



· A DAY IN THE MOUNTAINS

AIRCRAFT OWNERSHIP ON THE CHEAP!

ZK-FDA

STICK AND RUDDER UG: SAFETY WIRING

CILS

- FLIGHT DESIGN CTLS
- CRAC AGM NOTICE

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MARCH 2018







RECWINGS is produced by a keen group of individuals within the Canterbury Recreational Aircraft Club.

To subscribe to the e-mailed edition please contact editor@crac.co.nz.

For back issues, head to www.crac.co.nz/magazines

Contributions for the next edition are due by **April 11**th. We invite contributions from all, with editorial discretion being final.

Brian Greenwood editor@crac.co.nz

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Cover, Stephen Hirsch's Flight Design CTLS basking in the Rangiora sunshine recently. See page 12 for more photos. © 2018 Brian Greenwood





MARCH 2018





CRAC AGM – April 9th, 7:00PM CRAC Clubrooms, Rangiora Airfield

CONTENTS

A Day in the Mountains	3
Aircraft Ownership on the cheap	4
Christchurch Engine Centre	7
Stick and Rudder Users' Group – Safety Wiring	8
Flight Design CTLS	12
Oxford Strip 10 th Anniversary fly-in	13
F-16 Pilot looking forward to Wanaka	15
Local and International Companies support WoW	15
Club Life Jackets available	17
Notice of Annual General Meeting	17
Celebrating our Successes	17
Committee Notes March 2018	18
New Members	20
Congratulations	20
Upcoming Events	20



A DAY IN THE MOUNTAINS BRIAN GREENWOOD

Sometimes just wandering around the airfield has its benefits! Chatting to **John McCaul** while he fuelled his aircraft resulted in an invitation to pop up to Lake Pearson with him. In a rare moment of serendipity, I had the time to accept.

John's Tecnam is a Bravo model with a higher-speed wing and a Rotax 100hp engine, and is a little racier than the club trainers. I do enjoy flying with different pilots, there's always the opportunity





to learn something new.

We flew in via the Waimakariri Gorge, I was surprised at how much flat land there was around should one need it. As a history buff it was great to see some of the railway line and bridges on this route.

We checked out a couple of properties of interest but the flight was surprisingly quick, the Tecnam Bravo made short work of the trip in.

All-too-soon it was time to descend and check out the paddock where

John had permission to land. On our descent we noted a slight westerly drift higher up but a definite easterly on the field. Two passes over the field to suss it out before the final approach and landing.

Thanks a heap to John for this experience and to show a novice not to be scared of the beautiful Southern Alps – in the right conditions!



RECWINGS - MARCH 2018 3

AIRCRAFT OWNERSHIP ON THE CHEAP BRIAN GREENWOOD

Let me open by saying that there is no such things as truly cheap aircraft ownership (assuming, of course, that you are operating said aircraft). But there are a few ways of reducing costs and making it surprisingly achievable. Naturally, please make sure that lower cost does not equal less safe.

The first choice would be to ditch GA and come over to the light side to fly Microlights (I'm preaching to the converted for most of our readers, of course). Unless you really need to take multiple passengers, or fly IFR, or over cities, you're wasting your precious retirement fund. There is a caveat to this: if you're a licenced LAME (or are close mates with one) you can buy a clapped-out Cherokee for \$40-odd thousand, a clapped-out Tecnam Microlight might cost you twice that amount. To be fair, the Tecnam is a lot younger than your average 140.



But do you really need a Tecnam? There's plenty of Rans S6's on the market for \$20 to \$30 thousand. Sure, some of them are 2-stroke engines, but that segues nicely on to the next point. (I could Segway but I'd probably fall off).

Do you need a four stroke? Yes, they're great engines (especially that ubiquitous 80hp Rotax we love so much), but they're hideously capital-intensive in the short term. Long term, over may thousands of hours, the four stroke is the way to go – CRAC has proven that. But for a quick entry into aircraft ownership, the Rotax 582 Blue Top (properly looked after) is a cheap and reliable engine. There's plenty of 582s flying well beyond the 300-hour crank-shaft replacement time "on condition". A new 912 costs around \$28K, a new 582 around \$8K. That cost difference buys you a lot of flying.



