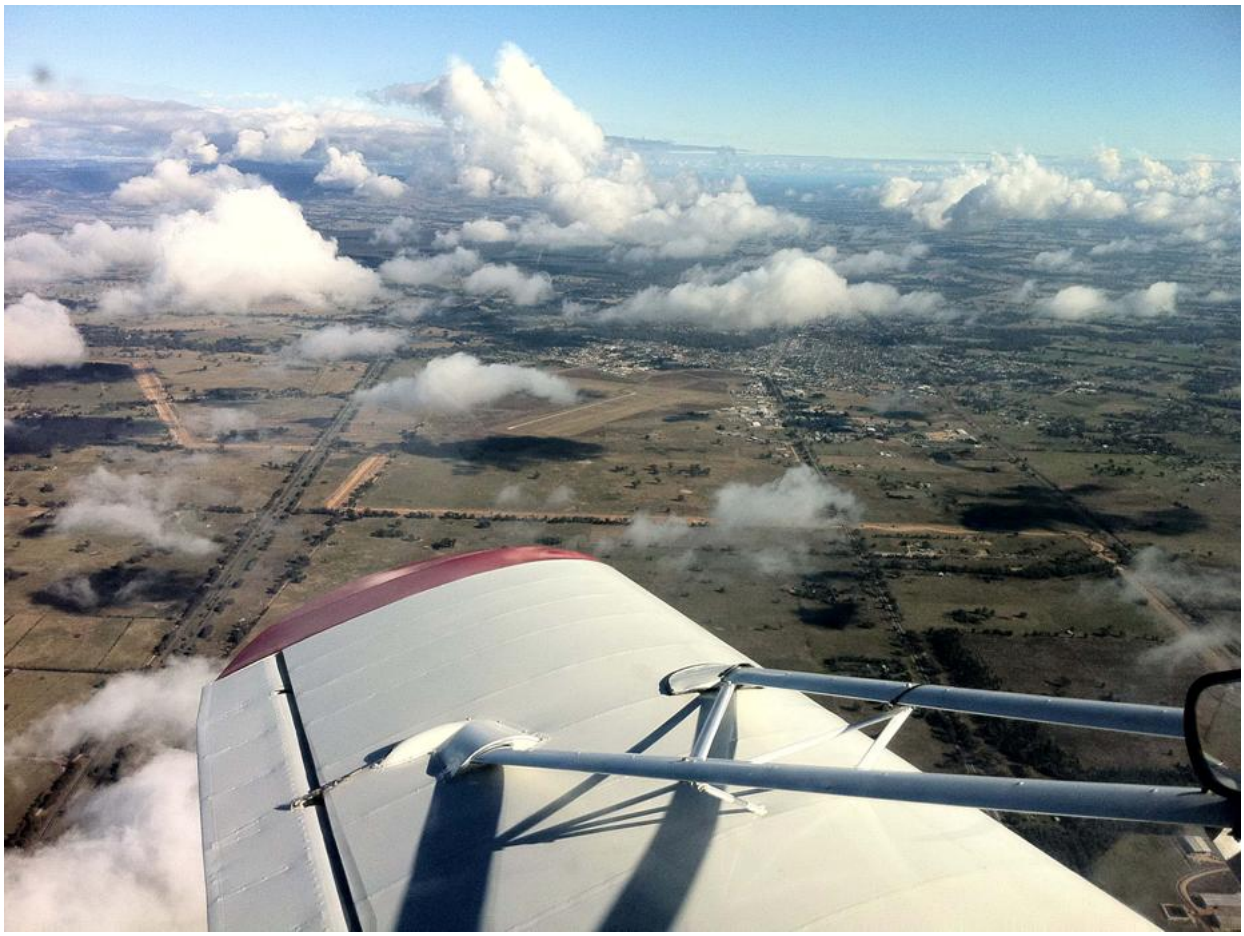

A I R F L O W

Spring 2011

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Cover Photo: GCV over Benalla 28 May 2011 by Robbie Burns

Editor: Robbie Burns (rtb.gcv@hotkey.net.au)

PRESIDENT'S PIECE

It is a while since the last Airflow and a lot has been happening in the Club. Therefore, this President's Piece will effectively be a Committee Report about things GCV members may not know about.

Piecart
Around Easter it was observed the Piecart roof was leaking and the internal ceiling was collapsing requiring urgent action. The Piecart was removed from service and put in the Clubman Hangar. Local builder Ron Grant was contracted to seal the roof and install a new ceiling. After the Piecart went back into service, and Ron went on his annual winter pilgrimage, a puddle of water was discovered on the Piecart's floor. Don Ridgeway and Kirk Amos sprang into action and painted the roof with sealant. With all this work, the Piecart should last for some time to come.

Rob Brown has installed a new wind sock mast on the Piecart with weather station sensors mounted above the wind sock. The sensors communicate with a display by wifi which is a loose object at the moment. The new weather station will be useful for daily operations and timing cross-country starts. (see article on page13).

Before leaving on his winter sojourn, Ron Grant suggested further ideas for volunteer work on the Piecart to smarten it up. He has since returned and has begun implementing these ideas and is looking for helpers to assist. Don't hold back from approaching Ron. A number of members have commented that the Piecart is our Showroom.

Mowing of Airfield
a. At the end of a heavy mowing season both the International tractor and the TORO had serious breakdowns. The 2 machines were taken to a local engineering firm for repair and after a lengthy absence and expensive bills both are back in service. Gary Albutt has since being making mods to the TORO to make greasing easier.

b. Council mowing contract. For those who don't know, Benalla Council pays the Club an annual fee to mow the airfield. After this remained unaltered for 7 years, the Committee approached Council for an increase and gained a 27% increase which is roughly in line with inflation. It was also agreed there would be annual review of the fee in line with inflation.

c. The Committee is aware the TORO and the International with the slasher are inadequate for a heavy mowing season. The Committee is open to suggestions for economical alternatives for new equipment.

Many members put in heroic efforts keeping the rapidly growing grass under control. Our appreciation and sympathy are extended to these members. Hopefully the grass won't grow so much this year because we will be experiencing an excellent soaring conditions.

Radio Room

The Committee has agreed to a suggestion from Alby James to create a radio room at Benalla for the repair of Club and private glider's radio systems. Alby needed a space to store radio instruments and carry out the work and has been allocated shared space in the office at the rear of the tug hangar. If you have a problem with a radio, look out for Alby. He's your man.

AGM
GCV's 2011 Annual General Meeting will be held at Benalla commencing 5.00 p.m. on Saturday October 15. This is a month earlier than in recent years and has been brought back to this time spot so as to not interfere with flying once the soaring season is underway.

Nic Richardson Resignation
Nic Richardson was elected to the Committee at the last AGM. Unfortunately, Nic resigned from the Committee at the July meeting due to an unexpected increase in study commitments. Normally the Committee would fill a vacancy with a replacement, but decided not to in this case due to the proximity of the Call for Nominations who will be elected at the AGM. Thanks are extended to Nic for his contribution on the Committee.

Gabor Hoffman's Badge Collection
Gabor Hoffman's badge display was taken down for the painting of the Clubroom's walls. Since the painting, Stu Smith has taken control of the display material and models in the Clubrooms and is doing an excellent job. Stu suggested Gabor's Badge Collection be loaned to the Benalla Aviation Museum on a long term loan as it is unsuitable for the new layout. This has been done and an "Agreement For Property On Loan" has been signed with the Museum. This will mean if the Club or Gabor's family ever wanted to retrieve the Collection it would be possible. The Collection is now mounted in pride of place on the back wall of the Museum's half of the Bellman Hangar.

BXP Rebag
At the end of last season, BXP's fuselage's fabric and panels were in need of repair and replacement. BXP was withdrawn from service at the beginning of March and, what has been a big job, is coming to an end. It is expected BXP will be back in service at the beginning of October. The result is an excellent job as can be witnessed in the Workshop. Many people have put in, with Bob Fox, Graeme Greed, John King and Reg Gardner being the major contributors. The Club owes a debt of gratitude to everyone who helped create this wonderful asset.

The Dreaded Bunkrooms
Renovation work is continuing on the Club's bunkrooms. We are hoping to paint the 4 remaining rooms in the next month or so following the 4 painted last winter. New curtains for all 8 rooms are to be made by April Currie which will give the rooms a much nicer feel. We had a good response from members last year for suitable furniture looking for a good home. Apart from 2 rooms, the beds are now largely acceptable.

The appeal to members for furniture, in good condition, suitable for the bunkrooms is ongoing. Currently we need:
* 2 or 3 bunk beds with safety features to widen the options being catered for,
* Bedside tables and reading lamps,
* All rooms are in need of small wardrobes, or clothes hanging frames,

* Most rooms have bare walls. Pictures would greatly improve the ambience whatever the theme of the picture. It could be aviation, meteorological, landscapes, cuddly animals, etc. (but not with broken glass).

Any furniture donations should be offered to Don Ridgeway at dcridge@bigpond.net.au and 9439 1728, or Robert Dorning at softdawn@tpg.com.au and 9489 4298, so that the offerings can be checked against what's needed.

The Committee has increased the charge per room from $16 to $20 per night with students continuing to be charged at $16 per night. In addition, there will be a separate once-off charge for linen supplied by the Club each session a room is occupied. The latter is to encourage members to bring sleeping bags, or their own linen.

35 Year Life for IS28s

The Club has been advised by the Gliding Federation of Australia (GFA) that a 35 year life will be enforced on IS28s in Australia with the possibility of a life extension inspection being developed by the Romanian Certificate of Airworthiness holder. This means it is likely our 2 IS28s have only a short time to fly. The date of the factory flight tests of GCV's 28's were: WVV - 21/71977, CQD - 12/1/1980. Applying a 35 year life gives WVV almost 1 year to run and CQD 3.5 years. Maybe a different starting date will be applied and we may get a little longer out of them. WVV is currently moth-balled in the annex against the Tug Hangar.

For the last 10 years, or more, GCV has operated successfully with 3 twin-seaters. Having purchased the 2 popular ASK-21s, the Committee made the commitment to retain an IS28, but now it seems that option is being removed. We have 2 years or so to think about what to do. A third twin-seater is likely to be required. No doubt this will generate much discussion.

As a result of suggestions from members, the Committee is investigating loaning WVV to a "needy" club for a small charge for use in the year before it is grounded. Otherwise, it unlikely to fly again.

