

Newsletter

June 2013

LiPo Fire - a lesson to be learned.

It's one of those things you hope never happens. When it happens within the confines of your own home doesn't bear thinking about. The story I have been told was that this guy (not a member of this club) left a LiPo on charge whilst he went out for a walk. When he returned, the fire brigade were attending a fire in his flat. It has apparently destroyed pretty well all of his belongings, made a right mess of the flat.

These LiPo's have to be treated with great respect and you absolutely never leave them when you are charging them. I've said it before, a LiPo fire is an awesome thing - you can't put it out - they produce intense heat whilst they burn and also produce nasty toxic fumes at the same time. It may well be that he doesn't have access to a garden within his tenancy agreement so it may be difficult for him to charge safely outside. Just to compound the problem, he didn't even have contents insurance. It is worth reminding ourselves of the volatile nature of these chemical batteries.

Cleveleys Classic Car Show

Dave Swarbrick and Jason took the jets to the Cleveleys Classic Car Show again. They were kept busy all day answering questions. It was a lovely hot summers day and the show was very well attended.



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One of the many meticulously restored cars displayed at the Cleveleys Classic Car Show



A really beautiful example of the MGA - again, this has been superbly restored to show condition.

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A VIEW FROM THE HEDGE. (By Will Sparrow)



“Here comes summer, we’ll go flying every day. Here comes summer, grab your plane and come away”... Yes, summer arrived on the first of June (and ended on June 11th!) and a scant few of you decided to take full advantage of conditions which could only be described as ideal. It never ceases to amaze me that on some grotty day in November the weekend turn-out is healthy, whereas on a beautiful weekend in June only a handful of members are there to enjoy the conditions. Perhaps it is the need you humans seem to have to want to herd yourselves together in hot, crowded places and to sit for hours, barely moving, in your little tin boxes. Infinitely preferable to enjoying a lovely, sunny day on the flying field, I’m sure. It’s all beyond the comprehension of us feathered folk!

The warm, calm conditions have encouraged a good few thermal-soaring gliders to take to the air. Jim Sparrow and I were watching them soaring effortlessly the other day and began to see the attraction. Who would not delight in climbing to height, seeking out that elusive thermal, then, with wings outstretched, being borne effortlessly aloft on gentle up draughts of warm, summer-scented, air? You will know by now that sparrows are always keen to try a new experience. How hard can it be? We resolved to give thermal soaring a go. After all, it only takes twenty-five joules of energy to raise a twenty-five gram sparrow to one hundred metres above the ground (more if you take sparrow efficiency and feather losses into account – Wise Old Owl). The pair of us were definitely up for it!

Jim and I arrived at what looked to us like a hundred metres above the ground (but was probably a good deal less), sweaty and out of breath; we never realised that twenty-five joules of energy expenditure could so deplete a poor little bird. We stuck out our wings and waited to experience that joyful upward surge. In no time at all, the ground was looking a whole lot nearer! We flapped back up to height, this time moving out towards the railway line to re-try our luck. The result was much the same; descent was the order of the day. As a last resort, Jim tweeted that we might shift position a little and join a small flock of swallows who seemed to know a little more about thermal-hunting than we evidently did. Success! The pair of us found ourselves rising effortlessly upwards. The sensation was somewhat intoxicating – reminiscent of the effect those fermented



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A View from the Hedge Continued.....

berries had on me last year. Up and up we went. I had never been so high before; we could see the edge of the world and what looked like a large lake over to the west. The hedge looked a long, long way below and a long way off. The swallows had, by now, disappeared and we found ourselves in the company of three large, broad-winged birds who seemed to be edging ever closer to us as we circled in the lift. I was beginning to feel a little uneasy... Those birds had large, curved beaks and the glint in their eyes hinted at latent evil. At times such as these, the preservation instinct kicks in automatically; the pair of us executed that well-known manoeuvre known as "The Sparrow Plummet". The descent was rapid (I felt my ears pop on the way down) but we regained the safety of the hedge in double-quick time. As the adrenaline ceased pumping, we both felt elated but at the same time serene. Thermal soaring is certainly a different experience and makes a welcome change from aimlessly flapping round. Jim is keen to have another go, and has been doing wing-stretching exercises in an effort to increase his wings' aspect ratio (daft bird!). I'm more sanguine – I still retain images of big, curved beaks and fearful imaginings as to their possible function.