Another option which will reduce costs a lot – buy a single seat aircraft. Although it's most fun flying with company (sharing the terror, I mean pleasure), single-seaters a lot less costly. They sell slowly too, which can give you some advantage as a buyer (although you'll face the same issue when you come to sell – so treat the seller with respect!)

It's <u>the</u> oil for your Rotax 912

Elf Moto4 10w-40 – a very high quality, semi-synthetic oil specifically designed to work with engine and gearbox combinations. Anti-clutch slippage is integral to the composition. Moto4 Semi-synthetic is low lead rated and allows you to maintain recommended service intervals even when mostly on AVGAS. *Rotax recommend reducing to 25 hour intervals if above 75% AVGAS usage.







Light Aviation and Beyond!

www.sprintaero.com

Email: Phil@SprintAero.com Phone: Phil on 021 720 180 There are many options for single seat (i.e. Class 1) Microlights, for example the replica fighters such as the Spitfire or Nieuport, Mike's lovely Pober Pathfinder, or even aerobatic aircraft such as the Rans S9 for sale recently.

Another option – build your own. There's plenty of experience within our own club, hopefully someone will write an article for the magazine soon. (Yes, that's a not-so-subtle hint). The capital outlay is still pretty high, but you might be able to spread it over the length of the build process.

There's some very good kits out there, the Savannah has a reputation as being a nice build and I hear the new Zenair CH-750 (big brother to the oh-so-popular CH-701) is looking good too. Mate a CH-750 to one of the 130hp Viking engines and you might have a cost-effective build compared to buying a new aircraft. Likewise, Rans are still out there selling a multitude of aircraft, the lovely S6 is still available and (I believe) can be built from a kit with no welding required.

Want to halve your costs? Or more? Syndicate! Aircraft need to be flown frequently, it keeps the engine in good condition and spreads the fixed costs over more flying hours – which makes for cheaper flying. There's a heap of people in our club, find someone you get on with and make a (decent) proposal to them. The best syndicates seem to have a written agreement, which covers the arrangement with cost sharing, ownership percentages, introducing more people to the syndicate, or selling a share.

We had a good look at this a while back (Thanks, **Roger Palmer**) – the most important thing is to find someone that you can easily agree with. You don't need to go even proportions in the capital outlay, if the agreement shows who owns what percentage (75/25? Why not?!). Fixed costs such as hangarage should be an even split, and there should be an allowance paid into a bank account for ongoing maintenance, based on the hours flown (paid straight after the flight). This is simply an estimated amount, excesses or short-falls should be split by number of hours flown per member).

It is important to document the process around introducing a new member into the group, or selling a share. All syndicate members must agree on the potential buyer (after all, they're flying YOUR precious aircraft), and there should be prior agreement on how the new proportion is made up. Are you going to allow someone to split their existing proportion? I would not recommend that; it simply waters down the original financial arrangement.

LEARN TO FLY Classic Tailwheel

> Paul Godfrey 027 249 8231



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Authorised Rotax Service and Repairs

Wayne Lindebaum offers full service and repairs on all Rotax aircraft engines, all generations and all types, along with Microlight inspections, repairs and upgrades to cover all your light flight needs.

Wayne has just returned from his bi-annual, update course for Rotax Aircraft Engines at Bert Flood's facility in Australia. This keeps him factory current all the way to the beginning of 2018.



Call Wayne: 03 313 6987 or 021 214 5091 Email: rangiora.light.aviation@hotmail.co.nz www.lightaviation.co.nz Syndication aside, you can also make some savings on maintenance (but **carefully** – it's your safety and our reputation). There's a legal framework around this, but we Microlighters have a large amount of freedom compared to GA (which is balanced against our restrictions in IFR/Populated areas etc). It basically depends on your own mechanical skills, and major work must be signed off by an IA (Inspection Authority). The important thing is that maintenance is done properly, of course.

We're lucky at Rangiora that we have a number of good maintenance options (shout-out and thanks to our advertisers). For myself, I do the simple stuff, usually taking things apart, and pay for the experts to put it back together again. This way I get a professional set of eyes over everything else, which spot potential areas that I might have missed. A good example of this was getting my throttle cables replaced when I didn't know they were getting worn.

