



## DEVON STRUT NEWS – August 2008

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### Co-ordinator's Comments

by Pete White

Please excuse me from being a bit self-indulgent this month but I have to announce that after 3 days short of one year 'IVOR the wings' is back in the air sporting a 'new' engine. This never-ending nightmare of searching for the correct serviceable parts and a fault finding marathon all came to an end on the evening of Thursday 17h July when I test flew this great little Aeronca Chief. Subsequent flights and an oil change have produced excellent results that have left fellow SWAG members and myself with permanent grins of delight. It was a long journey and I have learnt a lot but it could not have succeeded without the help and support of several people including Dave Silsbury, Deltair of Waterlooville, Richard Hunt, Ray Brown Engineers and SWAG members John Colgate and Ian Law. I thank them and all the others that offered advice, help and support. Enough about me, what is the Strut up to.....?

Last time we spoke, the Halwell fly-in was about to happen and despite some adverse weather, it turned into a very successful event that was enjoyed by many visitors both by air and road. (See report). It was a real treat to go to the Halwell event and see *real* people again instead of hi-vis clad individuals who, with a hard hat added, are starting to resemble 'Lego Men'. I fully understand the implications of having to be seen and I have not missed the epidemic of Health and Safety that is being forced down our throats by faceless droids ticking government boxes. BUT we can take all this too far and a recent example was listening to visiting pilots to our own SW Regional Rally at Dunkeswell. Many of them were highly confused when taxiing and looking for a marshal, because they were faced with a wall of day-glow yellow. Not only did our team of marshals have hi-vis vests but also many visiting pilots and enthusiasts were similarly attired as they freely walked about the aerodrome. There is no legal requirement for these jackets/vests and it tends to be confined to 'local airfield rulings' but naturally the craze has caught on, as people like to be helpful and do what appears to be 'the safe thing to do'. In fact at Dunkeswell I was encouraging visiting pilots and enthusiasts to remove their high-vis wear in the interests of safety. That's quite ironic really but if thought about, it is common sense and far easier for a tired visiting pilot that has encountered problems such as poor weather, to identify the correct marshaller to guide him safely to a parking space.

The Devon Strut is a hard working bunch of individuals and the results of our events are a testament to that. But I must wave the flag and cheer one individual who has worked way beyond the call of normal duty and with his enthusiasm has encouraged others to join him on the ambitious but thoroughly worthwhile project of Build-a-Plane 2. Yes, I am referring to Jim Gale who has masterminded this 'self build' project from its outset and gathered together other Strut members who in turn have recruited young lads and lassies from the Air Training Corps and Scouts from around Devon to build the X-Air Hawk. Jim recently took the BaP2 aircraft by trailer to both RIAT at Fairford and to the SBAC show at Farnborough where much interest was shown (see report). Amongst the volunteer non-Strut helpers are two stalwarts from the Scouting organisation, Chris and Sharon Noble, who have devoted so much of their time to this project including accompanying Jim and team to the two big events. They are also our main contacts and organisers on the Scout side of the Strut's annual Aerocamp, which again relies their time and enthusiasm. I am suggesting that, as a Strut, we can thank them for this devotion by making them honorary members and inviting them to our fly-ins and events. Your thoughts on this would be welcomed.

Time for an advert; Some of our committee members are leaving at the end of this year due to other commitments or they have requested a change of task so if any of you would like to join the team and

use those hidden skills you have to help run our ever successful and enterprising Strut in the future, please contact any committee member or myself.

Nick Long, coordinator of the Wessex Strut has challenged the Devon Strut to a 'breakfast patrol' on Sunday 27<sup>th</sup> July at Henstridge airfield. Those members on email will have received the details already, as this newsletter may not have reached you in time. I applaud this 'challenge' and naturally on behalf of the Strut have accepted it but behind this, I view it as a very important message. Yes, we are a successful Strut because we have a good strong leadership team but we are still part of the LAA and should interact with our neighbours. Let's spread our wings a bit and allow more unity amongst those nearby and it may bring us all nearer to the truth; it's only a hobby and we do it for fun, so let's have FUN!