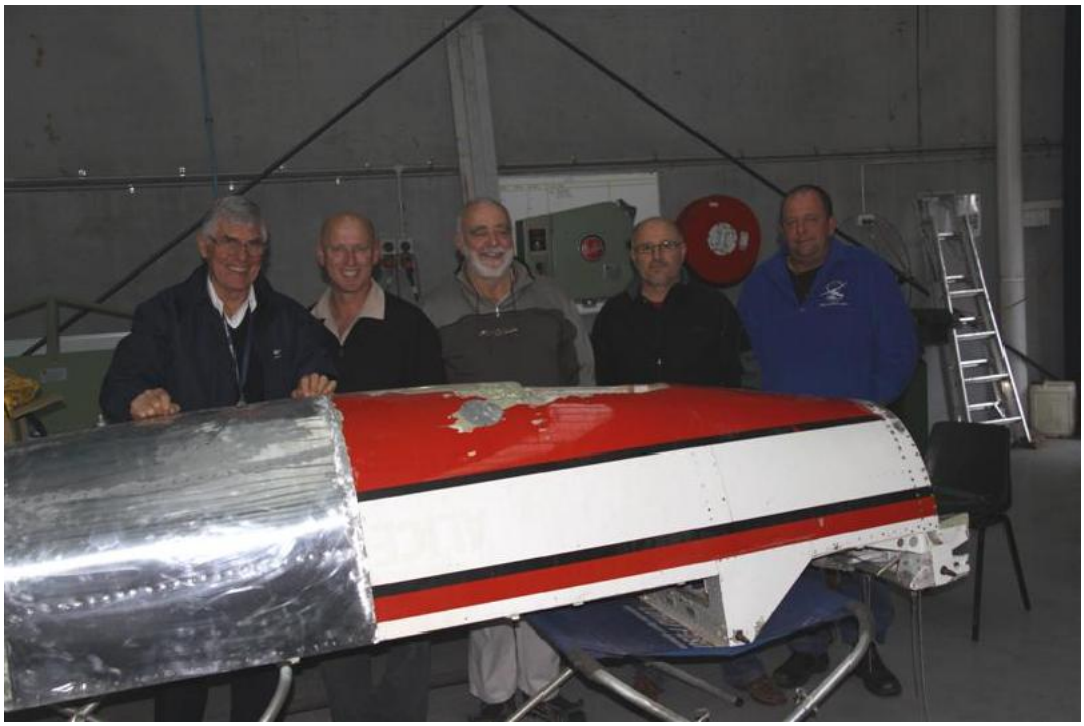
Hangarage in the Mark Carr Hangar

Mark Carr's hangar is the new large shiny hangar near the south-east corner of the private hangar complex. The hangar is administered by the Council because it was exchanged for the front of the Bellman Hangar (a complicated story). The Committee is talking with the Council about having access to the hangar for short term hangarage (3 - 4 months) for members and visiting pilots. The Council has proposed GCV have access to approximately two thirds of the hangar from early November to the end of March. The balance of the hangar would be occupied by a row of 5 trikes. The area available to GCV is about 18 m wide and is estimated to hold 4 gliders at a rent of around $27 per week per spot. Council wants to be able to allocate places for powered aircraft in our off-season. Anyone interested in such an arrangement can contact Robert Dorning at softdawn@tpg.com.au and 9489 4298.

Robert Dorning – GCV President

VERY S(T)IMULATING

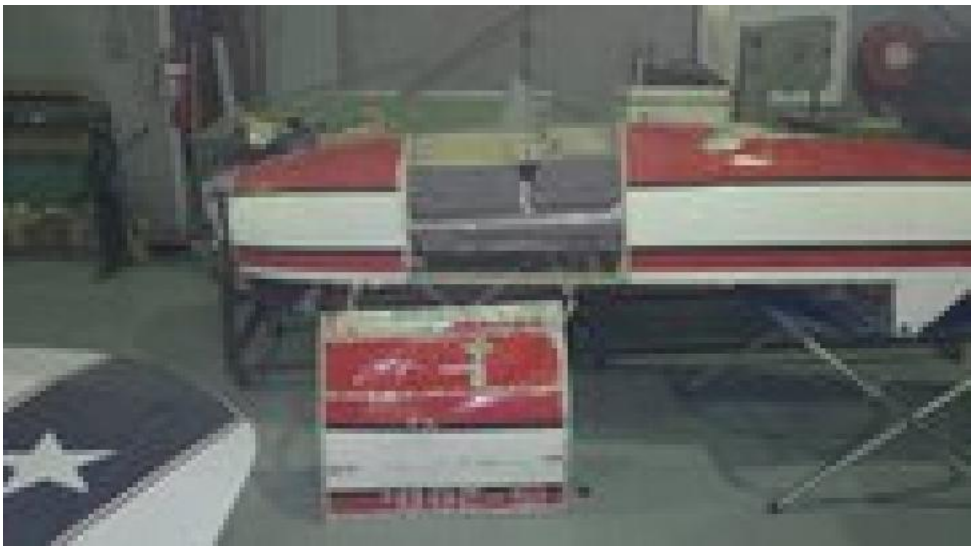
You may know, or not know, that a few club members are busying themselves building a Glider Simulator for the club! The culprits are; Graham Garlick, Phil Henderson, Steve Hobby, Deniz Ture, Alby James, Jonathon McAliece and Richard Gynes. I hope I haven't missed anyone!



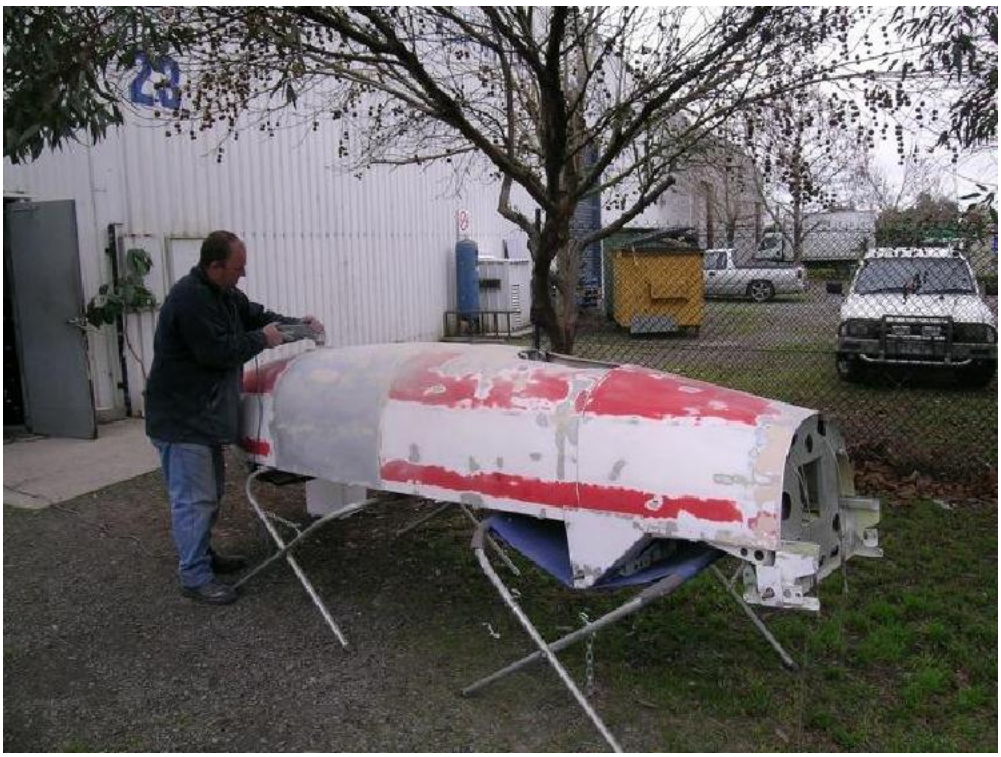
Posing in front of the cockpit from left to right are Graham Garlick, Phil Henderson, Alby James, Deniz Ture and Steve Hobby.

The project was in the thought processes of a few of them and was spurred into reality when the GFA simulator visited the GCV for two months.

The guys have decided to build a two seat simulator to allow for training of instructors using two seats, or simulating single seater cross country flights using only the front seat. They've already found a cockpit to use – an IS28B2! It came from Tocumwal and was last flying at Alice Springs. It was last registered as VH-CQA.

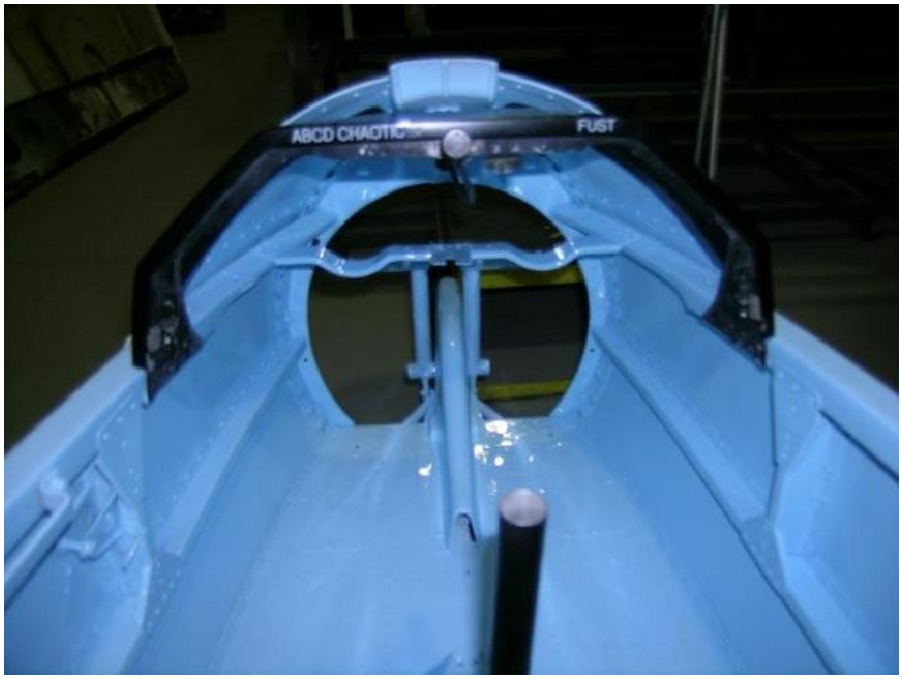


The cockpit shortly after it arrived in the Melbourne workshop.
The crumpled bit has been removed.

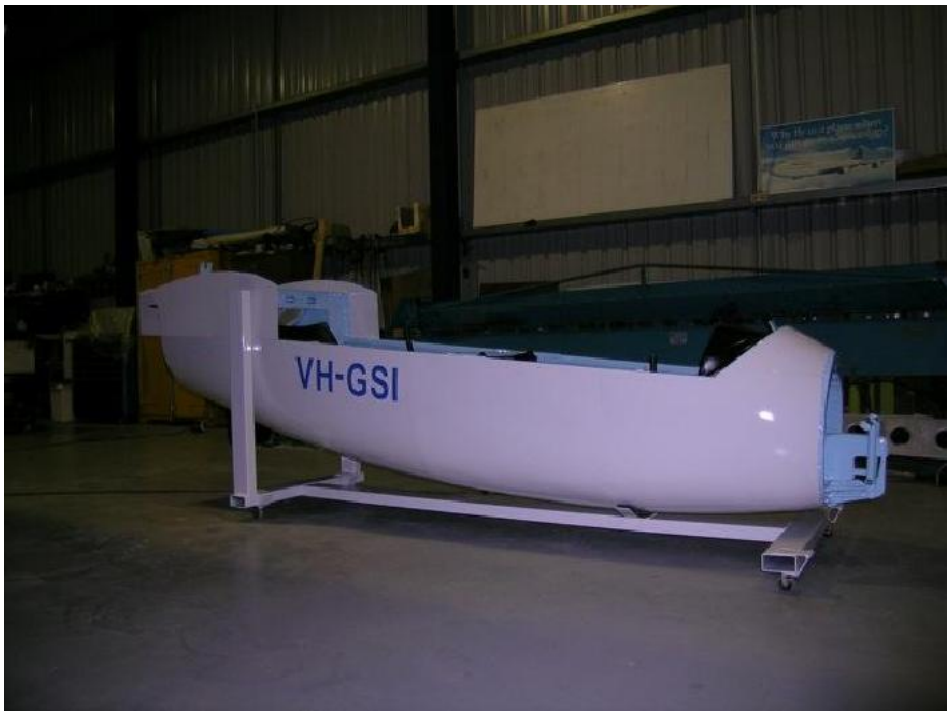


Steve Hobby hard at it sanding after the repairs.