There's one other way of getting cheaper flying – reduce the hangarage costs. There's not too many foldingwing or easily trailer-able aircraft around, so storing the aircraft at home isn't usually an option. I've been told that you can buy a hangar and rent out a couple of spaces to pay the mortgage. Personally, I can't see how that works, \$150,000 for a hangar (that's probably optimistic) isn't going to be paid off by a \$300 to \$340 per month income (2 aircraft). Perhaps it worked when hangars were cheaper.

If I was starting out again, I would be looking at a low-end Rans S6 for a two-seater. There's also the Bantam option, you can get a reasonable one of these for \$10 to \$15K. Single seaters are even easier, personally I have a soft-spot for the VW-powered Taylor Monoplanes or Druine Turbulents. Cheap, fun, safe, flying! I've also got to mention the Trikes as well. Although not everybody's cuppa, they inspire a very dedicated following and are the epitome of affordable bugs-in-your-teeth flying. Talk to some of our Trike guys if you're interested in weight-shift flying.

Whatever you do, get your potential purchase checked out by one of our trusted IA's or experts. There's plenty of pitfalls with aircraft, and an expert set of eyes minimises these risks.



6 RECWINGS - MARCH 2018

CHRISTCHURCH ENGINE CENTRE BRIAN GREENWOOD



I was recently honoured with a tour around the Christchurch Engine Centre at the invitation of a CRAC member **Gary Umali** who is an engineer there.

This facility was reported on in-depth by **Buzz Harvey** in the March 2017 edition of RecWings, so I won't repeat the information. Suffice to say that this facility is truly world class, and is a credit to all concerned.

Naturally I started geeking-out at the sight of V2500 Turbofans in various stages of undress. More importantly I realised how much local I.P. has gone into building and running this facility. Small wonder that cameras weren't allowed.

A lot of expertise existed locally, but many staff have been attracted from overseas as well.

Having this sort of facility locally has a raft of sidebenefits as well as the obvious commercial ones; the social aspects to the local community, and to the local



All photos this page (except the Meteor below) from the Christchurch Engine Centre's web site, www.pwnz.com. Page Header, the Engine Centre admin and factory. Above, the engine test building, Left, the IAE V2500 Turbofan.



aviation community. Many of the technicians and support staff are interested in, or actively involved in the local GA and Microlight scenes. It's obvious from talking to a few that they have a passion for aviation and safety.

The Turbo*fan* concept was originally patented by a Soviet Designer, Arkhip Lyulka, in 1941. The first turbofan to run was probably the Daimler Benz DB 670 on May 27th, 1943. The first to fly was the British

Metrovick F.3 in a Gloster Meteor, although I can't find much information on this. So; here's an original photo of a Metrovick F.2 (Axial-flow turbo*jet*) powered Meteor F1, which would be similar. Note the engines are underslung, unlike the usual Meteor Welland and Derwent engines which were mid-mounted.

A heart-felt 'Thanks' to my hosts at the Engine Centre, there's a flight in JOL offered to anyone interested. Contact me – editor@crac.co.nz.



7

RECWINGS - MARCH 2018

STICK AND RUDDER USERS' GROUP - SAFETY WIRING BRIAN GREENWOOD



A relatively small group of members met on a cool early Autumn evening at the CRAC House to hear **Dave Mitchell** give an inspired demonstration on lock wiring.

Dave managed to explain what can be a complicated-looking procedure in a clear and easy to understand style. Being shown how to do something makes a big difference.

With two typical class 8.8 aircraft bolts in a vice (emulating, perhaps, propeller bolts), Dave arranged the lock holes to

point in the worst possible direction – directly towards each other. Threading the lock wire through the hole, with an even amount on either side, he showed us how to route one end around the bolt head in a clockwise direction (so that the torque of the lock wire would tighten the bolt) and **under** the other end. Dave then hand-twisted the lock wire together in a sufficient length to reach the other bolt, where the process was repeated. Possibly I'm not explaining it very well but the photos might make up for it!



