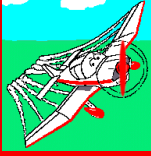


March 2016



SKYWRITINGS

Newsletter of the *Kent Strut*



Dry grass in sight? And air under the wings

Meetings

March

Border Force. James Sack will be talking about the work done by the Border Force and no doubt nefarious activity at our airstrips.

April

“Aerial Misadventures in Kent”

ex policeman Roy Ingleton, hopefully none of us feature in his talk.

February Quiz

Thanks' to Mike Negus and his daughter, Danielle for organising the quiz.

The third runners up were “Nites of the round table” with 42 points,

“The quad Skints” were second runners up with 55, coming in second place with 60 were “Haven’t a clue” but the honors' go to the “One Wing Wonders” team of Gary Smith, Steve Solley, Peter Huxley, Ray King and Kevin Marks with a score of 66.



Nigel Read - Editor

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31st March Meeting

Border Force - James Sack

Cobtree Manor Golf Club, ME14 3AZ 20:00hrs

www.laakentstrut.org.uk

Good Friday Spot Landing competition

Well it wasn't quite dry grass for PAFRA's spot landing competition and this has been postponed to Monday May 2nd. So there is still time to practice a bit and have a go at Rochester.

Flying again

At long last the editors Europa is about to take to the air with a new engine, New propeller, new main wheel bearings, new suspension block and shock absorber and for the second time new bushes in the undercarriage retraction mechanism. The old engine has departed to the Czech Republic for a new life in this Aeros UL-2000 Flamingo. According to Wikipedia this ultra light has been in production for sixteen years.



Smart new GT laminated prop, replacing the black and white stripy one, which is destined to become a base for a time piece. The new engine is supposed to have an extra 5hp. It's taken a few months for the engine to settle on the mounting rubbers.

Due to an unfortunate tipping too far forward on landing back in 2014 my co-owner shortened the prop by a few inches. We were informed by Skycraft that GT props were more likely to cause some engine damage than Jabiru props, apparently they are stronger. Marginally meeting the criteria for a strip down, Skycraft checked out the engine (the prop flange was running within the specification for a new engine) and found nothing wrong. A valve seat was found to need reseating and both distributor caps, rotors and drive shaft seals were in need of replacement. The engine

had done 500 hours.

We had been contemplating upgrading to the later design with hydraulic tappets. So this prompted us to bite the bullet and fork out for another supposed 5hp. There are a few who don't like the hydraulic tappets, don't know why, not that checking the clearances on the old engine were particularly onerous. The first engine I worked on at Ford was the CVH (compound valve hemispherical head) which has hydraulic tappets—and very quiet was my first Escort. Good enough for Ford then.

It has taken rather a long time, for personal reasons. Unfortunately I've lost my over checker of grammar and typing of the newsletter now.

In the meantime we have done some other work.

Main Wheel Bearing

We have difficulty dragging the aircraft around for years, compared to Dave Watts' Monowheel partly because the brake had a tendency to bind but on removing the main wheel and turning the bearings one side felt exceedingly rough. A new pair of bearings were obtained from Europa and pressed in by my local garage. We decided to have a go at bleeding the brake again and appear to have got the piston moving and at last it looks like the problem is solved.

Undercarriage Retraction Bushes

These small phosphor bronze bushes really have a very small bearing area and this is the second time they have been replaced.

Knocking up a few 'special' tools helps with removal of the old ones.



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Polyurethane suspension block and dampers

The suspension block has been running on an original red one which required two 'vees' cutting in it to provide a more progressive absorption of the bumps/landings, larger holes for the later addition of hydraulic shock absorbers and a spacer to make sure the locking goes over centre. The original one had rather oversize holes and was possibly too soft. We replaced it with the one from my kit as I had bought a revised black replacement, reputed to be better all round. Machining polyurethane is not something you want to attempt too often. I got my vees cut in Ford's tool room at Bridgend, which I had setup for said CVH engine.



The dirty bits of a monowheel

Although it doesn't look like it in the photograph this is the 'before' with the red block and a rubber spacer. The bushes are cut to 1/4" long to fit in each side of the forks above the block and in the plates top and bottom of the block. The lower ones protrude along the bar at the bottom and one was fractured.

The shock absorbers pass through the squidgy block and have to stop it recovering from compression. Inboard of the bottom end of the shocks is an aluminium support, bonded to the underside of the lower plate to support the bar which runs right through the main leg. That needed re-bonding, but we also bolt it on. The replacement parts came from someone who converted to a tri gear. Despite only being in use for a few hours the shocks were not much stiffer than our old ones. I sent one back.