During the coming month we can look forward to Terry Case's fly-in at Farway Common and our own events at Lundy, Treborough and Plymouth (see *the Calendar*). If you can attend our fly-ins, please lend a hand with help on the ground, particularly the marshalling. Lundy is always a challenge, given the nature of the runway and the confined parking area so I'd be grateful for any Strut members arriving there to respond favourably when asked to help out for an hour or so!

All the best, Pete White

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## BaP2 to RIAT and Farnborough

by Jim Gale

I'm pleased to say that Brian Anning came to my rescue with regard to supplying the steel tube and welding up the frames to carry the wings on the trailer. This took Brian 3 days on and off with a bit of help from me and on Thursday 10<sup>th</sup> July the Barnstaple Scouts, together with Steve Robson and Tim Gilmour-White, succeeded in fitting all the parts of G-SPDY onto the trailer for me to trial tow it and set it up, ready to go to the LAA stand at RIAT, Fairford on Friday 11th.



So, the aeroplane was displayed at Fairford with the Strut name on it, as a tribute to Devon youth with the Barnstaple Scouts in attendance.

I got home at about 1.00 a.m. (!) on Saturday 12th after the *cancellation* of RIAT. The trailer with outriggers for wings worked well. I was able to trail at 60mph and steady as a rock. We went through a couple of thunderstorms and it's obvious that we need a custom made windscreen/cabin cover because of water ingress but otherwise all was OK. To dismantle the aircraft and load the trailer/secure the load takes 2 hours. It will probably be a bit quicker as we get used to it but that's using a 4 man crew. Two would take longer as we have to make sure all the "loose ends" are tied down.



Apart from the obvious disappointment that we didn't see the full airshow and the crowd was very thin on Saturday (no public vehicular access - absolute quagmire), they were still practising flying routines when we got there Friday and the highlight of that was a Spitfire/Typhoon(Eurofighter) combo that put on a very spirited demonstration over the crowd line, absolutely superb! Farnborough next!

Having supported BaP2 at RIAT on 11-13th July, it was Exeter Air Scouts turn to do their duty at Farnborough on 17-20th July. Unfortunately due to unexpected commitments Exeter had to drop out at very short notice and on the 16<sup>th</sup>, Barnstaple stepped forward to cover even though the leaders Chris and Sharon Noble were already committed to a presentation in Cardiff on the Friday evening!

Thursday dawned and we set off to Farnborough trailing BaP2. (Thanks again to Brian Anning for his help with welding up the wing carriers on the rig.) After a 4 hour journey we arrived at gate J and the fun began. Anyway 3 further hours later we got to our pitch and it was right next to the Vulcan stand, so at least we knew that plenty of punters would be walking past. Then Stewart Luck with BaP1 joined us and we set up our display. From there we broke out of Farnborough which didn't take quite as long as getting in but security, bless them, tried hard. We stayed at "Runways End", a Scout activities centre just off the airfield, in 6 two-manner tents. At least there were proper toilets and hot showers. It's actually a very good campsite.

6am saw us up the next day and on site by 7, ready for the International Youth Day. This involved several thousand youngsters and their teachers, leaders etc visiting the exhibition, being treated to a full airshow including the Airbus 380, the Vulcan, the Red Arrows and the BBMF as well as visiting all the aviation career stands including our Build a Plane display. Devon was not only represented by us but 2 Austers from Eggesford and the WW1 Squadron were there as well. There were nearly as many LAA aeroplanes flying/attending as there were military and commercial!

Many of the youngsters were keen to climb on board the aircraft on display and our two 'planes were no exception. They talked to our Scouts and Stewart's Air Cadets about their experiences during the respective builds. We also had talks with the teachers and leaders on what is involved in running a project. Sponsorship was also on the discussion table with a visit from the RAeS who are keen to fit the scheme within their educational programme. Then on Saturday and Sunday came the public days and with them the crowds - see the photos. We were kept busy from 8am through to 6pm on both days with lots of genuine interest in the Build-a-Plane concept. If all goes according to plan the next project proposed for the South West will be at Taunton ATC and overall, if funding is made available, we identified a total of 6 possible projects to start in the next two years!