Left, the completed first demonstration. The bolts moved in the vice a bit and Dave wasn't able to make it as neat as he'd prefer. Hopefully the bolts on your aircraft don't do the same! It still looks tidy to me.

Note the direction of the wire around the bolt heads, pulling them both tighter, and the tail of the wires tucked back into a hole out of harm's way.

On the subject of propeller bolts, one rule he mentioned is that they are all wired in pairs, *never a single wire through the whole lot together*. Sometimes there's an odd number and one set must be done as a triple unit. This ensures that a damaged safety wire does not compromise the entire unit.





Left, another view on the 'two-bolt' demonstration. Note how the end coming around the bolt head goes under the end exiting the bolt head hole. This ensures that the wire will not vibrate over the top of the bolt head and come loose.

The next example was a Rotax gearbox drain plug kindly supplied by **Paul Godfrey**. There were two options for the locking wire, because there were two lugs near the hole in the bolt. When asked, most attendees at the evening would have tied it to the nearest hole, but Dave showed that the furthest was the best option in this case. This is because it is less than three-quarters of a turn from the source.

Right, the Gearbox sump drain plug solution. The locking wire goes to the furthest lug to provide more tightening torque, provided the distance isn't going to risk the wire being pulled over the top of the plug head. The lugs are "downhill" from the plug-head hole by design, which will also prevent the wire vibrating over the head.



The last demonstration was wiring a turnbuckle. These are quite common on flight controls, Cherokees, Harvards, and Iroquois all getting a mention. There are a few different ways of doing these, but Dave prefers the "double-eight" method (*below*) which is simple to execute (and therefore get right) and will prevent the turnbuckle from tightening or extending.

Other tips mentioned by Dave were: use 0.032" lock wire for most applications, and always use lock wire only



once. If you mess it up, cut it away and start again (one turn undone is about the maximum acceptable).

Thank you to **Dave Mitchell** for this superb evening, it certainly gave me the confidence to do more myself. Naturally this article is not a comprehensive instruction and I encourage you to seek further training if you're interested.

RECWINGS - MARCH 2018 9



FLIGHT DESIGN CTLS BRIAN GREENWOOD



Club member **Stephen Hirsch** parked his Flight Design CTLS in front of the club house in early March, which gave me the opportunity to have a look at this very attractive aircraft.

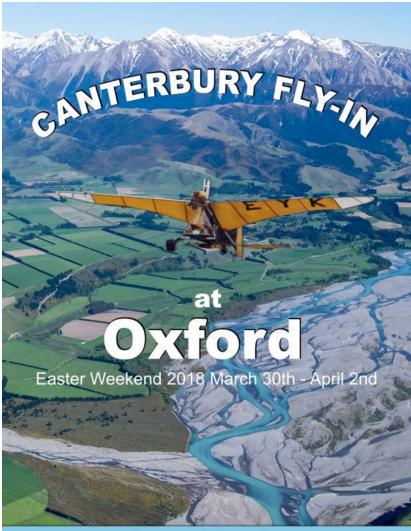
Flightdesign Vertrieb is a German company set up to build a Composite Technology (hence CT) light aircraft. The original CT model was first produced in 1997, most of the structure being Carbon Fibre. The CTLS is the Light Sport model and has several improvements over earlier versions (fuel systems, tail plane, landing gear, and aerodynamic improvements). It was announced in 2008, and is powered by the 80 and 100hp family of Rotax four-strokes.





Facts and figures aside, it's a very good looking and slippery aircraft!





For more information Phone Dave 0272231870

ELEV 850 FREQ 119.2





- 1. Standard overhead join requested
- 2. Circuit: RWY 27 Left hand RWY 09 Right hand
- 3. Turn to the north after landing
- 4. Caution: Trees at the end of 27
- 5. Clay target shooting maybe in progress (generally 3rd Sun of mth)
- 6. Occasional grazing occurs

7. There are no taxiways, be careful taxiing as it is a farm paddock 8. Operator Dave McPherson Phone 027 2231870

- Camping and ablutions on site
- AvGas available at NZRT, 17km East (Shell and BP Swipe cards)
- MoGas available at Oxford township nearby (transport available)
- Breakfast \$5, Lunch \$5, Evening Meal \$10
- Lots to do in Oxford, visit www.oxfordnewzealand.co.nz
- All Recreational Aircraft invited and welcomed

It is 10 years since the Oxford strip was opened with an Easter Fly In, in 2008. The weather has been organised so that we can have a celebratory fly in Easter weekend March 30th – April 2nd 2018

The Oxford strip is 1nm West of the Oxford township alongside the Coopers Creek, at the confluence of the Eyre River and the Coopers Creek. There is plenty of room for camping and tying down aircraft on the field.