So what else has been happening on the field? There was a brief appearance of a depron-winged, futuristic-looking fighter created by the fertile imagination of one of your most experienced members. I say brief, because the little model refused to take off and was quickly bundled back into the modeller's car in order to receive instant attention in his workshop. This model reappeared a few days later and this time it did take off, only to disappear down wind seemingly heading for the Isle of Man (wherever that is). I wonder if it made it? A shock wave was propagated along the length of the hedge, during the warm spell, when an Extra, on approach, decided to do battle with said hedge. The result: Hawthorn 1, model 0. We also experienced another knee-trembling moment when a large petrol-powered plane had what sounded like an engine malfunction. Fortunately, the pilot was able to execute a perfect landing just as the engine finally coughed its last. Apart from these events, all has been sweetness and light with enjoyment well to the fore.

WS

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BMFA Fly In at Bickershaw

It's the second year that I have attended this event and I'm glad I did. Plenty of good models there and pilots who exhibited varying levels of expertise! The first picture shows a really nice petrol engined Zero - he wiped off his undercarriage on landing - he obviously wasn't comfortable about the landing phase because he kept on going around after calling 'landing'. Anyway, the damage done would be repairable.



It looks so realistic - nice weathering



Andy Ellison was there - he flew this 'hotliner'. I know these things are spectacularly fast but not exactly nice to look at - they even sound like a long wet fart when the power goes on!

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Bickershaw



To me, the best scale model was this Stolz Starlet it flew around looking superb.

*This was one of the models flown by
Andy Rigby - he is really impressive.*



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Bickershaw



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By John Higgins

MODELLERS' SNIPPETS

Levelling the numbers.

If the recent poll in RCM&E is to be believed, only 12% of modellers are under 40 whilst the remainder fall in the 41 – 90 category!

To level the demographic try this: Take your age, add the two digits together and subtract this number from your age. Now add the two digits of this resulting number together. You see, you are all really nine at heart...

Let's have more model shops.

For the G8 meeting in Enniskillen, boarded-up high street shops are being covered with a very realistic poster which depicts a bustling, well-stocked shop. Wouldn't it be nice to see a dozen well-stocked model shops on every high street? Contact your local council.



An example of a typical fake shopfront



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THE REVENGE OF THE LOMCOVAK?

I had a flying incident, just the other day, which has left me a little puzzled. Recently, I have been exercising my little fleet of petrol-powered planes after they have been checked-out following their winter lay-up. The models have their mechanical bits checked and replaced/tightened/adjusted wherever necessary, the electrics are checked and the models are then run up in the garden prior to being passed as field ready. The model in question, a 1/4-scale Zlin 526 AS, had been through this process and was on its first outing when the incident occurred.

I was on the third, 10 min, flight of the day when, towards the end of the flight, the engine made the sort of noise that usually means that the silencer has fallen off. The engine rapidly lost power. I managed to land the aircraft unscathed, the engine finally stopping as the model rolled to a halt. The first thing we looked at was the silencer which was still solidly fixed in position. We then noticed that the prop seemed loose.

Back in the pits; time for a post mortem. On removing the spinner the cause of the problem became very clear. 3W engines (this was a 3W 35cc) have a multi-bolt prop fitting; the prop locates on the crankshaft and is then bolted to the prop driver with three 5mm stainless steel bolts. All three bolts had sheared off level with the prop driver face! The spinner cone is secured by a bolt which screws into the crankshaft, so the only things driving the prop, in the final stages of flight, were the edges of the prop cut-outs in the alloy spinner. Needless to say, the prop (a 20 X 10 composite) and the spinner are now completely trashed. I am at a loss to explain why this failure occurred.

For those unfamiliar with the Zlin 526 AS, it was an aerobatic aircraft from the 1970s designed to fly “on the wing” rather than “on the prop”, as is the case with modern, high powered aerobatic aircraft – both full-size and models. The model also flies “on the wing”. I have had two 526s, a 1/5-scale version and this 1/4-scale example, and both have excelled at one particular manoeuvre that was also a party piece of the full-size – the Lomcovák.