A most successful four days and my thanks go out to Barnstaple District Scouts and their leaders for their unstinting support.

Regards, Jim.

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## Epoxy vs Vinylester Resins

by Larry Howell (via the KRNet Newsletter)

Dear KRNetters and Future builders,

I was in manufacturing for many years, part of my business made composite/prepreg fiberglass parts. I have learned many things over the years but I am not an expert by any stretch of the imagination. This resin thing has come up over and over. Some of us have given our opinions, some of us are correct, partially correct, or not correct at all. I decided to contact Gary Hunter who worked for Shell and let him

weigh in with his opinions as he is an expert in resins, is well known by some of us in the composite business and some of us in the experimental aircraft circles. He has done seminars in years past at Oshkosh; some of you may know him or have seen his seminars. Gary is quite knowledgeable so if I were any of you with differing opinions, I would listen to him.

Side subject: My father in law gave me a lot of Shell epoxy resin years ago. He worked for Jim Hall of Chaparral Racing and built their cars when they were in the CanAM series and later in the Indy series. Shell gave the race teams many things like resins, oil, carb cleaners etc. He told me many years ago that Shell made most of the epoxy resins that everyone uses. They all just put their own names on it and use their own formulated hardeners with it.

He may have been correct way back then but I have no idea how that industry is now. Below you will see included two of my emails to Gary Hunter and two of his responses to me. This is a long posting so if interested be prepared! I would suggest that in the near future, until something new comes down the pike, that if any more questions come up regarding resins that Mr Hunter's responses be the final word. Just my opinion of course!

He gave me his permission to publish to you and others his emails/opinions that he sent to me. Please pay attention to what he says about primary, secondary and mechanical bonds. It is critical !! Thanks, Larry Howell.

PS: Please don't yell at me, this has taken many days and has been a pain and I am only attempting to make our structures as safe as they can be. The only way to do this is to know what are our best options at this time.

Dear Gary Hunter

We have been in a discussion on another aircraft talk group about epoxy and vinyl-ester resins. I have always been under the impression that one could use epoxy resins to fibreglass over polyester or vinyl-ester cured resins but that you could not use vinyl-ester or polyester resins over cured epoxy parts.

Some say that you can use vinyl-ester resins when glassing over cured epoxy resins and that it will bond to it fully. This is the main subject of contention. I have just never heard anyone knowledgeable say this before. I am well aware that one should stick to one system, vinyl-ester or epoxy and not mix the two systems or at least that is my policy. I believe the main topic is using vinyl-ester resins to go over existing epoxy resin. I hope I am clear as to what I am asking here. I appreciate your input.

Thanks,

Larry Howell

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Gary Hunter Wrote:

This topic has come many times in my 32 year career in epoxy and epoxy vinyl esters. During my tenure with Shell, we made both epoxy resins and vinyl esters. When this question came up, we set up a test protocol to evaluate the bond or lap shear strength of all three subject resins; polyesters, vinyl esters, and epoxies. The test focused on secondary bonds to existing fully cured composites. Secondary means just that. As opposed to a primary bond, which involves partially cured laminates of same or similar make which allows for a "chemical bond" rather than just a mechanical bond like that of a secondary bond.

Prelude to this, one must know that secondary bonds with polyesters resins used to make fiberglass boats, etc, is considered an inherent vice by insurance companies. Even with the most adept attempts to provide the best possible conditions to enhance the secondary bond of polyester composites, the bond is considered poor at best. As such, most boat manufacturers avoid such bonds in primary structural areas and try their very best to make sure these areas utilize primary bonds.

Vinyl esters, on the other hand, being made from the epoxy resins, impart a certain level of improvement in adhesion to cured composites of the same make up, and to other composites of dissimilar make up.