The Oxford strip runs East/West with all circuits to the south over Coopers Creek. It is easy to find if you locate the Eyre river to the south of Oxford and fly west up the river until you get to the confluence of the Eyre River and the Coopers Creek. The strip will be to the north and parallel to the Coopers Creek. GPS coordinates 431753S 172091E. All traffic needs to do an overhead join before descending to circuit height. The airfield is 850ft AMSL. The strip is 500 metres long running east/west, 09/27

It can be a tricky strip on 09, which is a right-hand circuit and is best flown by following the river in a curved approach rather than over the trees. 27 is a left-hand circuit and more conventional. It is slightly up hill from East to West. The Oxford strip is in the Canterbury CFZ 119.2 but the Rangiora CFZ 120.2 is very close by, the corner being the Oxford township.

EVERYONE is WELCOME

If you need more information please contact Dave McPherson on 027 223 1870



I wanted to go flying, but I decided not to when I saw it was a little Turbulent... Peter Small's Druine Turbulent ZK-CAC whistles in over the fence at Rangiora, late October last year.

The Turbulent, along with the Taylor Monoplane, is attributed with helping to popularise the home-built lowercost end of flying, especially with the PFA in the UK and here in New Zealand. ZK-CAC is one of the earlier ones and could be considered a reasonably historic aircraft in New Zealand terms.

This aircraft was re-registered as a Class 1 Microlight in 1996.

FOR SALE

CANON SLI (100D)

Camera Body, \$420 (a mere 3000 Shutter Activations, like new with box, charger, NZ Adaptor, 3 Batteries)

Canon 18-55 IS f/3.5-5.6 Mark 2 lens (the good one), Like new \$120

Canon 70-300 IS f/4-5.6 lens, with box, good condition, \$400



Or \$900 the lot.

The Canon 100D was the world's smallest optical viewfinder dSLR. I bought this to have a smaller camera than the full frame gear to cart around in the aircraft, but I don't use it enough. It's a great camera and it is hard to let it go!

Contact Brian Greenwood, brian@brians-place.com or 027 201 8452

F-16 PILOT LOOKING FORWARD TO WANAKA

US Air Force F-16 pilot Richard 'Punch' Smeeding is promising an exhilarating display when the Fighting Falcon demonstration team performs at Warbirds Over Wanaka International Airshow this Easter.

The F-16 team will be coming to Wanaka from their home at the Misawa Air Force base in Japan for their first ever display at a civilian airshow in New Zealand.

Richard is looking forward to being part of the 30th Anniversary Warbirds Over



Wanaka Airshow and notes it's only the second time since 1984 that the jets have displayed in New Zealand after they attended the RNZAF airshow at Ohakea last year.

Richard rates the F-16 as the best aircraft he's ever flown. "One tail, one engine, one pilot – the way God intended".

LOCAL AND INTERNATIONAL COMPANIES SUPPORT WOW

An impressive line-up of international companies are backing the Southern Hemisphere's biggest Warbirds Airshow – Warbirds Over Wanaka International Airshow 2018.

Heading up the list for the 30th Anniversary event next Easter is Principal Partner Air BP which has been involved since the first Airshow back in 1988.

Swiss aircraft manufacturer Pilatus Aircraft Pty Ltd will be back as a Principal Partner for the second Airshow running. Pilatus fly in guests from around New Zealand and Australia especially for the event.

Another big supporter of the Airshow is German shipping giant Hamburg-Sud, who along with New Zealand's Mainfreight, look after getting significant aircraft from around the world to Wanaka.

