

Flying INformation

NEWSLETTER OF THE NORTHAMPTON MODEL AERO CLUB • FOUNDED 1932 • AFFILIATED TO THE BMFA • AUTUMN 2004

Chairman's Chatter

At last your promised newsletter is here thanks to the work of Dave Shield and Phil Coupe.

Three quarters of the way through the year and all that winter building to look forward to. (that is assuming you DO build rather than just fly ready builds).

During the Winter months it really is great to see members models brought to the Club room on Fridays so we can all be inspired to get on with our own projects (mine is a twin which I hope to bring in one Friday in October..)

Don't forget we have a busy winter programme with lectures on spraying, indoor models, the Auction and of course the highlight of the County social calendar.. our Social Evening and Prize Giving & you will see the dates confirmed elsewhere in this publication.

I hope you enjoy this Newsletter, it could be more regular but that depends on input from YOU.. it is YOUR Club's mouthpiece & so let me have lots of articles and you will have a regular read!!

That's all folks!

Roger Brown



(Don't try this yourself...)

In this issue:

- Head for the Hills
- The LMA visit
- Marburg's Pearl 2004
- Indoor Funflying
- The lighter side
- The NMAC Badge
- 2 Stroke versus 4 stroke fuels

(But not in that order!)

All of the contributions this time were written by Club Members. Thanks, and keep 'em coming - Eds

2-Stroke versus 4-Stroke Fuels

Well, what do *you* think? Is there really a difference, or is this merely a big hype by the fuel manufacturers to sell more products? Fact: Most 4-stroke model fuels contain less oil than comparable 2-stroke fuels.

The most common response to this is, "But 4-stroke engines have more moving parts....they should need *more* oil, not *less!*" Well, that sounds reasonable, but it doesn't stand up under close examination. The number of moving parts has nothing to do with it. What *is* important? Think about it.

Fact: With rare exceptions, 4-stroke engines run at substantially slower rpm than a comparable 2-stroke engine...most in the under-10,000 rpm range vs. 12,000, 13,000 or more for a typical 2-stroke of the same size. They are engineered to deliver maximum power at slower rpm, with bigger props. What does this have to do with it? One of the main factors used in determining the proper oil content of fuel is heat. To use the well-worn term, it doesn't take a rocket scientist to figure out that the more slowly an engine turns, the less heat it generates from friction. If you don't believe that, rub your palms together slowly, then as fast as you can.

So lower revs = less heat = less need for oil

Fact: 4-stroke engines only fire every other stroke, vs. every stroke by a 2-stroke engine. Firing, or combustion, burns fuel, which creates heat. Logically, it may be deduced that if there is fire in the chamber only every other stroke, the engine has time to cool off a bit between combustion cycles. Let's take that a little further: Using a hypothetical 4-stroke engine turning 10,000 rpm = 5,000 combustion cycles per minute, vs. a

hypothetical 2-stroker turning 13,000 rpm...with the same number of combustion cycles per minute....the gap widens. The 2-stroker has *160% more combustion cycles* than the 4-stroker. Even though this is partially offset by the fact that at least some 4-strokers have a higher exhaust gas temperature, the message is clear: 4-strokers remain cooler, and need less oil.

Fact: Oil doesn't burn (or shouldn't) - methanol does. Using a little logic, we arrive at the conclusion that a properly made 4-stroke fuel will deliver better performance than a 2-stroke fuel in the same engine.

Why? Remember...the 4-stroker is only firing every other stroke. This results in the plug element wanting to cool down between strokes, resulting in a "colder" plug. Excess or unnecessary oil, constantly dousing the element, is going to make it more difficult to achieve a slow, smooth idle. Those who contend that, "Well, using too much oil can't hurt anything" are wrong. In addition to causing undue friction in the engine, keeping the metal parts from properly mating, etc., too much oil in 4-stroke fuel is constantly trying to cool a plug element that is already having problems. Sort of like pouring a bucket of cold water on a poor guy who is already shivering.

Again, since oil doesn't burn, it's doing nothing to help us develop power....it simply lubricates and goes right out the exhaust and all over everything. *However*, suppose we *don't* put unnecessary oil in the fuel, and replace it with methanol, which *does* burn. Well, what do you know...greater top end power! Hey, I think we're on to something here! Remove unnecessary oil from 4-stroke fuel, and we get a "twofer" - two benefits for the price of one....a slower, more reliable idle plus greater top end power!

Conclusion: For reasons that should be clear above, a properly blended 4-stroke fuel should deliver better all-around performance in a 4-

stroke engine than a regular 2-stroke fuel in the same engine.

While it's not going to actually harm anything to run 2-stroke fuel in a 4-stroke engine, *never, ever* run 4-stroke fuel in a 2-stroke engine. It's not going to have enough oil. Now, for those of you will say that you have done it with no problems, I'll agree....if you have a real good ear and keep the needle valve rich, it will probably work just fine...but the official word is DON'T! It reduces your margin of error unacceptably.