Epoxies, as many of us are aware, have superior adhesion properties to a vast array of materials – not just epoxy composites. Thus, epoxies are renowned for this characteristic and are the choice for adhesives in many applications. In fact, when a polyester composite boat suffers damage or bond failures, the prescribed material for repair is always epoxy.

Now, back to the test protocol. We (I) prepared laminates of polyester, vinyl ester and epoxy and allowed them to cure fully. We divided those laminates into three. We prepared to bond an area of each type of laminate in typical fashion by abrasion with 80 grit abrasive paper. Then we applied a secondary wet layup to each with laminates with all three type resins. Thus, we had a set of 9 different combinations to test for lap shear strength.

I wish I could publish the actual test report, but it belongs to Shell and I can't. I don't remember the numbers, but I distinctly remember the order in which they finished. The order was exactly as we (material scientists) had predicted. In order of performance: 1) Epoxy to Epoxy was BEST overall, 2) Vinyl Ester to Vinyl Ester, 3) Epoxy to Vinyl Ester, 4) Epoxy to Polyester, 5) Vinyl Ester to Epoxy, 6) Vinyl Ester to Polyester, 7) Polyester to Polyester, 8) Polyester to Vinyl Ester, and 9) Polyester to Epoxy.

The difference in strength between 1 and 9 is about 50% of 1. The difference between 1 and 5 is about 20% of 1. Epoxies bond best because of hydrogen bonding and electrical forces between molecules. Polyesters, on the other hand, rely purely on mechanical bonding. Scratched surfaces allows "keying" and locking of one material to the other. Thus, aggressive abrasion of surfaces is paramount to obtaining any kind of decent bond.

Vinyl esters have the back bone chemical structure of epoxies and thus provide some level of hydrogen bonding too. The amount of hydrogen valence sites available for hydrogen bonding is diluted by the styrene content. Thus they bond better than polyesters but not as good as epoxies. I have a sideline job that sometimes involves repairing composites. I specifically remember a project involving this subject. A previous builder used vinyl ester to graft fairings, inlets and such onto existing fully cured epoxy laminates. It was apparent that surface preparation was completely ignored. Every bit of the secondary bonds could be removed by wedging them apart with a wooden tongue blade mixing stick. I kid you not. It was amazing. This builder was a previous Glasair builder. So, there you have it. Collect your winnings, Gary Hunter.

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Gary, Thank you for your previous answers, I have a few more questions I would like your opinions on. Do you think it is a smart or dumb idea to recoat the inside of an epoxy tank with vinylester resins either with or without glass cloth? Do you think there is a chance that this coating may delaminate at some point or do you think it would be OK to do this?

I too had a delaminating experience as you did. A fellow I know purchased an already flying Varieze many years ago but it had a few problems with damage spots here and there on the fuselage and strakes. He knew I was a Rutanee and was into the Eze building so he wanted to bring the thing to my house so I could repair it. I noticed one repair on the fuselage had a little delaminated spot, so I took hold of it and was able to rip the whole thing off of the plane, Varieze-ily, if you know what I mean. I smelt the piece and of course it was either polyester or vinylester but that was so long ago I am not sure anyone was using vinylester at that time, at least I hadn't heard of vinylester at that time. That was at least 20 years ago, maybe a little longer but not for sure. I knew then that polyester was a no-no over an epoxy structure, at least that was my permanent opinion.

I had been told some years back that vinylester resins had been developed to emulate epoxy resins because they would be less expensive for the end user than epoxies. If I understood what you wrote without re-reading it right now, are you saying vinylester resins are made from epoxies? I am just curious. I have just been under the impression that it was polyester resin with cobalt or whatever mixed into it to make the ester resin, I think it was epoxy resin. I also thought that since both use mekp as a catalyist that they both were the same. I do not use either one so I do not really know much about them.

I have used a lot of epoxy prepregs in years past. Some of the things that my company made were polevaulting poles, windsurfing masts and at one time I was making carbon fibre wing spars for Quickie Aircraft Co that went into the canard wings of the Q200. Thought you would be interested to know that Scott Swing of Velocity worked for the Quickie Co at the time, he was one of the ones that load tested our parts before they were shipped to customers.