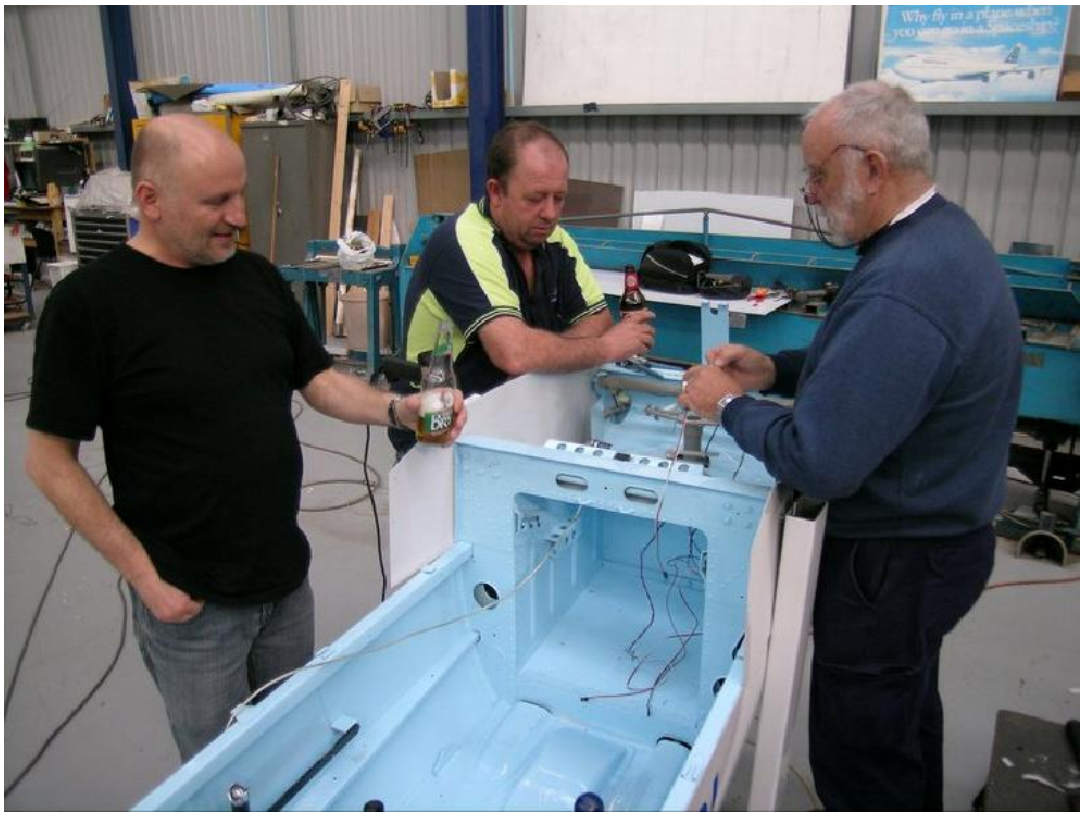
Steve Hobby has done the majority of the body work, filling, sanding and painting. In the process of doing this work Steve had to turn the fuse over. First time he does this two dollars drops out!! Next day Steve has to roll the fuse again – another two dollars drops out!! Phil Henderson then suggested that Steve roll the fuse over every day and our financial woes will be covered!!



The interior all clean and duck egg blue – hey it was free paint (and looked white when the can was initially opened – before stirring).



What a change! Is that an IS28? Looks smicko!



With the major work on the cockpit done it was time to call in the techos to install the wiring and the pots to convert your stick movements into something the computer can understand. Note that when doing critical wiring a beer must be involved!

Where are we going to install this two seat stimulator? Initially the first thoughts were to install this in the main club room in the corner adjacent to the door to the upstairs rooms. A couple of problems arose from this location selection; 1) The unit would have to be dismantled and moved any time we had a large function (such as a Nationals competition) and what a pity we couldn't show it off under the eyes of the nation! 2) It wouldn't be very private for those times when some extra work was required for an Instructor or Student. 3) It would take up a fair amount of space down there!

So, where to put it? The old Vet Lab offices would have been perfect but these have been leased to another group and all efforts to defray the rent cost are good! The current thinking is the "old" computer room upstairs. It gets less use these days then when we initially started it and the Committee have a plan to set up an "Internet Café" area under the stairs, so the facilities will still exist.

One little problem. Just a tinny wenney issue. A bit minor really. The room is 3.6 metres long and the cockpit is 4.1 metres long. Just a little bit too big! Still, given the people on the job a solution was quickly to hand – knock a hole in the wall! Seriously, it's just a wall and it's in the way! We intend to put a double door sized entrance into the upstairs computer room from the upstairs Briefing Room. This will allow the rear end of the simulator to protrude into the briefing room and Instructors or visitors to observe from behind. A number of partitions and a curtain would enable us to segregate the briefing room from the simulator activities if they clash.

The simulator is scheduled to be delivered to Benalla in October. You can track the progress of the simulator by going to the Simulator Facebook page (how very modern!). The Facebook page is called "Gliding Simulator". Log in and become a friend of the simulator!

A trifling issue though; the cost of putting together the simulator is about $6,000. The GCV Committee will help fund the project on a dollar for dollar basis so we need to collect $3,000! (less the four dollars Steve recovered from the fuse). Can you help? Please donate some dough by calling Rhonda at the office on (03) 5762 1058 or gliding@benalla.net.au. UK Pounds and Euros are acceptable!! Give until it hurts!

John Switala

GFA AGM

The Gliding Federation of Australia is holding their Annual General Meeting and Seminar in Melbourne on Saturday 10th September. Outside of the AGM, there is an excellent range of speakers covering a diverse range of topics at the seminar and an opportunity to catch up with the latest gadgets at the trade show. The attached Seminar Brochure has the details.

It will be another 4 years until the next opportunity to meet the Board in Melbourne and ask those probing questions, hear from a range of interesting and experienced presenters on a range of matters affecting your sport and join the with other fellow pilots whilst you dine and learn from exhibitors and others at regular breakout sessions.

WINTER TRAINING COURSES 2011

Winter is a good time to develop member skills via ground-based training courses. Saturday 20 August and Sunday 21 August saw delivery of two such courses: Flight Logger Operation and Airways and Radio Procedures.

Five members attended the Logger course. Operation of Club flight loggers was covered, as was analysis of flight logs and use of the Online Competition (OLC) to promote Club flying. Tim Shirley contributed valuable insight to this course, and his assistance is gratefully acknowledged.

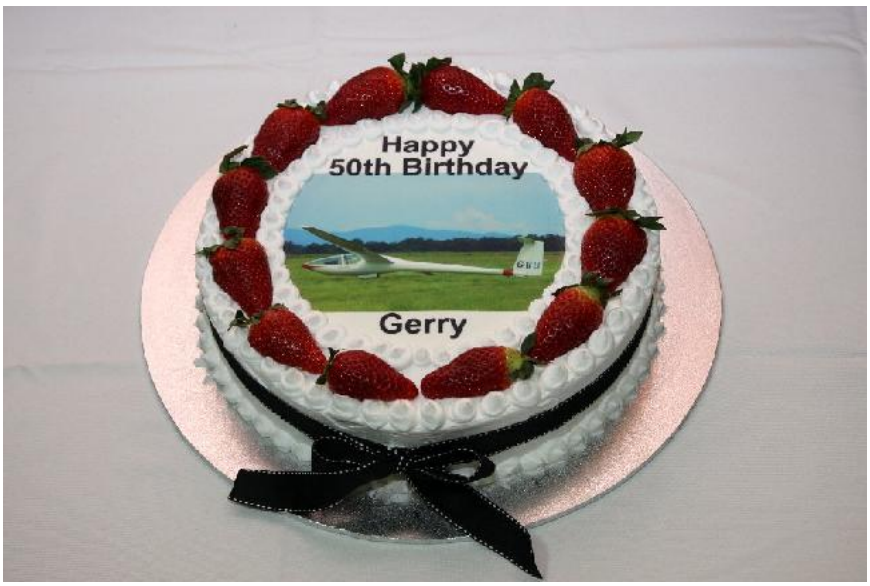
Nine pilots attended on the Sunday to gain their GFA Radio Operators endorsement. This endorsement is now a mandatory GFA requirement, and attendees now have a working knowledge of airspace regulations as they affect flights out of Benalla, and of radio procedures pertaining to (cross country) flying by glider pilots.

Congratulation to all successful members.

John Millott

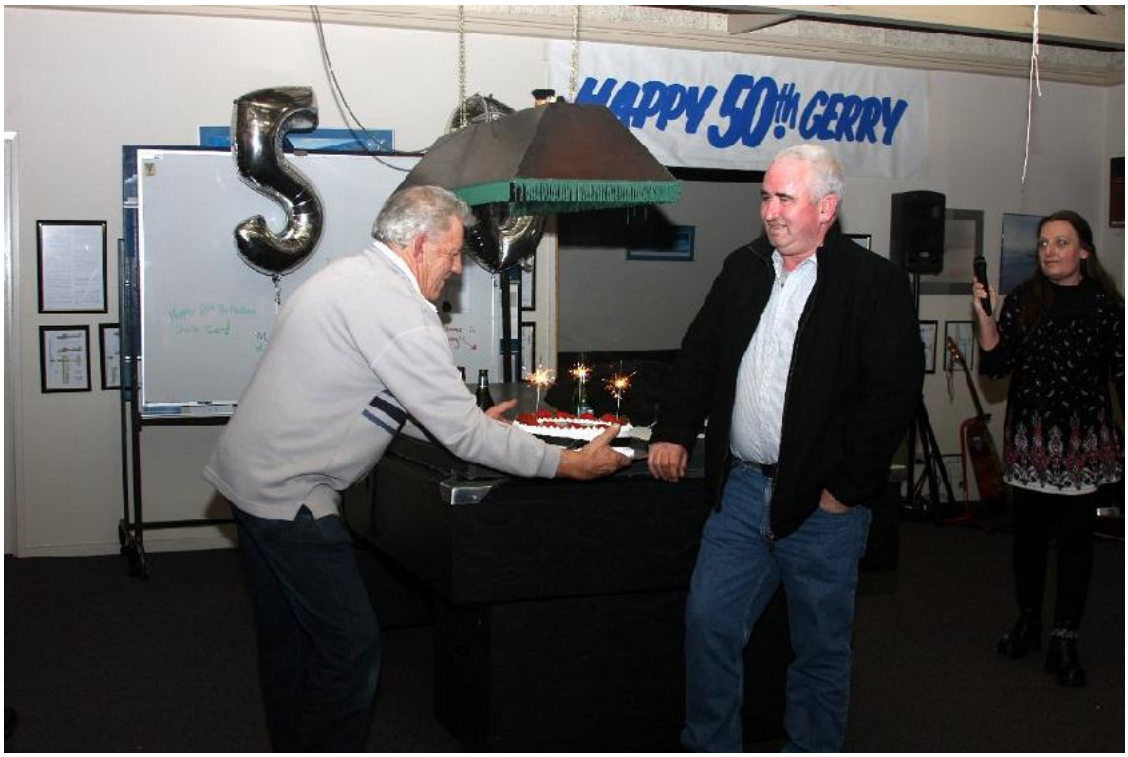
BIRTHDAYS GALORE!