Outriggers

One hung low! Bothered by one of the outriggers the dangled somewhat lower than the other we decided to take a look at them both with the wings off.

When the aircraft was initially tested at Cambridge, the inspector fitted small blocks to the link that lifts the outriggers up with the flaps. The effect of this was to shorten a slot that allows the latch to lock in place. It turns out that the slot does not need to be anywhere near as long and the blocks were de-rieveted and replaced with new ones, deciding to do both.

With the engine out it was straight forward supporting the aircraft and doing retraction checks.





The New Engine

This was collected from Skycraft when we delivered the old one for shock load testing. Various new parts with it were not required as we have a modified exhaust and ram air ducts to suit the cowl. These went with the old engine.

The old engine suffered a dud coil after only 11 hours and after getting replacements from ST the agent at the time we were told to rig up a cold air supply to the coils and received with them insulating fibre washers. They now supply a pair of bent aluminium pipes to be bonded into the back of the ram air ducts. Much prefer what we use, bringing cold air from the front via scat hose. One of the outlets needed changing as one coil is located in a reversed orientation. Nothing is ever simple.



The Vacuum pump drive for the spline drive now comes as a separate item, so we had to buy the adaptor. This should take up any misalignment with the



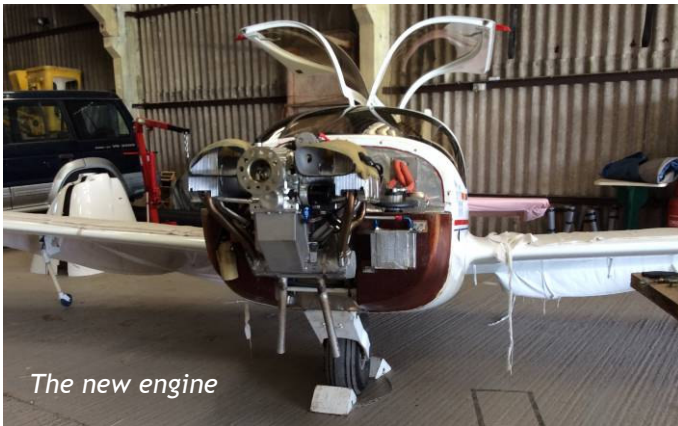
pump but it did not fit! It eventually dawned on me that the bolt heads around the rear of the crank were fouling the adaptor so it would not engage with the oval drive and there was nothing for it but to file clearance flats on it. Nothing is ever simple.



The new mounting rubbers caused the spinner to be a little out of alignment with the cowl but the

Outrigger (photo turned the 'right' way up)

lengthy wait to finish the work and wait for dryer weather to do the permit and test flight allowed it to settle nicely. To our surprise the 'Red Top' battery was still holding a good charge and very little topping up was required from the charger when the charge indicator extinguished.



The new engine

The sump no longer sprouts cast cooling fins but the cylinder head as thinner fins squeezing more into the same space.

So permit check is done but as it's been out of permit for over a year we now have to get clearance from LAA to do the test flight.



Finished and waiting for the test flight

With more flying taking place (Laddingford is in use by some but still soft despite extra drainage work being carried out. Possibly, the water needs to find new channels into the ditches to speed up drainage).

If the cobwebs need shaking out be careful. Keep spats clean, or off, if they fill up with mud and be sure to check the condition of destination airfields before setting off.

Fed up with reading about my Europa? Any chance of some reports for the newsletter?

Sun and Fun

Or Sun 'n Fun if you prefer is not far away and there will be a contingent from Farthing Corner there as usual but *Skywritings* editor is tagging along this time for a



Going through some old photos I found these two Cubs that used to grace the skies above Farthing Corner. Kilo Bravo is an L21 Super Cub built in 1954, Whiskey Echo now answers to G-WLAC and dates from 1970.

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first visit, so expect lots of photographs next month.

Easter openings

Easter brings lots of venues back to life. Stow Maries and the Battle of Britain Museum at Hawkinge to name a couple.

And of course, Steve Solley has his café and shop at Ripple, with flying in possible but ppr first, contact **07836 653257**.

Dates for your Diary

31st March Strut Talk Border Force

5th-10th Sun n Fun

28th April Strut Talk "Misadventures"

26th May Strut Talk Ex RAF pilot tbc

25th June Cross Channel LAA Fly-out

30th June Ripple BBQ and fly-in

(or visit the new tea rooms at Ripple sooner, PPR from Steve Solley)