Thanks Gary, Larry Howell

Gary Hunter wrote:

The fuel tank issue came up many times before too. MTBE was the big concern back then. As you are aware, we haven't been reading about numerous fuel tank failures or in-flight fuel stoppages due to epoxy fuel tanks disintegrating. So, all those concerns were for naught. Ethanol is a bit different, but in the % of ethanol in today's regular grades of Mogas is not enough to cause problems. But – E-85 might. E-85 is not available everywhere and its future is in public scrutiny right now. People have to eat !! Polyester and vinyl esters both suffer from something called "air inhibition of cure". What that means is, the surface layer of molecules fail to cure or cross-link because of contact with the air, nitrogen primarily, oxygen and CO2 secondly. This surface layer is nowhere even close to the chemical resistance of the fully cured layers just micro-inches below it. If the entire tank was fabricated from vinyl ester, and it was able to achieve a full cure it will hold up just fine. But, if you are adding vinyl ester with only one layer of fibreglass, or no fibreglass, the inhibition of cure will leave you with layer of poorly cured material subject to attack by mogas or whatever. So – using a polyester or vinyl ester in to line the inside of fuel tank is a bad idea, unless you cover the surface while it cures. A real pain in the butt – if at all possible.

First of all, let's get something clear. The word "epoxy" in generic terms, means – an epoxy resin formulation AND a curing agent formulation. And – literally, there are hundreds, if not thousands of possible combinations of epoxy resins, diluents, and curing agents that can be formulated for the purpose of laminating fibreglass over foam. (I am a formulator as a profession).

In my opinion, knowing the composition of these formulations, as I do, any fuel tanks built from Safe-T-Poxy or Rutan's original FAST curing agent are not subject. They are A-OK in my opinion. Especially the Safe-T-Poxy. Aeropoxy has test data showing Avgas resistance.

However, some of the epoxy "formulations" recently approved for building our projects were formulated primarily for ease of use and structural performance over chemical resistance – as in gliders. The manufacturers of these resin formulations were asked to produce some test data relevant to Avgas resistance. They agreed to do so. I have yet to see that data indicating resistance to Avgas let alone, Mogas or E-85. As a formulator, I have a pretty good idea what these formulations are (MSDS info), and I suspect, the results were not encouraging enough to publish. However, we know there are quite a few COZY's built with these German formulations, and to this day I haven't heard any concerns or issues. Proof is in the pudding – they say. For those builders – I highly recommend they post cure their projects to obtain optimum structural and chemical resistance performance.

But, there are tested and proven "Epoxy lining systems for aviation fuel tanks". JEFFCO of San Diego California has formulated a premier epoxy lining system used in all Lancair aircraft fuel tanks. This epoxy formulation was developed solely for the purpose to seal and protect the composite structure from aviation fuel tanks. Any one who wants to line their fuel tank, this is the material of choice. It is a thick epoxy coating that is brushed on. It cures under ambient conditions. Stay away from the Vinyl Ester in thin films.

Sincerely, Gary Hunter

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## Halwell Fly-In, 29<sup>th</sup> June

by Dave Brown

I arrived early Sunday morning to find a tethered Aeronca, a car and two tents on the airfield. Pete White and Reg McComish were so keen to enjoy the fly-in that they arrived the day before. They told me how much they appreciated the use of our new toilet facility and that they had a very pleasurable fried breakfast on the patio. I felt a bit envious having only had bran flakes for breakfast!

Considering the gusty conditions the day turned out exceptionally well. Approximately twenty aircraft flew in, including about twelve Devon Strut pilots, and quite a few others arrived by road. Both Paul and Keith made it a memorable day for several people after giving them a fright....ooooops I mean flight. Mind you, with those gusty conditions it may well have been both. I watched spellbound as Pete challenged the weather in his flexwing. For a while after take-off I thought he was practising "S" turns, but he soon got it under control. I'm not very religious but for a while there I'm sure I heard the words "Never again!" coming from above.