Gerry Hogan turned 50!! And here are some photos to prove it!



The Cake

The Family



The Presentation

The Man Himself!

Photos By Jutta Goldman and Tom Doolan: The full collection can be viewed at http://jalbum.net/a/1022965/ and http://jalbum.net/a/1022991/.

And Jim Barton is turning 80!!

As previously announced, the Gliding Club of Victoria is hosting a Celebration of Jim Barton's 80th birthday and his contribution to the GCV and gliding in Australia. As you would know Jim has made a huge contribution to GCV. He was president for 36 years and under his stewardship the Club grew to be the largest in Australia. The bulk of the excellent facilities we enjoy today were acquired in his time. Jim was the driving force in having the World Gliding Championships held at Benalla in 1987.

The details of the Celebration are falling into place. The function will be held on Friday, September 16 at the German Club (also known as Club Tivoli), 291 Dandenong Road Windsor (between Williams and Orrong Roads) commencing at 7.00 p.m. meal served at 7.45 p.m.). The charge is $35 per head and there will be a 2 course meal (main and desert) with coffee and tea included. There is a bar from which drinks can be purchased. There is plentiful on-site parking and the German Club is at Stop 36 on Tramlines 5 and 64 from the City.

For the formal part of the evening we have Vice Air-Marshal John Blackburn, AM (retired) as Keynote Speaker. On his retirement, John was Deputy Chief of Staff of the Australian Airforce. The young John and his father Jim were members of the GCV in the late 60s and 70s. John flew gliders first and learnt to fly powered aircraft at Benalla. He joined the RAAF in 1975 and eventually rose to hold one of the highest positions in Australian aviation. John is now a member again at Benalla flying tugs and his ASG29.

In a previous e-mail we asked those who would like to attend to register their interest by notifying Rhonda in the GCV Office either by telephone on (03) 5762 1058 or by e-mail at: gliding@benalla.net.au. We have had 50 register so far. ARE YOU INTENDING TO COME, BUT HAVEN'T GOT AROUND TO IT YET? If so, could you register ASAP.

We would like to receive payment before the event. GCV members will have their flying accounts deducted unless they tell Rhonda they want to pay another way. Payment can also be made by cheque made payable to: Gliding Club of Victoria, PO Box 46, Benalla 3672 and by Bank Transfer: National Australia Bank, BSB: 083 541, Account No: 55 971 3511.

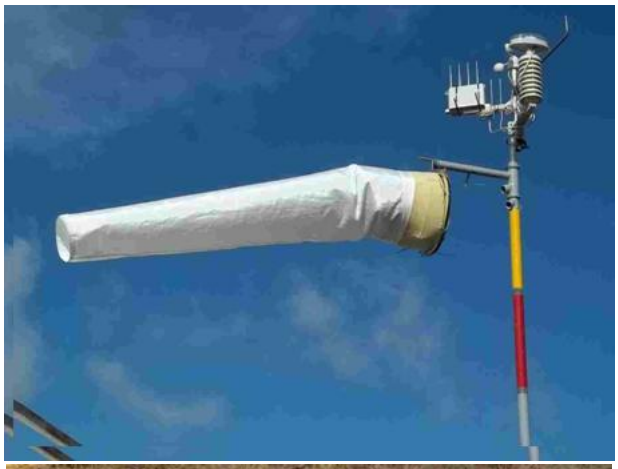
If possible we would like to have a display of photos on the night. If you have photos of Jim at major events, e.g., at the building of the hangars at Benalla, it would be appreciated if they could be sent to the GCV Office. All photos will be returned in good condition.

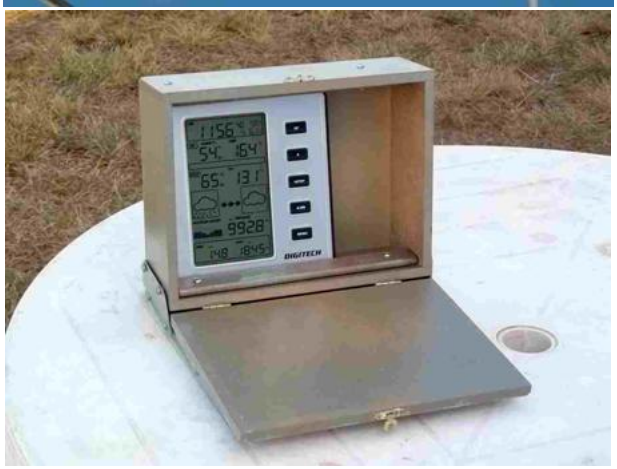
In his life Jim has made many friends and admirers. We know that many will want to celebrate this important birthday and the contribution he has made. Please tell others who you think might be interested as contact has been lost with some. It should be an enjoyable evening.

Yours in gliding

Robert Dorning
GCV President

PIECART WEATHER STATION





As the birds had been roosting on the old windsock and from there, covering the solar panel with doo, the windsock mast has been moved to the tow-point area of the Pie Cart.

The whole assembly was reconditioned and a solar powered weather station added. The windsock assembly may now be easily removed from the mast for replacement or repair and a bicycle steering bearing assembly allows it to swing freely.

The weather station transmits temperature, windspeed and Rh periodically to the portable ground station. It is fitted with anti-bird spikes and a lightning rod.

The portable ground station is battery powered and displays ground temperature, Rh and air pressure from its own sensors in addition to those transmitted from the mast. It gives a symbolic weather prediction and if you can operate it, a history of all parameters (a guide book will be left in the Pie Cart).

You might also notice other work done on the Pie Cart, such as extensive refurbishment and waterproofing. In addition, the cart has been converted to towball operation so those with a sufficiently robust vehicle can move it without having to go for the tractors.

As speed tends to be higher, it is advisable to make sure everything is secure inside the cart before moving it.

In addition, the rear stand must be raised before hookup. Raising the front via the crank with the rear stand down, is damaging the Pie Cart.

Peter Martin has done an excellent job reworking the document boxes. They were sized for foolscap and A4 sheets would not fit. He has completely upgraded them with very nice finish and they function perfectly. In addition, he has put a shadowbox of hand tools there..

I hope I have not forgotten anyone.

Robert Brown

GETTING HOME

This is much the preferred alternative to going 'aux vaches' and perhaps having a long evening contemplating the uncertainties of a retrieve. It allows one to boast discreetly in the bar, whilst plaintive telephone calls from the unfortunate outlanders keep the tuggies from their beer.

There are, fortunately, a few things that you can learn to improve your chances of getting home. As with most things, a little planning does not go amiss. Start with a rough estimate of how long thermals will last, bearing in mind the forecast and the time of year. My rule of thumb, for example, is that when on an out-and return flight in the peak of the season when the days are long, one should generally turn for home by about 4 PM (summer time). If there will be a significant tailwind on the return leg, this can perhaps be extended by up to an hour. Conversely, adverse influences such as increasing cirrus bring the turn-round time forward. By and large, many pilots tend to turn back prematurely.

Psychologically, being three hundred kilometres north of Benalla at 4 pm can be a bit daunting until you've repeated the experience a few times. The mental trick is to reduce the problem of getting back to manageable stages. For the purposes of illustration, it will be assumed that there is nil wind.

Stage 1 (still racing)
If you've recently been averaging, say, 110 kph in racing mode for a while and have been getting 8,000 ft climbs (QNH), these conditions will probably continue until at least 5 pm (about the time of maximum temperature) and by then you will be only 190 km. away from home. Stage one has been effortlessly completed and the return leg problem immediately reduced by over a third.

Stage 2 (slowing up, keeping high)
The conservative aim of this stage is to arrive at a position to start a final glide as high and as far out from Benalla as possible, planning for the worst case. One should expect the height of thermals to reduce late in the day and an average of only 80 kph may be realistic for this stage. A 6,000 ft QNH climb might be the best that can be expected for final glide. If this can be achieved by about 55 km out (eg near Yarrawonga aerodrome), stage 2 (135 km) will be completed by about 6.45 pm.

Until then, the thermals will have become gradually weaker (most particularly low down] and much further apart. Cumulus clouds will have become scrappy and can die out long before useful thermal activity ceases. Your strategy should be to progressively reduce your cruising speed and confine yourself more to the top of the height band. If there is cumulus, decide on the most active areas of clouds close to or upwind of the track home well before the clouds decay. These areas will be still be the best even after all clouds have disappeared. Try to space your climbs so that they are just before known dead areas, such as irrigation and major river valleys.

By the time the best thermals are down to below 3 knots average, I generally try to stay in the top 25% of the height band and cut cruising speed back to 65 kts. This is much less than the McCready theory optimum, but increases the chance of finding the rare,

late evening thermals. These can persist very late; I can recall instances of running into wide areas of 2 knots at 8 pm after gliding 50 km. in completely dead air. Hang on to water ballast until climbing in the first thermal that averages less than about 2 kts, because it increases the cruising speed for the same glide angle. This is about five kts for an antique glider like my Glasflugel Kestrel, but perhaps ten if your wealth extends to one of the fashionable types.

If you fall below about 4000 ft during Stage 2, slow right down to best L/D until you can climb above final glide slope. The thing to avoid at all costs is getting low late in the day and having to waste time with whatever scraps of lift are available down amongst the weeds. By the time you laboriously dig yourself out, conditions may have decayed to the point where all is lost anyway.

Stage 3 (final glide)
The example of starting from Yarrawonga aerodrome should have you back at Benalla by about 7.15 pm, even at best L/D. On such a final glide, it is wise to gain extra insurance by flying through any remaining areas of buoyant air by adjusting your track to pass over small hills or rock outcrops that may be retaining heat.