The Lomcovák was originally conceived in the 1950s by Czech pilots flying early Zlins. To quote the great Neil Williams on observing these pilots: “We saw all the laws of aerodynamics and gravity refuted. We saw aeroplanes flying backwards, sideways, tumbling and rotating about all three axes, at zero airspeed and still, apparently, under full control... what we were watching was completely impossible!”



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The Lomcovák is not a single manoeuvre but a family of manoeuvres – there are several types. All these manoeuvres rely on gyroscopic precession acting on a roll/yaw resultant. The Czechs eventually banned the manoeuvre after several crankshaft failures on the 526 aircraft!

I do not sit in my 526, but I do like watching it perform the Main Lomcovák! This, with my Zlin, is entered from a full-power, almost vertical climb at 15 degrees past the vertical, the speed is allowed to decay a little and a negative flick roll to the left is initiated. At this point the flightpath becomes vertical and the gyroscopic forces, created by the prop, act on the roll and yaw; the model stands on one wing tip and rotates as if a hinge wire had been run from tip to tip. The model is “played” on the throttle and the manoeuvre continues with the plane finally becoming horizontal and performing a forward flip. Recovery is via a vertical dive to resume the original flightpath direction.

I still do not know what caused my propeller failure. Did all three 5mm bolts suffer simultaneous metal fatigue? (A bit unlikely) Did the prop peck the ground on the take-off run and shock-load the bolts? (If so, why did the failure occur at the end of the flight?). If no other logical explanation can be found am I just a victim of Lomcovák’s revenge?

John Higgins

Post Script.

A look on the LMA forum confirms that I am not the first victim of this malaise. The cause seems to be slight loosening of the prop caused by vibration, hub compression or softening of composite props as a result of heat soak via the prop driver. The prop’s torque variations then work on the stainless steel bolts (which seem to be particularly vulnerable to this effect) to cause failure. The recommendations seem to be:-

- Use wooden props – slight hub compression improves grip on the driver.
- Use a thin ply disc between driver and spinner back plate – a thermal barrier.
- Use black, HT bolts not stainless steel.
- Use “Loctite” (blue) on the bolts.

All of these things have I done! Have I done enough to revenge myself on the Lomcovák? We’ll see.

JH

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Indoor Flying

If you want a laugh, good humoured banter, this is the place for you. There are some seriously good flyers (and I'm not one of them) but I always leave with a big smile on my face. To watch Messrs Swarbrick and Reid cavorting their Shockies around is an absolute laugh. The helicopter brigade are also there in force.



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Jason prepared and airbrushed this Shockie for Mr Swarbrick



This time it's Jason trying to catch Dave - they often have mid airs and yet the models do take a lot of abuse and still fly.



Monday nights at the indoor tennis court behind the South Shore Tennis Club - you can enjoy 2 hours worth of flying from 6pm till 8. All are welcome.



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For Your Diary

Upcoming Shows

Cosford LMA 20th & 21st July

Elvington LMA 10th & 11th August

Southport Airshow 14th - 15th September (full size airshow)

In Conclusion

Half way through the year - incredible! I was very pleased to meet up with Alex Whittaker - the columnist with RCM&E. As you know, he is an excellent photographer - we happened to park next to one another at Bickershaw - he noticed me getting my camera gear out and came over to chat. He told me that he gets through a camera body on average in just 13 months - these are professional bodies costing around £2000 a pop! Nice guy - he even offered to lend me one of his lenses. Unfortunately he uses Canon gear - I use Nikon.

He was complaining to me about the dull light (it was very overcast) - strangely, I prefer the lower light - colours seem to stand out better against grey overcast - exposures are much easier to control and hold focus better.

This month has been very busy for me - following the Cleveleys Classic Car Show, it took a few days to process the images which had to be done as soon as possible following the event. Following this due to family commitments, I pretty well lost the major part of the month.

Anyway, Cosford LMA is looming at the end of the month, so that should be good. Thanks to John Higgins and Will Sparrow who have both once again contributed some excellent stuff to this newsletter. John Prothero has promised an article on his Deuces Wild so I hope we get that for next month.

In the meantime, I'll finish here - may this weather settle down once more!!