Later in the afternoon three vintage three-wheeled Morgans arrived, adding to the enjoyment of the day. A special thanks to Mark, Tony and Mary who did most of the cooking and serving burgers and hot dogs. Also, a special thanks to Rick and his wife for the use of their camper and for supplying drinks all day. Very much appreciated.

*[Derek Boyce briefly attended the Halwell fly-in on his return to Bodmin from the VAC Sandown Camp.]*  
Hi Mike, Not many made it to Sandown as the winds were very strong. It only took me 1 hour 40 mins to get there from Bodmin! I did not arrive until quite late in the day as I was trying to decide whether to go or not. The wind was straight down the runway, but quite gusty so the Champ was very reluctant to come down. I managed to get there just in time to join the visit to Airframe Assemblies who are currently rebuilding three Spitfires. A very pleasant barbeque was provided in the evening by the airfield owner. If more visitors turned up on the Sunday I left before they arrived, to battle my way back home via Halwell at which I took a few photos (below).

Regards, Derek



Keith Wingate's Emeraude



Visiting Dyn-Aero



Roy Young's Europa



Steve Slade's Rans S6

*More images from SHFC member Paul Adams*



Luke Roberts in his Jodel D9 gets a wave.





Pete Callis entertained the kids with rides in his Skytrike up & down the airfield.

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## Aeroletters

A good friend and former colleague of John Havers, Ron Cooper in New Zealand, recently sent the following anecdote about Bolt Head and the Chrislea Super Ace which readers might find of interest:

“Thanks for the photo of aircraft at the event on Bolt Head. Yup! landed there a few time in the Hereford days (1949-52) in the old "Grisley Ace" G-AKVD which was owned by Les Woolcott of "Milkmaid Milkbars". He had a "Dragon Class" yacht moored in the "Bag" at Salcombe so we used to pick him up from Bolt Head from time to time. The aircraft had organ pedal type rudder pedals with all the other controls functioned by control wheel out on a stem from the panel. So for ailerons you turned the wheel left or right and for elevators you lifted the wheel assembly up or down. It was not bad to fly in calm weather but in rough weather it was a beast. On one of my first trips I was P2 and flying it, when we hit some heavy turbulence, ups and downs and with both hands hanging onto the wheel, even with a seat belt on, I lifted off the seat a bit and up went my arms, so we went nosing down at a fair old speed. There was a structural tube that passed across the cabin at the top of the windscreen which in the future became a good steadying hand hold in rough weather. In those days the strip at Bolt Head was not very big and the "Grisley Ace" only just about fitted in. The original "Chrislea Ace" also had the rudder on the wheel assembly swinging the whole thing left or right it also had a foot throttle????.....that would have been "fun" to fly!???. Otherwise it was not a bad aircraft design and easy to maintain.

Best regards, John Havers

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## Silver Medal of the Royal Aero Club Awarded to Peter Harvey, LAA's CEO

Peter Harvey was one of the world's leading hang glider pilots, having flown in many international competitions world-wide. His successes included British National Champion and setting the UK foot-launched distance record. He won two Golds and a Bronze medal with the British Team in World and European Hang Gliding Championships. Looking for a new challenge, in 1995 he turned to competition gliding. He has since won the British Standard Class, Open Class and UK Overseas Gliding Championships. Internationally he won Gold Medals at the 2005 and 2007 Europeans and Bronze at the 2006 World Championships, and has been selected for the UK team for the 2008 Worlds. He is a coach for the BGA Junior International teams and young competitors.

Many congratulations, Peter, from the Devon Strut!