Given reasonable luck, however, one is quite likely to do much better than this scenario. For example, you may fluke a last 8000 ft climb at Rennie (85 km out) and be able to start a final glide from there. Any subsequent lift averaging over about 1.5 knots would be worth taking to increase one's margin, or allow a faster final glide.

Charles Day

There is a pot of gold in the Aeropark which anyone can find and dig up!
Photo Rob Brown

MARY NEIGHBOUR

I am biased I know - but I think the following is worthy news - well how many female pilots are there still flying on their 80th birthday and cross country flying at that. There seems to be little written about our female flyers other than in completions.

Mary was 80 on the 13th July and following her determination to do so did indeed fly on that date at our usual destination of Fuentemilanos in Spain where we spend four weeks a year amongst a gathering of pilots, all men, from many countries in Europe. One only need to check on OLC to discover the extent of the flying that is achieved there through the months June to August. A most distinguished group of pilots.

Mary went solo in 1962 and in the last 12 years of those 49 years, as a member of the BGA, has flown in Finland, France, America, New Zealand and more extensively in Spain at Fuentemilanos and Australia were we spend three months a year at Benalla.The Gliding Club of Victoria (we return there in November this year).

Mary has a Gold and two diamonds. The height diamond has constantly eluded her. She has some 2500 hours and countless thousands of cross country kilometres and still counting. She has flown some 45 different gliders during her flying career. Currently a Ventus 2ct.

Mary and the Diploma

The Staff at Fuentemilanos from the President, Gonzalo, of the Company that run the Airfield, the CFI, Antonio, the Administrator, Eduardo and resident Tug Pilot, Pedro organised a celebration and a diploma to mark the occasion. Information on their data base was the source of the information as to how old you are. The caterers provided the meal with wine that was held in the airfield restaurant in addition to flowers and a cake especially made by the resident Chef.

Edward Neighbour

AS SUMMER APPROACHES

2011/2012 Soaring Season

I just thought that I would take some time and write down a few things that may be of interest to you as summer approaches, from a towing prospective.

BXP is being completely re-bagged. Its a huge project and is expected to be completed by mid September. I take this opportunity to that those involved in this project – Graeme, John King, Reg, Bob Fox (who commenced the work at the end of last season) and other club members who have volunteered their time to assist in the project.

In relation to the 100hrly checks, CUR, MCF are about due and UTK will be done in the first weeks of August. Again – Graeme expects that their will be no real issues with these maintenance deadlines. As far as the engines go – if nothing is needed - this is testimony again to the NEW engine descent procedure that was adopted in 2008. Since we have taken a little more time at the top of climb, the engines have thanked us by not needing any replacement of valves or cylinders. This has saved the club money and in the words of our Treasurer, 'this is good'.

In relation to the work shop, let me take this opportunity to thank Graeme Greed (who is nearing the end of his studies and courses necessary to make him a full qualified LAME)and Rob Dorning (current Club President and workshop co-ordinator) for their efforts in maintaining our tug fleet.

The ETUG – CUR – is to stay with us again this season. It has been a wonderful aircraft to fly and I hope that you have enjoyed the performance that it offers. Michael Shirley, the owner of the aircraft, has been at Benalla this year and is expected again over Billanook Week in September. At that time, further tests will be undertaken to assist in the push towards its certification as a Glider Tug via CASA..

In relation to our Mid Week operations, Jeremy Birkbeck is to return on November 1 to lead the towing operation. If all goes according to plan, he will be joined by a NEW mid week tuggie, Robert Rose. Robert is a ATPL licence holder and is currently employed by Thomas Cook Travel in the UK, where he is a second officer in their 757 fleet. Robert is an active member of the Northumbria Gliding Club and, having been officially invited to join us, I am confident (as long as he gets the time off that he has applied for) that he will arrive around November the 7th. Rob and Jeremy will be our tug pilots until Val Phillips arrives in early January. Rob, Jeremy and Val will be involved in the towing solution for the Multi Class Nationals (2 until 12 January 20120 and then Rob will leave mid January. Val and Jeremy will continue until the end of February, when Val is expected to return home. Jeremy has committed to stay on until Mid March, so that mid week towing will continue until he leaves. Jeremy has stated that this will be his final year with us – I hope that is not the case.

In relation to the Nationals, I will again be pushing the organisers and GCV committee to have 7 tugs operating. This worked well last year with both competitors and club members being served well over that very busy two week period.

I certainly hope that you all have a safe an enjoyable soaring season. When returning to the field after a long day soaring, or just joining the circuit area after a local flight - please keep your communications clear and accurate. Remember – We all have to see each other and work together to make Benalla a safe place to fly. With the mandatory carriage of radio we are now in an 'alerted see and avoid' airspace

LOOK OUT and SPEAK UP!

Robert Pugh
Tug Master
GCV

TREASURER'S GRIPE!

This is your Treasurer speaking!

I am often asked the question by GCV Members: "Are we doing OK financially?" and I always answer "Yes". It is a perfectly correct answer as long as it remains in the "generalities" category. If "doing OK' means that we are paying our bills on time and have some money in the bank then we are doing brilliantly. On the other hand if it means that we are paying our bills on time and have enough money to buy a new glider as soon as one becomes obsolete, then we are performing just marginally.

In today's environment it is essential that old equipment (tugs and gliders) are replaced with new and modern ones at regular intervals and the purchase of the two K.21s has proved this assertion. Members and visitors are discovering the pleasures of flying a clean, comfortable and well performing glider (yes, I know, it doesn't spin well). Performing marginally means that we may not be able to replace tired or grounded gliders as soon as we would like to. We may not be able to buy new equipment whenever we want to. Despite of all this, we are doing OK.

Having said all this, we can always do better by producing a higher level of surplus. This can be achieved by one of two ways.

We can increase our revenue by flying more and I can highly recommend it. This, however requires more spending by Members which is not always possible.

The alternative method of producing more surplus is by reducing our expenses and here is where we can all help without any hardship.

Heating, cooling and lighting cost us over $7,000.00 per year. Think of this figure every time that you leave the clubhouse and, before you step outside, have a look around and see if there are any lights are on or heaters or air conditioners are running unnecessarily. The last person who leaves the room should make sure that there is no power wasted and turn everything off (except the security lightings).

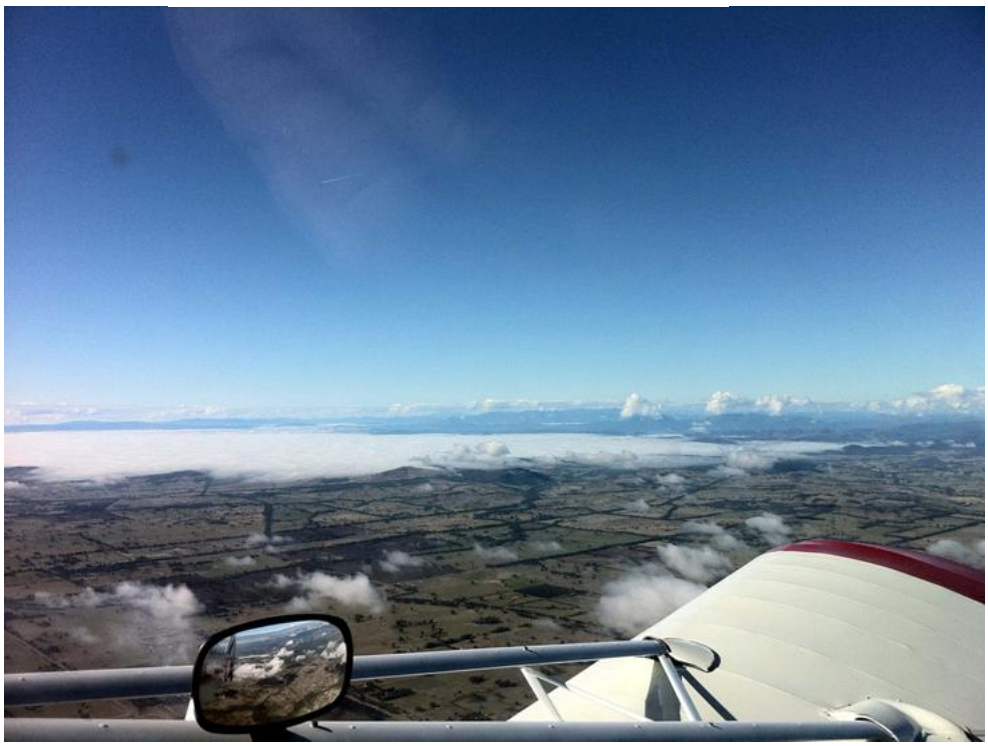
Just think! With very little effort we could save at least $1,000.00 every year.

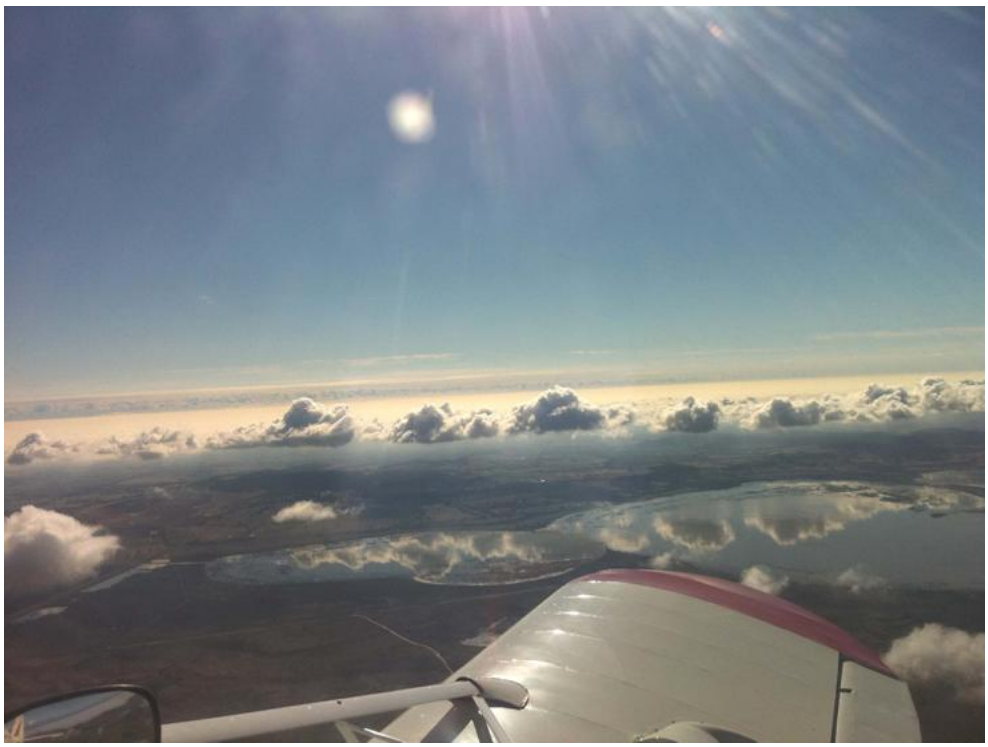
Peter Carey

BENALLA 28 MAY 2011

It was a beautiful winters day

The fog ran from the Ovens Valley …





… and along the Murray.