Warbirds Over Wanaka General Manager, Ed Taylor, says without the support of these two companies they simply would not be able to afford to get some of the aircraft to New Zealand.

Hawker Pacific is another company which is returning in 2018. Another aircraft company which is a regular visitor and is displaying again this Easter is Cirrus.

Bremont Watch Company is sponsoring the Bremont Spitfire Tribute this Airshow. Other overseas companies here this Easter are Marsh Insurance brokers, AVPIan EFB, Specialfx Supplies Limited, AIRPIX and the Australian International Airshow.

In the Aviation Trade Marquee many leading local suppliers will do business alongside international companies such as Bose and Garmin International who will have representatives from Australia at Wanaka. Bose is also onboard again as sponsor of the Bose Commentary Team for 2018.

The 30th Anniversary Warbirds Over Wanaka International Airshow is being held on March 30th, March 31st and April 1st. Information and tickets are available from www.warbirdsoverwanaka.com

Continued over....

Local organisations supporting Warbirds over Wanaka include the Central Lakes Trust, Otago Community Trust, Lion Foundation, and the Skycity Queenstown Trust.

Central Lakes Trust is providing funding for a number of essential services at the Airshow including safety fencing, sanitation and St John.

The Otago Community Trust has given funding to help with a new initiative at this year's Airshow – the Aviation Training Mart. This is an exhibition space where Airshow visitors can find more information about various careers in aviation.

Funds from the Lion Foundation have been used to purchase a new purpose-built ticket office for the event. The new office is currently being constructed by CUBE Innovations in Hamilton and will be completed in time for this Easter's Airshow. Five windows will allow for quicker ticket sales, allowing visitors faster access.

Late last year the Lion Foundation also provided funding to refurbish two public grandstands used at the Airshow and to light up the Aermacchi 'gate guardian' at the entrance to Wanaka Airport.

Some of this year's highlights will be: USAF F-16 display team, RAAF Bae Hawk 127's, full RNZAF participation, Friday evening FREE Lakefront event (with a helicopter demonstrating a live 'moose' capture! And RNZN/RNZAF Seasprite participation, Catalina), Hispano Buchon, Spitfires, Dancing de Havillands, Yak 52's, Yurgis Kairys, P-40's, P-51, Yak 3's, Avenger, Catalina, Vampires, L-39...

CLUB LIFE JACKETS AVAILABLE

The Club has two life jackets available for use in RGA and RGB. The legal requirement is any flight over 10nm for shore, but even if you're doing a trip around Banks Peninsula they're extremely comforting! Ask an Instructor for access to these.

NOTICE OF ANNUAL GENERAL MEETING

The CRAC AGM will be held **on April 9th 2018, 7:00pm at the CRAC Club rooms.** All current CRAC members (i.e. subs up to date!) are requested to attend to support our club. Are you interested in a role or being on the committee? Get yourself nominated, we'd be keen to have your help.

CELEBRATING OUR SUCCESSES

Right, Liam Wedlake solod in KNZ on March 4th. Congratulations on your tail-wheel solo!



For Sale

1 off hardly used, never by me, BRS Second Chantz Emergency Parachute

Is 10kg added to the weight or subtracted from your useful load of your aircraft sufficient to give you peace of mind?

If so, then make an offer for what it is worth to you of at least \$1k and its yours. I'm sure your life deserves a 2nd Chantz and is worth much more than this!

I removed it from my CFM 503 Shadow when I purchased it to allow for my 100kg weight! MTOW = 407kg email **bob@lifteye.co.nz** unless on Xtra, whereby email me at **lifteye@gmail.com** You can also call Bob Johnston on 021 650 612.









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Experience a stay at a fully - functional airport in the heart of Central Otago.

Land yourself a night at the newly constructed NZLX Motels and enjoy an aviation experience like no other.

Vehicles available for guest use.

To book or for more information visit www.nzlxmotels.co.nz or contact Nigel on 0274348184.



For Sale - Aircraft Seats

For sale on behalf. Double aircraft seat as per the photo.