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**Exeter International Airport** is now able to present a Draft Master Plan which sets out ideas and aspirations for the future with a view to stimulating debate and generating ideas. All comments and observations will be considered for incorporation in the adopted Master Plan, which will be published in the winter of 2008. <http://www.exeter-airport.co.uk/masterplan>

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Dear Mike

I thought these two photos may be of interest for the newsletter. On display at the recent Yeovilton Air Day (5th July), in one of the hangars, was the fuselage of a Sopwith Pup marked as G-EAVX. The Pup was built in 1916 for the RFC as B1807. Sold onto the civil market in November 1920 as G-EAVX, this a/c was damaged beyond repair at Hendon in July 1921. The machine was re-registered in January 1978 with the PFA project number PFA101-10523. This was claimed to be a rebuild of the original machine. Nothing much has been heard of the rebuild in the last thirty years. According to the G-INFO web site this machine is owned and registered to Kelvyn Baker of Winscombe, North Somerset. The restoration seems to be of a very high standard but I have no idea as to the timescale for when its first flight will be achieved. There was nobody that I could ask at the time so I wonder if any of our members could throw any more light on this matter. Regards, Alan Faupel.



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### **Nano GPS Anomaly Website**

**Nano** is a website for reporting any 'navigation anomalies' when flying with GPS. It is hoped it will make flying safer, especially for GA pilots. On **Nano** you can report issues such as loss of guidance, position errors, losses of RAIM integrity, database errors and human factor issues. You can leave your name or you can report *anonymously*. You can also *comment* on other users' reports to give your own experience or feedback. <http://nano.aero>

### **Kemble secures future of G-VFWE**

<http://www.flyer.co.uk/news/newsfeed.php?artnum=751>

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## **LAA Engineering Update**

### **ATTENTION B & C STARTER OWNERS !**

The LAA is investigating reports that a faulty batch of B & C starter motors has reached our shores. These faulty starter motors have so far caused the destruction of two Continental O-200 engines. The LAA is urgently investigating this issue which concerns an incorrect drive pinion which, in service, disintegrates distributing metal throughout the engine. The problem apparently occurred because

pinions intended for use on a Lycoming engines were fitted to starters labelled for use on Continental engines.

Information received from B & C Speciality Products has confirmed that the incorrect pinion has a dimension (across the teeth) of 0.982". The **correct** pinion measures 1.166".

The LAA is still waiting for better 'applicability' information - more info to follow. Any members who have purchased starters of B & C type in the last year are advised to contact their supplier at once to determine whether their starter is amongst those affected by this problem. A simple measurement of the pinion identifies the rogue parts. If in doubt, don't use it – it might cost you your engine!



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### Recent Slick magneto Service Bulletins

[http://www.qualityaa.com/SB2-08\\_Cams.pdf](http://www.qualityaa.com/SB2-08_Cams.pdf)

[http://www.qualityaa.com/SB3-08\\_Carbon\\_Brush.pdf](http://www.qualityaa.com/SB3-08_Carbon_Brush.pdf)

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And one for the Aeronca boys from Maurice Wickstead: The photo shows three Aeronca 7AC Champs of Glendale School of Aeronautics taken at Glendale Airport Los Angeles circa late 1940s.

(Acknowledgement to Arcadia Publishing, USA.)



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### RAF Harrowbeer Weekend of WW1 Memorabilia

Bank holiday weekend 23-25<sup>th</sup> August, 11.00 – 17.30, free car parking & entry. Knightstone Tea Rooms, Crapstone Rd, Yelverton. Tel. Michael Hayes 01822-853679

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### Members' News

#### From the South Hams Flying Club newsletter:

Well folks we have finally got it!!! Yes you guessed it, our very own flushing toilet. Gone are the days when we would help the nettles grow big and strong behind Rod's hangar. Sorry all you homemade wine producers, you'll have to find another source of nettles. "Yuk". We also now have a large patio, with steps which will eventually lead to our clubhouse. The driving force behind both these projects is Paul (*Aston*). With the help of Mary and many club members both projects have taken shape over the past month in time for our annual fly-in.... After Tony and Christine's hangar is finished and the dust has settled, phase 2 of the project will commence. Then we will have somewhere to brew a cup of tea and to reminisce. Well done everyone, but especially to Paul and Mary. [*Paul Aston is now Chairman of the SHFC - Ed*]