Whilst Benalla had glorious sunshine and winter Cu's

TRAINING PANEL

Congratulations to the following Instructors, who have been upgraded.

Level 1:

Kirk Amos
Don Ridgeway
Steve Hobby
Jonathan McAliece

Level 2:

Fabian Gaida

Congratulations to **Liam Hicks**, who recently went solo

Paddock Landing Course:

The above course will be conducted over the weekend of 19th/20th of November. Details will be sent out in early September.

Paul Barber
Chairman/Training Panel

FOR SALE

Std Cirrus 75 VHZKH

Located at YBLA. Excellent condition. FlarmNav Becker Radio Tow- out-gear Enclosed Trailer.

Owner heading overseas. $19.000.00 ono.

PH Jeremy on 0424724313

INDISPUTABLE FACTS

Put these three indisputable facts together:

One: There is a low limit of weight, certainly not much beyond 50 pounds, beyond which it is impossible for an animal to fly. Nature has reached this limit, and with her utmost effort has failed to pass it.

Two: The animal machine is far more effective than any we can hope to make.; therefore the limit of the weight of a successful flying machine can not be more than fifty pounds.

Three: The weight of any machine constructed for flying, including fuel and engineer, cannot be less than three or four hundred pounds.

Is it not demonstrated that a true flying machine, self-raising, self-sustaining, self-propelling, is physically impossible? — Joseph Le Conte, Professor of Natural History at the University of California, Popular Science Monthly, November 1888.

Do not spin this aircraft. If the aircraft does enter a spin it will return to earth without further attention on the part of the aeronaut.— first handbook issued with the Curtis-Wright flyer.

Never fly the 'A' model of anything. — Ed Thompson

The Cub is the safest airplane in the world; it can just barely kill you. — attributed to Max Stanley, Northrop test pilot.

What's the hurry? Are you afraid I won't come back? — Manfred von Richthofen, 'The Red Baron,' last recorded words, in reply to a request for an autograph as he was climbing into the cockpit of his plane.

You've never been lost until you've been lost at Mach 3.— Paul F. Crickmore, 'Lockheed SR-71: The Secret Missions Exposed,' 1993.

Lew Tankard

JOEYGLIDE

10-17th December, 2011. Kingaroy Airfield!

G'day everyone,

It's with great pleasure, with thanks to the tireless efforts of a junior member Ailsa McMillian, the JoeyGlide website (www.joeyglide.com.au) is now live! Please join in with me in thanking Ailsa for designing this site, as well as one of our long term JoeyGlide sponsors, Heath L'Estrange at www.webadventures.com.aufor hosting this site.

The big ticket item in this announcement is that we are now able to open the entries (and expressions of interest) to JoeyGlide! Please check out the website, and if you're a junior pilot that it going to be joining us for the event – we'd love to see your name on the entries list!

I look forward to bringing you and the world more news as it develops in the news section, via the tweets, facebook group - JoeyGlide News (for everyone who's interested in following the event), tracking site, and the scoring live** (see below!).

SPONSORS!!

INTERNODE! www.internode.on.net

On behalf of the Australian Junior Gliding movement, we'd love to thank Simon and his Internode team for continued long term support of the JoeyGlide event! Please check out their website at **www.internode.on.net**

"Internode is an Australian owned, national Internet services provider.

We love the Internet - and Internode delivers so much more than just an Internet connection."

Gliding Queensland!

"To Foster, Promote and Develop Gliding throughout the Region"

We have an amazing culture up in Queensland due to the massive support we all receive from GQ, so come up and have a glide one day, month or year! Thanks to Dave Donald and his team for helping the juniors out this year. I assure you it will be one to remember! For all your news, info on Queensland Clubs, development, history and heaps more – please check out: www.glidingqueensland.org.au

****Swift Avionics**

Thanks to Mark Newton of Swift Avionics (http://www.swiftavionics.com.au/), JoeyGlide is yet again able to lead the way in competition soaring in Australia. This year we'll be running the fabulous new device called the DittoLog (www.dittolog.com) in 25 of the competitors glider. This device brings you wirelessly online flight sheets, online logbooks, online accounting interface. DittoLog saves time, improves efficiency and money! Where we'll be leading the way though, by the time that the junior gets out of their cockpit, they'll have been scored!

SimJet

Thanks for providing some great prizes and sponsorship for this and future years JoeyGlide, we'll be sure to announce them in the coming issues! Come and try your hand at flying a Boeing 737 simulator,*Nick Kranenburg will make the simulator available at a special hire rate for any member of the GFA & HGFA when it's not being used by a airline academy!* Check it out at www.simjet.com.au ;

Go Soaring

"Products for the soaring enthusiast"
Thanks again to Al Sim of Go Soaring, who has been a great supporter of JoeyGlide over the years – by providing prizes, shirts and his enthusiasm for the sport. Check out his website:www.gosoaring.com.au

WebAdventures

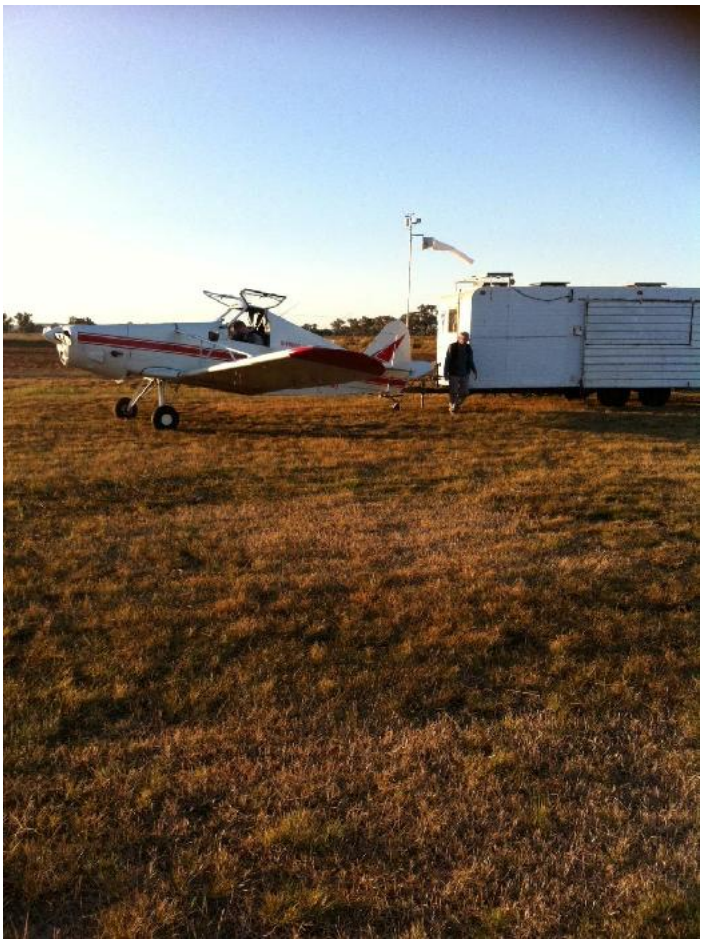
Thanks to Heath L'Estrange for hosting the JoeyGlide website, his support has made my life much easier on the web front! Web Adventures is an Australian business based in Adelaide providing specialised Web Hosting, Design, and Marketing services to customers. We pride ourselves on providing a level of service that makes your website development project as pain free as possible. Please check out: www.webadventures.com.au ;

Safe Circles,
Adam Woolley

LEW'S GAB

As most members know, much is afoot at GCV with new solo pilots, a new tug pilot (Peter Burke) and at long last the pie cart is being refurbished. Firstly, just a quick word about amazing co-incidences (symbiosis?)

I mentor several students, Cean Sheerin, Peter Burke and Chris Van Der Merwe. Peter Burk is also a tug pilot, very recently endorsed. It happened that on the very first solo tug flight Peter did, I was being towed, on my first flight with Chris, on his first flight in the IS28! All went well. And congratulations to Peter. So good to see such a young man putting so much into the club.



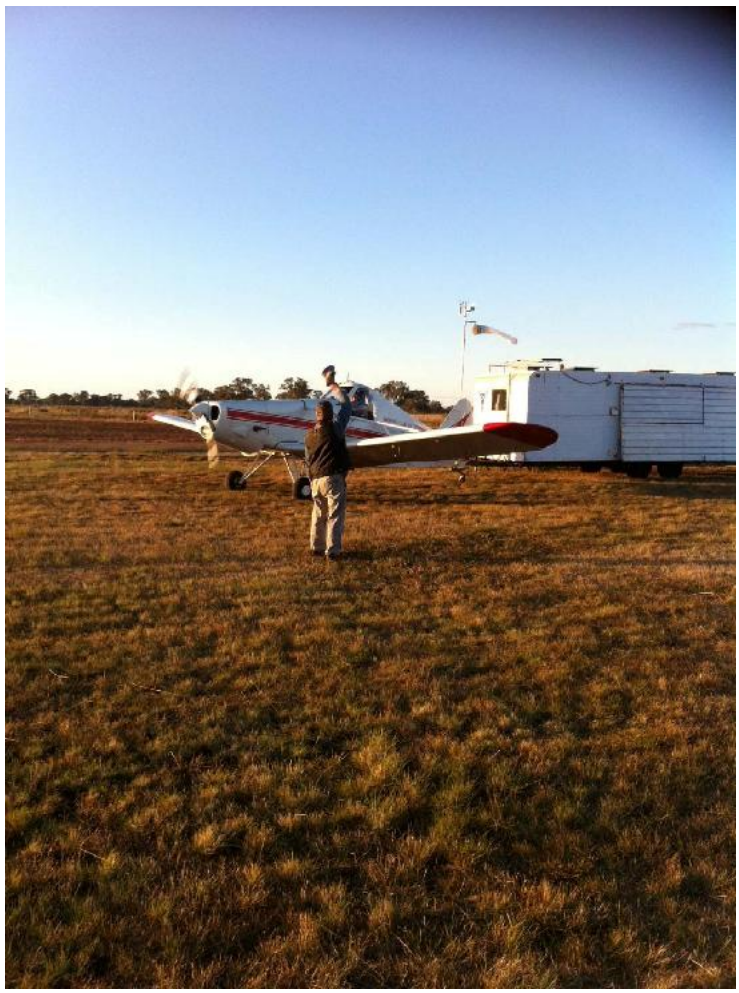
Hooking up

Let me tell you a little about my students. Peter Burke is a Uni Student at Swinburne but comes from Wangaratta. He is 19, a fully qualified power pilot and now tug pilot. He has his A and B certificate, and will shortly have his CV. He is endorsed on the K21, IS28, Junior and LS4.

Cean soloed last year but broke his shoulder and had to take a break from flying for some months. However, he has his A and B certificates, and is endorsed in the K21, IS28 and Junior. Also not far away from C certificate.