Finally: Because engine manufacturers have been burned in recent years by some fuel makers' attempt to lower the cost of their products by using either too little oil or a cheap grade, most manufacturers today are recommending that you run a 2-stroke fuel only in their 4-stroke engines, or will specify what would seem to be an abnormally high oil content (and it probably is). Who could blame them? Since they know they have no control over the oil used in someone else's fuel, they're just trying to cover their own backsides. So would I.

Note: I believe it's commonly known that the manufacturers of YS engines...among the most powerful 4-stroke engines available....mandate that only fuels containing oil contents in the normal 2-stroke range be used. Their engines are unique, and the manufacturer's recommendations should be followed, although, as with anything, there are exceptions.

Dave Shield

The NMAC Badge

Around the mid 1930's the number of Model Clubs in the country was growing rapidly

and one of the results of this growth was the appearance of many distinctive Club badges at model meetings.

Around 1936 the Northampton Model Club decided it was time they had their own badge and asked the members to submit designs and ideas on how this should look. The one considered to be the best incorporated the Town Coat of Arms so permission had to be sought from the town council to use this design in the badge.

The final proof of the badge was submitted to the council and duly approved and official permission to use and display the badge was granted. About the spring of 1937 the first six colour, waterslide examples of this design started to appear on the club models. It was soon to be admired and known throughout the modelling world. "Throughout the world" really came true when club member, Roy Chesterton, took his Ted Evans designed Wakefield model to America in 1948, as part of the British team. The 'Jaguar', as it was named, carrying the Northampton badge, won the contest and Roy proudly brought the massive Wakefield trophy home. It was displayed in most of the major shops and banks in the town during its year's stay.

The waterslide transfer was printed by a Fine Arts Printer in Birmingham, H Butchers Ltd., and sixty five years later the SAME company produce the IDENTICAL badge, which (I hope) you display on your models...(on the fin if you please, in those days turning up at the flying field with the badges on the wings, like roundels, could get you drummed out of the brownies!!)

Twenty five pence for a piece of real modelling history... can't be bad.



Brian Baker

Indoor Fun-flying

On Friday February 27th about 20 club members had a great evening flying indoor models in the Gym at St Andrew's Hospital Northampton.

Noticeably, there was little support from club members who are "not interested" in indoor flying - what's new!?

There were a variety of models cavorting around the susceptibly large hall. Brian Baker was flying several of his superb foam replicas of famous vintage models such as Spook, and at the other end of the modelling spectrum, Merv Haycroft was making a nuisance of himself with his ultra fast but super flying jet.

Something different was provided by Phil Coupe with his beautifully built rubber model of balsa and tissue construction and powered by a twin Gasparin CO2 motor. This was a little too large to be flown free flight in the hall, but several very successful tethered flights were made - very entertaining and deserved the round of applause he earned!

For about 1.5 hours the air was full of gently flying indoor models from the now famous and incredibly successful Brian Baker 'Wallfly' to the more complex built up models and of course several ready-to-fly Butterfly's.

A really entertaining and relaxing evening giving a change of pace to the hectic flying we all normally enjoy. Many thanks to St Andrew's Hospital, and especially John Smith, Director of Physical Education for allowing us the use of the hall

Roger Brown

Large Model Assocⁿ

On February 13th we were privileged to listen to John Greenfield of the Large Model Association.

He started by showing us a small box containing a bottle of white glue, a can of pond sealant (G4) some paint and masking tape and announced that is all he ever used to finish his models (yeah right!)

The Stuka shown below had many hours flying under it's wings and several serious repairs but showed little sign of hangar rash or crash scars. Large models really are so different both their need for different building techniques for extra strength and inbuilt safety factors.

It is true that large models are easier to fly but the responsibility of flying a 20lb model in a display before the public needs more nerve than I have.

John's talk really emphasised that this hobby has many different aspects and specialities, so that there is always a new area to explore. A really enjoyable and informative evening.



(Engine's at t'other end, Dave)

(Produce of more than one writer)

The Lighter Side..

- 1) Growing old is mandatory; growing up is optional.
- 2) Forget the health food. I need all the preservatives I can get.
- 3) When you fall down, you wonder what else you can do while you're down there.
- 4) You're getting old when you get the same sensation from a rocking chair that you once got from a roller coaster.
- 5) Its frustrating when you know all the answers but nobody bothers to ask you the questions.
- 6) Time may be a great healer, but it's a lousy beautician.
- 7) Wisdom comes with age, but sometimes age comes alone.

Anon

Marburg's Pearl 3rd-4th July

The Marburg club celebrated the 30th anniversary of purchasing their own model flying site on Saturday the 3rd and Sunday the 4th of July. As we had planned a holiday in Bavaria at that time we made a detour to attend. We were the only Northampton attendees, it being decided to wait until next year for a "Club" trip, be it them to us or vice versa. The hospitality was, as ever, extremely warm and friendly.

Previous celebrations have involved other twin towns, however Eisenach was the German DDR but of course is now part of

"West Germany", Poitiers have never attended, Maribor in Hungary seem to have dropped the twinning celebrations leaving only Northampton actively joining in.

