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