Now, the interesting thing about Cean, is his job. Cean is a 'sniffer'. He has a calibrated nose. (I swear this is true). The actual title is 'Odour Panellist' . What this involves is smelling air samples from various places, sometimes as a result of a complaint or just a Factory checking its output. Different people have different sensitivities. Hence the 'calibration' Cean is a 1. The most sensitive. He sniffs samples from test tubes and presses buttons to record his responses. Don't fart near Cean!!! He will know who did it!!

Chris. Fairly newly soloed, has his A certificate and endorsed on both K21 and IS28. Very close to B certificate. Chris is an engineer that studied via a scholarship through the South African Air Force. He never pursued the pilot part of the Air Force but was directly involved in test flight activities (Electronic Warfare related) at one stage as a passenger mostly and taking control unofficially a few times of some fighter and training planes. He now works for the NAB.



All out!!

We know each other as pilots but it's always interesting to find out what people do outside of flying.

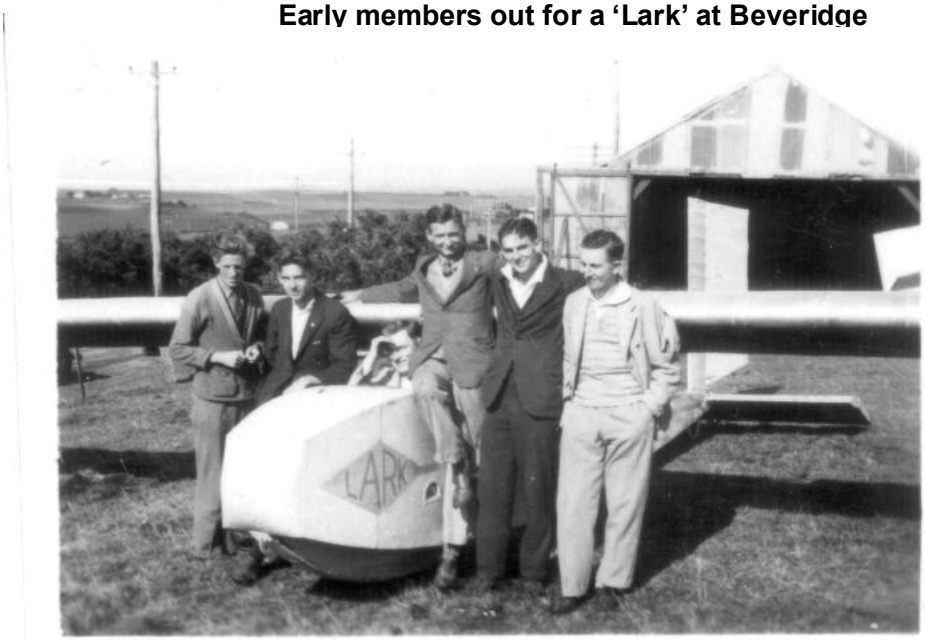
On my last duty weekend, it was very quiet, so we had a bit of time to fly for ourselves and generally have a good time. It was also Peter Burkes first weekend on the tug roster. In a quiet moment, Rob Brown and I were discussing the installation of the new towing hitch on the pie cart. Great idea, so now 'anyone' can tow the pie cart. The pie cart also had to be put away at night so that the refurb can continue. Hmmm, what do we have that has a lot of power that we can tow the pie cart with? Ah. MCF has LOTS of power, and after all, Rob said 'anything' could tow it. The tug has to go back to the hanger anyway, so let's tow it back with the tug! Great success, and a good way to make sure Peter Burke fully understood the full extent of his duties when he is on the roster.

Please see the photos we took. Hooking up was easy and then Rob Brown waiving 'all out' Note we are towing into wind. This raises all sorts of possibilities. Maybe the tug could tow a glider out when it comes out in the morning! We have to make efficiencies.

Lew Tankard

HISTORY CORNER

Early members out for a 'Lark' at Beveridge



Raymond Garrett Collection

THE SEARCH FOR THE IDEAL GLIDER TUG

(The development and testing of the eTug)

Introduction

In 2005 a syndicate was formed to see if something practical could be done to create an automotive-engined aircraft that would reduce the rising costs of aerotowing and be able to be certified by CASA and replicated for a number of clubs.

Knowing of the history of Autotug in Queensland, we approached Dave Sharples and asked him to join and oversee the project with us.

We named the project eTug (short for "enviro-Tug") because we intended that it should have a "friendlier" footprint than current tugs – apart from being a lot cheaper to operate, it must be quieter, more efficient in terms of tows-per-engine-hour, more fuel-efficient, cause less impact and erosion damage to grass strips and deposit no lead into the atmosphere.

We have had questions from many people about the project, so this document aims to summarise how we arrived at the specifications for eTug, to answer questions about the other possibilities we examined and to report on the progress and cost benefits of the prototype.

The aircraft we examined which are described here are all well-known, certified and competent as GA aircraft. However, our interest was to evaluate them against the special set of requirements that we developed for our "ideal glider tug".

As well as applying our own experience, we have talked to a lot of people in the gliding movement with experience in pretty well every method of aerotowing.

The conclusions we reached as a result are set out here, in the progress of the development of eTug.

Specifications and Performance

Towing a glider into the air behind a tug aircraft appears to be a relatively simple process to define and specify. In reality, it is. In the discussion of the theory, however, it attracts all sorts of methods that often reflect the personal interests of the theorists rather than the dispassionate evaluation of the available possibilities. And it should be noted that the original automotive-engined glider tug, Autotug, after flying for 17 years with a Ford Javelin V6 engine, has now been modified to run a GM LS1 5.7 litre V8 engine.

As a syndicate interested in finding the most effective way of reducing aerotow costs, we set out to specify the requirements as objectively as possible, as well as to apply advances in engine technology that have emerged since.

We looked at Eastern Australia, and the rather particular needs we have for aerotowing, and at Lake Keepit specifically as a good example of the requirements of the gliding movement. Here they are:

We need an aircraft which is:

- Proven to be robust and simple to fly
- Powerful enough to tow at high climb rates and suitable speeds for glider pilots
- Has sufficient power to easily tow heavy two-seat and heavily-ballasted Open Class gliders
- Capable of rapid turnaround for highest possible number of tows per hour (more than ten) both to satisfy demand as well as to reduce the costs of towing
- Robust and powerful enough to paddock-retrieve at the height of summer, without any doubt of its capacity to do this
- Fuel-efficient
- Quiet
- Simply maintained
- Cheaply maintained
- Affordable for a gliding club to buy

So, knowing what we needed, here is what we looked at:

- Jabiru

A syndicate was formed in Lismore a couple of years back to evaluate the suitability of this type for aerotowing. This project had significant factory backing, with the factory delivering a specifically-modified 6-cylinder 115hp Jabiru.

The evaluation revealed that the aircraft was difficult to control on tow at anything less than 70 kts, making things more difficult for the glider pilot. At this speed, its rate of climb was too low for it to operate as a useful glider tug in terms of time-to-release, producing an unacceptably low rate of tows per hour. Fuel consumption appeared to be encouragingly low, but when considered against a greatly reduced tows-per-hour rate, the advantage was nullified. Further disadvantages were doubts about its ability to paddock retrieve, and its light weight and construction.

The factory acknowledged that for safety, the tricycle undercarriage would need to be converted to tail-dragger configuration because of concerns about possible failure of the nose wheel assembly particularly in operations from rough grass strips.

Other modifications suggested and subsequently produced by the factory included increasing the length of the wings and the surface area of the ailerons, and strengthening the tail assembly to better withstand towing stresses. Whether these modifications will render the aircraft suitable to tow to our specifications remains to be seen. Subsequent test flights conducted at Kingaroy indicated that climb rates were inadequate, and in any case, the cost of the modifications appear to increase the total price of the package to well above $120,000. We understand the modification has not remained in production.

- Tecnam – P 92 Echo Super and P 96 Golf

Initially, this looked quite hopeful in that the factory was offering purpose-built aerotow adaptations. Two models were evaluated in NZ, and as far as smooth-strip towing was concerned appeared to perform adequately. However, with no capacity to paddock retrieve (on cold days, let alone hot) and a price tag exceeding A$140,000 for what is a lightweight and arguably not notably robust airframe, we eliminated it from our contenders list. (Interestingly, the two Tecnams which started towing in NZ appear now to be operating on a

very limited basis, and our contact with a number of NZ clubs suggests that no new orders have or are likely to be placed.)

- Cessna 150

Two Queensland clubs have converted Cessna 150s to Cessna 150/180 tugs. Their experience as recounted to us is that the airframe, particularly the tail assembly, will not stand up over time to glider towing stresses. The Kingaroy club Cessna has had the tail section rivets replaced twice in less than 2000 hours. No further rivet replacement is possible, so the empennage has been bolted, apparently. It is said that the next repair will require complete replacement of the empennage. Its tricycle undercarriage will not allow rough paddock retrieves. While inexpensive to buy, the model is now 45 years old and becoming scarce, and in any case, the shortcomings outlined here took it out of contention for us. Kingaroy has replaced its Autotug with LS1 engined Pawnee.

Cessna 150 – Subaru engine

Boona club investigated this combination and found the engine was so heavy the aircraft could never meet W & B limits. The project was recently abandoned.

- Super Cub - 180

The performance of this aircraft is similar to that of the Aviat Husky (see below) – relatively low rates of climb and low numbers of tows per hour. In addition, it is also becoming a collectors' item, and is consistently increasing in cost, putting it out of consideration.

- Husky

Looked at in the light of our specifications list, the Husky's shortcomings are:

- Lack of robustness. LKSC had a number of structural failures with their Husky, the last resulting in the aircraft being written off
- Tows at low climb rate
- Descent rate also low
- Hard to achieve high tows-per-hour
- Operates at the limits of its capabilities in hot-weather paddock retrieves
- Expensive to maintain
- No locally available parts

On the positive side, it is relatively quiet and fuel-efficient (although the low number of tows per hour reduces this latter benefit somewhat).

Changing the engine to an automotive type was considered, but rejected as impractical because of the shortcomings listed.

- Pawnee

This aircraft meets the requirements of the specifications list if the Lycoming engine is replaced with a high-powered automotive engine. In all other respects it fulfils the requirements.

The Pawnee is an ag-strip cropduster. It was designed to carry up to a tonne of fertiliser into the air off rough farm strips. It is enormously strong. It is a very easy aircraft to fly. There are currently over 70 of them on the register in Australia with an unknown number in sheds and

hangars as a spare parts source. The type is still in production via the holder of the Type Certificate in Buenos Aires, Argentina.

One major advantage is that Pawnees are cheap. This is because they are being supplanted in agriculture by larger, turbine-driven aircraft and so have ceased to be generally viable as cropdusters. Our experience suggests that they are all for sale, and at reasonable prices.

The Pawnee is also, however, the tug of choice of many of the gliding clubs in Australia, New Zealand and UK. (In NZ and UK, despite exposure to "lighties" as tugs, some clubs we have contacted are reverting to Pawnees).