Klaus Ebel insisted we join him and two other members for a light meal on the Friday evening of arriving in Marburg. Saturday morning we had to be firm in refusing Klaus's offers to escort us round, as I have been to Marburg a few times I felt able to show Gill the sites. For those who haven't been it is a beautiful city, very old and lovingly preserved, quite how Northampton is its twin escapes me! Saturday lunchtime we met at the strip for a BBQ with huge sausages and pork steaks plus the odd beer. (How come you see cows in Germany but no pigs, yet they eat pork almost exclusively?) Then general flying with a large variety of planes varying from the little Twin Stars to Ernst's over powered glider tug (don't ask me what it is a model of) with a 2 metre wingspan and vertical climb ability.



Towing Reinhardt's lovely glider, not exactly a "floater".

Later in the afternoon there was Kafe und Kuchen. Small cups of coffee served with enough cake to sink a ship, and boy do they make good cakes (I am informed!).



The Marburg club comprises the model flyers, full size planes, gliders and hot air balloonists, and Saturday evening we were treated to a meal at the restaurant on the main, full size, field. Very nice as always. Sunday we were treated to a trip in the skies over Marburg in one of the club's 4 seater planes. It was a gusty day and Gill was somewhat nervous, however the substitute pilot (first one didn't show) was very senior but very good. Gill was fine until he waggled the wings over the Schrock model site. He made up with a superb landing under quite tricky conditions.



Then off to Schrock for a BBQ and the main celebration, yet more pork and sausage with the obligatory beer!! Their competition is much more civilised than ours. The balloon bursting is done with no time limits for the three passes, more points being awarded for the touch'n'go/spot landing than the

balloons burst. So the body count was much lower than our time bound attempts.



The prize was also quite impressive, a model of the new electric twin Sonic Liner from Multiplex, all the runners up receiving "raffle" prizes awarded in no particular order.

After some more general flying we all dispersed with Albert and Annie inviting us to a German supper at their apartment. A tour round Albert's small and very crowded workshop revealed some really good models, how he makes models with a 3 metre wingspan in a room of 2.5 metres is inspirational. After being showered with gifts and schnapps we returned to the campsite and departed south on the Monday morning.

Richard Sears

Head for the Hills

"Meet at 9 o'clock in the Queen Eleanor car park". That's what it was, that's where we was! Eight dashing representatives of the N.M.A.C., about to descend on the slopes of Dunstable Downs, hopefully near Ivinghoe.

Squadron Leader Brian Hammond (well we were nearly a squadron, and he was going to be in the lead car!) said "Straight down the M1 to junction 11, turn right, straight through

Dunstable, out the other side till you see a big hill. Turn left up the hill to the car park”.

Forty five minutes later we were all parked and unloading our models. Shame on anyone who thinks this club has no organizational skills, we were at Ivinghoe!

Loaded with kit and models, we walked on a well worn pathway to the top of the beacon, about a quarter of a mile away,

First thing that hits you when you get your breath back, is the fantastic view, almost worth the journey just for that alone.

Anyway, on with the flying. We all went to the west side of the hill to see how strong the wind was blowing. Hammo produced his instrument and held it up in the air. Was this an ancient ritual to the slope gods? No, just a way to measure the wind speed. At the strongest gust it topped 4 mph, - just! Even a helium balloon would have a job to fly in that! No problem - try a model to feel the conditions - so to speak. The model didn't fly very well; the conditions were 'crap', so we did a lot of talking.



Gradually, about 11 o'clock, the wind began to increase to 9 mph and the sun came out, a couple of models got airborne and stayed there. This was more like it! We knew Hammo wouldn't let us down when he said the wind would increase. He knew we

wouldn't really have thrown him off the hill if it didn't - probably.

Time for me to try flying off a slope. I had a Zagi that Santa brought, and was keen to try it. Gentle heave into the wind and it was away. Out it went away from the hill flying perfectly and so stable, gentle up elevator and it climbs into a slow turn and back across the slope to the left. Slight left aileron and it passes across in front of me and five feet below. Same again and the Zagi headed out into the void gaining height once more.

This is fantastic, a model that doesn't want to land, - seems the only thing that limits flight time, is a low battery on the receiver, - or falling off the slope!

Just a minute, I take that back. Some swine just had a midair with my model! Don't panic, don't swear, Simon did have a father! This really is a different dimension to power flying. Two models collide, bounce off each other, spin twice and fly on as if it never happened. Strange feeling to be grinning from ear to ear after an air strike, I could get to like this. So it seems could everyone else, models are everywhere as we all give it a try.

Just after noon, members of the Ivinghoe Soaring Club arrived and quickly sorted us out with their own peg board system. This consists of a full numbered set of pegs from which you take your frequency number, and peg it to your trannie aerial, returning it to the main set after flying. I had quite a conversation with a couple of the Ivinghoe senior members and they were very friendly, inviting us back whenever we choose, saying we were most welcome.

(Flying on the slope is as guests of Ivinghoe Soaring Club as stated on a sign at the car park. National Trust Issue)

By now there were quite a lot of people walking across the hills, many stopping to