No damage but could use a good clean. \$100 ono. If interested, please contact Buzz Harvey on 027 499 7265 or <u>kiwisfly@clear.net.nz</u>



COMMITTEE NOTES MARCH 2018

- **CRAC AGM** date confirmed as April 9th, 7:00pm at the Club House
- RGA Engine Trademe advert approved in principle
- WDC advise on NZRT Ground Rental increase as at 1/7/18
- President has contacted Airways re incorrect microlight safety information supplied to media
- Final outstanding RGB loan (approx. \$3900) to be paid shortly
- CRAC Annual Subs increased to \$90 p.a.
- March BBQ resounding success
- Hangar floor marked but still to be painted
- RGB Prop still to be balanced
- Tecnam seatbelt mod ongoing project, cost estimate \$1500
- Some reports of poor calls in MBZ articles and follow up training suggested
- Davis Weather station being investigated as possible replacement for club one
- Stone and Weed mat budget for septic tank area set at \$1000
- CRAC sign at airfield entry road still to be erected
- Kevin Dore will replace Stewart Bufton on the WDC Airfield Advisory Committee
- Club caps are in stock, \$20 at the club house
- President to represent CRAC at the WDC meeting on airfield noise.
- Working Bee at Oxford on Sunday March 25th (please volunteer!)
- Oxford strip mown and ready for Easter, Toilets and hot water being arranged. Spit Roast organised, along with Tuck shop, biscuits, tea urn.
- Fly-away for Easter from Oxford strip to Ashley Gorge, Lees valley, McDonald Downs, Hurunui, Ashley River Mouth, Rangiora, and back to Oxford.
- Landing Competition planned at Oxford Strip.

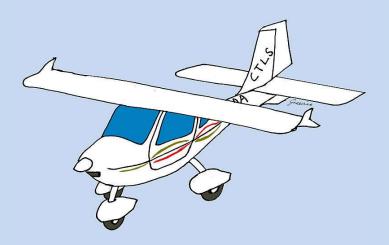
FOR SALE POBER PATHFINDER \$18,000 ono



VW 1730 CC DUAL PORT HEAD All chrome molly fuselage and spruce wings. Only 120Hrs on Airframe and much less On the latest engine. Easy to fly and reliable.

PHONE MIKE ON 327 6448 OR 027 660 5956





CANTERBURY RECREATIONAL AIRCRAFT CLUB (INC) P.O. Box 440 Rangiora 7440

www.crac.co.nz

WHATSAPP CRAC Drop Of The Hat CRAC Revolution (for chat)

FACEBOOK www.facebook.com/flyCRAC



Interested in joining us?

E-mail <u>secretary@crac.co.nz</u> or use the online application form.

We can send you an information pack which includes membership details, costs, and joining forms. Membership enrols you for the magazine, too.

UPCOMING EVENTS

24th – 25th March Annual Murchison Fly-in. Refer
CRAC Rap for details
30th March – 2nd April – CRAC-hosted National
Fly-in at Oxford Strip
30th March – 1st April – Warbirds Over Wanaka
30th Anniversary show

9th April – CRAC AGM, 7:00pm at the Club House

Keep your eye out for weekly club e-mails, join the **CRAC Drop Of The Hat** WhatsApp group for informal group fly-aways. Join **CRAC Revolutionary** for general chat and good humour.

CONTRIBUTIONS AND ATTRIBUTIONS

Colour photos on Page 7 from the Christchurch Engine Centre's web site, www.pwnz.com

RecWings logo by Eric Lim.

Disclaimer: This Magazine is prepared by dedicated enthusiasts; the opinions expressed herein are not to be taken as official club policy unless approved by the committee.

NEW MEMBERS

Welcome aboard to: Troy Sutherland Allan Ruck Paul Newman Trinadha Uppalapati Jesmond Micallef Kate Lee Please make our new friends feel welcome.

CONGRATULATIONS

Glenn Martin, Senior Flt Instructor

Check out **Iceman's** bio in the March edition of Recreational Pilot, the RAANZ e-zine raanz.org.nz

NEXT NEWSLETTER

Contributions for the next edition are requested, publishing deadline April 11th, 2018 ("ish").

Next publishing date approx. April 18th, 2018 – May be delayed due to Warbirds over Wanaka! Brian Greenwood, Editor editor@crac.co.nz

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