The Pawnee's capability to achieve high numbers of tows per hour is noteworthy. On one occasion at Lake Keepit, a Pawnee flown by Ian McPhee performed 84 aerotow launches in a single day. However, the Lycoming engine requires time spent gradually cooling after glider release that limits it to about 7.5 launches to 2,000' in one engine hour.

Its paddock-retrieve capability is outstanding, because it was designed with rough, short landing areas in mind and it was built to withstand the stresses that these operations generate.

In its existing form, though, the Pawnee does have shortcomings. All of them are engine-related.

The Lycoming aircraft engine is expensive to buy, fuel, maintain, repair and fly. It's also noisy (European clubs don't use this sort of engine in tugs because of increasingly onerous noise legislation).

In glider towing, the Lycoming has to operate close to its performance limits, constantly. The result is that almost no Lycoming engine reaches its 2000-hour overhaul level without first needing new cylinders or a top overhaul. Shock cooling on descent is a permanent problem that increases turnaround time and, if not handled well by the pilot, results in cylinder and cylinder head cracking. All of these problems and processes are costly. A top overhaul can run to $18,000. The 2000-hour overhaul costs between $55,000 and $65,000. Spare parts are expensive, as is avgas. And the result of all of these expenses is that an aerotow launch is more costly than it should be.

The solution to all these problems is to dispense with the Lycoming, and install a proven, inexpensive, powerful, modern, extensively tested, readily available, easily maintained automotive engine that is also cheap to run to drive the Pawnee. This conversion process must be approved by the authorities, but there is a specific program to be followed which will provide certification of the modifications.

The perfect candidate for this job is the General Motors LS1 Chevrolet V8 alloy engine (better known in Australia as the Generation 3). GM have produced 8 million of these engines over the period to 2006. The company has spent billions of dollars developing, testing, refining and manufacturing it. The engine capacity is 5.7 litres. It develops 340hp at 5700rpm. It is fitted to a range of high-powered GM vehicles including the SS Commodore and Monaro. Outside of motor cars, it powers a remarkable selection of utilities, trucks, dragsters, airboats and aircraft. Complete with prop-drive unit (PSRU) it weighs in within a few kilograms of the 235 Lycoming engine. (Current production has replaced the LS1 with the L76 with 6% more capacity and 10% greater power.)

It was this combination of airframe and engine the eTug syndicate decided to proceed with. In taking this course, we recognised at once that eTug would be quite different from Autotug. The immediate success of eTug encouraged Autotug to fit the same LS1 V8 engine.

It is also of the utmost importance to note here that the project to convert numbers of Pawnees in this way can only work if we, hopefully with continuing GFA support and participation, can gain relief from the CASA regulations by achieving a new class of certification for the aircraft, in the area of operation of glider towing.

The Prototype – Conversion and Advantages

The conversion of our first aircraft, VH-CUR, commenced at Bundaberg in 2005 with Dave Sharples and Ian Watson performing the work and creating the solutions to the need to accommodate water-cooling and other automotive engine peripherals within the airframe.

In an aircraft application like ours, the LS1 engine runs at about two thirds of its maximum rpm and power output. It operates on climb at 3800 to 4200 rpm, with a power output of about 250hp at the propeller. The LS1 engine is capable of running at this rate indefinitely, and has demonstrated that it can do so in numerous applications – and because our LS1s have been balanced, operation is particularly smooth. (Incidentally, the 235hp Lycoming delivers only 195hp at the propeller on climb, giving the LS1 a significant power advantage).

The engine drives a 3-bladed carbon-fibre propeller through a 2:1 reduction drive, producing propeller rotation up to 2200 rpm. At this speed we have found the engine's consumption of premium unleaded petrol to be about 25% less than a Lycoming engine. And, this is achieved with a considerable increase in launch rate. With finer tuning and propeller experimentation it is hoped to further reduce eTug's fuel consumption.

Quite apart from fuel consumption, cost savings and power advantages, there is another important benefit of a water-cooled engine. At top of climb, the pilot simply closes the throttle and descends to the field as fast as he wishes. This is because there is no shock-cooling effect to manage. In addition, the aircraft is fitted with a Tost retracting rope winch. This pulls the tow rope entirely into the fuselage, which will allow shorter approaches and improved aircraft positioning for the next tow. So with faster climb rates and considerably faster descent rates and better positioning, the turnaround time between tows is significantly reduced, enabling a minimum tows-per-hour rate of more than fourteen. Rates at Gliding Club of Victoria have been as high as fifteen.

In operational terms, the LS1 conversion offers other advantages over the Lycoming. The Pawnee is already an easy aircraft to fly and land. Along with the LS1, we are adding a number of features that will improve safety and efficiency. We are about to fit a closed-circuit TV camera to give the pilot a clear view of the glider's position and performance on tow. Improved visibility of the aircraft in flight will be provided by high-intensity strobe lights positioned above and below. The Tost retracting winch will also help simplify the pilot's landing approaches, and with the line retracted and a separate short tow line on board will make paddock landings and retrieves much simpler. The winch will also simplify the ground crew's work. A further important benefit of this winch is to eliminate the risk of unrecoverable upsets of the tug. This can happen in a conventional installation when pressures on the tow rope make it impossible to release at either end. A guillotine mechanism at the winch allows the tug pilot to cut the rope in an upset or other emergency

In terms of costs, too, the statistics are persuasive. For a 6-cylinder Lycoming rebuild – say $55,000 to $65,000. For a complete replacement of an LS1 engine – under $8,000 (short engine $5,000). LS1 maintenance, too, is vastly cheaper than maintaining a Lycoming. No matter what the service intervals, the automotive engine is intrinsically cheaper to service, and has the advantage of considerably lower parts and consumables costs. With the addition of platinum spark plugs, the 100-hourly cost is limited to 6 litres of oil, an oil filter and 3 fuel filters. (With platinum plugs, EFI and no lead in the fuel, there is no plug fouling.) In service we have found oil consumption is negligible.

The advantages continue to mount: consider the noise factor. At a prop speed of 2000rpm, and with a properly muffled engine exhaust, the LS1-engined Pawnee is quieter in flight and on the ground than any equivalently powerful GA aircraft.

On the airfield, it creates considerably less erosion and impact damage because its landing rolls can be shorter and more direct, its positioning manoeuvres can be considerably shorter, and the retracted towrope will do no damage at all. The towrope itself will last very much longer than they do now. Both of these advantages also represent cost savings to the operator – less airfield maintenance, and reduced purchasing of ropes and rings. It is also worth noting that the winch can be readily adapted, on the spot, to a shorter towrope for use in paddock retrieves.

A final benefit – perhaps not quite as important, but a benefit nonetheless – is that using unleaded mogas will reduce the amount of lead deposited into the atmosphere, so providing a useful environmental effect as well as a 25% saving in fuel cost.

In combination, these benefits and advantages have convinced us that the LS1-engined Pawnee represents the efficient and cost-effective future of glider towing in this part of the world. This view is reinforced by the budgets for the final cost of the converted aircraft, which, once the development and prototype costs are amortised, will not exceed $45-55,000 each. (One critical issue is that this does not include development costs for Type Certification, which could be completely prohibitive unless relief is sought and granted from the Regulations.)

This estimate (minus the TC costs) is based on:

- the conversion being performed by the eTug syndicate for quality control and security of IP
- conversion of a PA-25 235, 250 or 260 minus aero engine and mount. The PA-25 135 has not been tested for installation of an LS1. It should also be noted that Pawnees fitted with wing tanks require more complex plumbing and pump peripherals which will increase the costs slightly
- the converted aircraft delivered to the purchaser ready-to-fly at Scone, NSW.
- Is limited to engine related costs as all airframe costs are the same for LS1, or Lycoming engines

Having completed the first conversion, we are committed to certifying the aircraft, and are working with GFA to seek a specific glider tug certification category.

We named the project “enviroTug”, or eTug for short, because with its significantly reduced fuel consumption, unleaded fuel, reduced impact and erosion damage, better pilot

conditions, quieter operation and considerable cost savings, it does have a friendlier environmental footprint which is worthy of note.

The bottom line advantage, though, should ultimately accrue to the clubs that fly it and the pilots who are towed by it. In aggregate, our budget comparisons and projections indicate that eTug will cut the cost of aerotows to less than half. That means twice the launches for the prices being paid now, or putting half of what pilots are spending now back in their pockets. And all with an aircraft that is built for the job, and which works the way gliding folk need it to work. The higher launch rate means one eTug will nearly do the work of two PA25-235 Lycoming engined tugs.

Financial Benefits

Engine:

This summary of the estimated cost savings which will result from using eTug as opposed to a Lycoming-engined PA25 is based on a 2,000 hour timeframe – the normal life of a Lycoming engine:

Fuel	$	$
PA25 – Avgas at 60l/hr @ $1.75/l	210,000	
eTug – Mogas at 45 l/hr @$1.30/l	117,000	
	Savings	93,000
Maintenance (Engine only)		
PA25 – Top overhaul @ $20,000		
– Rebuild @ $60,000		
– Total	$80,000	
eTug – New engine & peripherals	10,000	
	Savings	$70,000
Extra Tows		
eTug - +6 tows/hr @ say $45 per tow		$540,000
Total Estimated Savings with eTug per 2,000 hours		$703,000

(GST excluded)

It looks very much to be the right aircraft/engine for the job.

Airframe:

While it is true that the costs to maintain the airframe are the same for either Lycoming, or LS1 engines, the higher launch rate of the LS1 distributes the airframe costs over a larger number of launches so creating a substantial saving per launch:

If airframe maintenance cost on average $2,200 per 100 hours the total cost over the 2,000 hours will be $44,000 and this will be distributed over many more launches than was possible with a Lycoming engine.

Progressing the Project

At the time of writing the eTug syndicate has converted our first Pawnee, VH-CUR, which has now completed over 500 engine hours. The conversion is a tribute to the work and experience of Dave Sharples. Dave's original creation and operation of Autotug have had a profound effect on the progress of eTug.

The syndicate's second Pawnee, PIJ, has now been bought. The syndicate also owns a second LS1 engine and three prop drive units. We have had approaches from three clubs in Australia and two in NZ who are interested in talking to us about Pawnee conversions for

them. However, until the rules are changed to allow eTug to be certified, these conversions can not proceed.

Gaining GFA's support and active involvement in lobbying CASA to create a new class of restricted certification for the Pawnee/LS1 configuration for glider towing would speed this process immeasurably. In fact, active support from GFA in this effort is probably essential.

The eTug Group
Sydney

AEROPARK AGM AND WORKING BEE

The AGM will be held at the GCV clubhouse 17.30 on Saturday 10th September 2011.

Prior to the AGM members are invited to assist with the annual clean up and repairs of the grounds.

WHEN THE ON BOARD COMPUTERS GIVE UP WHAT HAPPENS NEXT?

This link discussing the Air France 447 disaster indicates that there is a chilling lack of training in airlines:-

http://www.youtube.com/watch?v=ARybu2kHeZ8&feature=player_embedded