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### Welcome to New Members

Stephen Austen of Torpoint. 07977-512534 [stephen.austen1@btinternet.com](mailto:stephen.austen1@btinternet.com) Steve has recently moved to Torpoint from Dubai, has 5 years experience flying microlights in the UK, France and the Middle East and has previously owned a Kitfox based at Lower Upham in Hampshire. He's on the lookout for the use of a grass strip with hangarage anywhere near Plymouth and is also in the market for a second hand CTSW, Eurostar or C 42

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## August Free Landings

**Pilot:** Enniskillen, Sandtoft, Hanley, Fife (Glenrothes), Seething and Sturgate.  
**Flyer:** Bagby, Donegal, Draycott and Sherburn  
**Today's Pilot:** Andrewsfield, Fife, Swansea and White Waltham

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### Adverts

Piel Emeraude, Cont.O-200 Re-covered in 2001. Tidy aeroplane. £16K (or shares at Watchford). Mike Wells 07836-272233



### Devon Strut / LAA Fly-In & Event Calendar 2008

August 9-10 <sup>th</sup>	<b>Sherburn R/Rally</b>	Sherburn-in-Elmet	<a href="http://www.sherburnaeroclub.com/">http://www.sherburnaeroclub.com/</a>
August 10 <sup>th</sup>	Lundy Island	Pete White	01752-406660 / 07774-017704
August 16 <sup>th</sup>	Farway Common	Terry Case	01395-597535/07779-538991
August 17 <sup>th</sup>	Treborough	Mark Weatherlake	01984-641179
August 30 <sup>th</sup>	Dunkeswell Jurassic Coast M/L fly-in		01460-68855/07887-954155
August 31 <sup>st</sup>	Plymouth	Chris Howell / John Kempton	07970-25186 01548-842057
September 6 <sup>th</sup>	Belle Vue	Jim Gale	07887-906789
September 14 <sup>th</sup>	Watchford	Brian Anning	01823-601268 / 07779-143439
October 4 <sup>th</sup>	Dunkeswell Jodels	Jim Gale	07887-906789
October 5 <sup>th</sup>	Popham LAA PCS coaching day		LAA website, Training page.

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### The Other Side of the Cones

by Josh10524

To me, airshows have always been a bittersweet affair. Between the demo flights and aerobatic teams were the periods of open airspace. The airport returned to its natural form, the circuit grew crowded with ride flights and sightseers, and for a while the airport operated just like any other day.

Spectators averted their eyes from the skies and headed off to forage for sandwiches, shaved ice, and die-cast fighter jets. Not me. I admired the boring old Cessnas and Pipers. A Mooney was just as interesting as a warbird. I'd watch otherwise normal people cross the sacred line of safety tape and traffic cones, out onto the hallowed expanse of tarmac, out to their aeroplane. The pilot would circle the machine, looking it over. A nudge here, a cap tightened there. Preflight complete, doors would open, passengers would climb in, and the engine would putter to a start. Just a Cessna, to them. To me, an unattainable dream, a Real Airplane. I'd give anything to be them.

To be a pilot would be the best thing on earth. As they taxied past the static displays and tents, I'd imagine seeing all the airshow spectators from the other side. A few minutes later, the aeroplane would reappear, airborne, passing with a buzz, then be gone. I felt not just longing, but genuine jealousy. Then it was time to go home, back to my ordinary, rather boring life. I'd take home a toy 'plane or two, perhaps a book, but always regret. Regret that I couldn't cross the tape, climb into an aeroplane, and fly away. I'd think – "Someday I will". I knew it when I was eight, and I never forgot. When school ends for the summer in a few weeks, I'm going to learn to fly. Nothing but an ordinary Grob 109, but more than I had any right to hope for. I only pray, that when I'm old, with hours upon hours, that I don't forget what it was like on the other side of the cones.

I hope, whenever you are flying the old club Arrow for the thousandth time, you remember, that someone, somewhere, would kill to be you. Enjoy it.

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