



Mick Broom, left, with Nigel Beale, thinks self-certification for sub-390kg aircraft would boost the market

▷ number of our fellow associations and a slow decline over the last few years.

As we pin our hopes on 600kg planes for more to join, we seem to accept that the original concept of what a microlight is all about is dead, and with the weight-shift past its time, it will not be long before there are calls for a name change to stop any embarrassment on the radio.

I believe without new and exciting machines in the market we will go nowhere, so effort should be put into removing the restrictive practices to allow that to happen. This, fortunately, is also one of the CAA main aims.

The direction I would suggest is proportionate regulation to try and encourage microlighting at the cheap self-ownership end – the reason I joined the BMAA more than a few years ago and, I believe, still a BMAA aim.

We have no regulation below 70kg, SSDR to 300kg, which is part-regulated with pilot responsibility, and then we have the present system of regulation to 450kg under the CAA. I would suggest looking at relaxing the regulation oversight for up to 390kg two-seaters by al-

lowing self-certification by the manufacturer or importers.

The reasoning behind this is the start-up costs for manufacturers, who quote up to £100k to reach the point when they can sell a new model. This, together with the small market, means that only top end expensive machines can be made and carry the overheads involved.

It's not possible to produce sub-390kg two-seaters in the UK with annual sales of 10 or 20 machines, and although self-certification would not save all the cost, as the testing and documentation would still need to be carried out, it would give opportunities for substantial savings in both time and money in this critical start up period. Also we could use other overseas build codes to increase the market size and make importing an easy low-cost option.

Every time we see a reduction in requirements, we see an increase in both interest and choice of machine from manufacturers, where no market existed before. More choice gives continuous improvement and lower cost. We must do something about the gap in supply, at present

filled with second-hand machines and old pilots who will do nothing for membership growth.

Mick Broom

Mick, many thanks. I think it's great that the BMAA is such a broad church, from sub-70kg nanotrikes to 600kg hotships (if that weight increase happens). Of course, we'd all like more members. At the AGM last year, the target was set of 500 new members in the next five years, and Amanda Lord, the new marketing manager, is working on some very good ideas to sell microlighting out there and get more members in – Ed.

Give him an inch and he'll take 500ft

DEAR EDITOR

Picture the scene – stunning flying conditions in North Wales, golden evening light with a very slight mist hanging at around 20ft over an empty beach, giving an otherworldly, ethereal quality to the view and tempting the unwary Quantum pilot for a low blast along the beach... then out of nowhere, shock horror, a (male) nudist appears!

Aargh! Full power, right-hand sharp climbing turn, abort, abort – run away! Other half in the back seat laughing her head off, demanding we go back for a closer look! Me: Blah blah, 500ft rule etc – we're outta here!

Observing the 500ft rule has never been such a pleasure. Why didn't they warn me about this kind of extreme peril in the NPPL flying at minimum level training?

Steve Metters

Steve, fabulous. It wasn't any of the MF team, that's for sure. For other Quantum fliers, there's a Quantum Microlight Pilots' group on Facebook for fans of the aircraft – Ed. □



SAFETY

Now, how does this work again?

Knock the rust off your flying skills and don't be an April fool, says Flight Training Liaison & Safety Officer John Teesdale



Left Whoops. Maybe I should have checked the Notams

SPRING is springing, and lots of insects and animals are emerging from hibernation.

Many microlights will also be seeing the light of day for the first time in months. Owners will be busily cleaning the winter dust and dirt from their machines, checking for mouse damage, charging batteries, pumping up tyres, draining old fuel (modern mogas goes off very quickly) and generally sprucing up their pride and joy for the much awaited first flight of the year. See Rob Mott's article for further detail on preparing your aircraft.

But what about the pilot? Who is going to knock the rust off them?

The problem is, although we know that flying skills and knowledge are perishable, we don't see the rust until we go flying. Which can be too late.

Oops, forgot to check the Notams. And those nine red Hawks look familiar.

Oops, forgot to check my chinstrap. Damn, that's the prop gone.

Oops, what's that big runway with passenger jets? Oh crikey, I've gone west, not east.

Oops, bit low on this approach... just raise the nose a bit... oh dear, it's all going a bit wobbly.

Oops, that was a big bounce. Never mind, I can handle it. Bugger, that's going to be expensive. Now, can I reach my phone to call an ambulance?

These are typical early-season mistakes resulting from lack of currency, which can easily be made and yet so easily avoided. Here are a few suggestions to help prevent you becoming an April fool:

- Take some refresher training with an instructor. A bit of dual revision will quickly bring you up to speed. Not just flying skills either – how good is your preflight planning? Weather? Notams? Current chart? IMSAFE? Read the *Skyway Code* pp27-50.
- If you have an NPPL, you must fly an hour with an instructor every two years anyway, so why not have it as your first flight of the season? And every year, not every two?
- If you have the old PPL(M) where an instructional flight is not compulsory, why not set an example and take one anyway! It's good value for money and will make you a safer pilot.
- What do you know about human factors, the cause of more than 75% of accidents? Ask your

Come to the light side



Legal sub 70kg SPHG nanolight trike
 Almost as quick to rig as a sneeze
 69.9kg with full fuel and 3 hours duration
 Super light handling and an absolute joy to fly
 Real affordable flying

Flylight Airsports Ltd Sywell Aerodrome Northampton NN6 0BN tel: 01604 494459 email: ben@flylight.co.uk www.flylight.co.uk



SAFETY

- ▷ instructor to give you tips on good decision-making and maintaining situational awareness. Read the *Skyway Code* pp118-123.
- Are you aware of the advantages and shortfalls of GPS? A recent survey by the CAA on the causes of infringements found that proper use of moving-map GPS could have prevented the infringement in 85% of cases. But beware – if your software is not up to date, or you have no wi-fi where you are doing your planning, you may not have the latest information – this has also caused infringements!

- Are you up to date with 8.33kHz radio changes? Does your radio comply? Do you know all the new frequencies?

So, to summarise, it's very tempting on the first good day of spring, when you are all excited, just to jump in the plane and go, but this is really not a good idea, and has caused accidents and infringements.

As with all flying, good planning and being current gives you the best chance of staying safe and avoiding an infringement. This isn't just theory – it's fact!

Enjoy the new flying season, and fly safely.

April fuels!

By Rob Mott, Chief Inspector

ONE of the main issues during the winter lay-off relates to fuel, don't get caught out. Petroleum providers seasonally alter the fuel blend from summer to winter. Why do they do this? It turns out, for good reason...

It is mainly to do with Reid Vapour Pressure (RVP, not to be confused with VRP!) which is a measure of the fuel's ability to evaporate (its volatility) at a specific temperature. So as temperature changes with the seasons, so does the fuel's ability to vaporise.

Hence the RVP is altered accordingly. During winter it is higher, the increased volatility making the fuel vaporise more easily. This helps with starting a cold engine in low temperatures. Conversely, for summer months the RVP is decreased – if this were not done, the fuel would vaporise too easily, leading to problems such as vapour locking. This is where fuel starts to boil, normally in lines close to the engine where it picks up heat, and the result is inadequate fuel flow. Typically, vapour locks happen when trying to start a hot engine in already elevated temperatures – the fuel vaporises in the line due to heat soak.

Carbureted engines are more prone to this, because fuel-injected systems operate at a higher pres-

sure and the fuel flow rate back to the tank is higher. This keeps the fuel cooler.

So what happens if you use winter fuel in summer and vice versa? If you use summer fuel in winter, the low RVP will make starting more difficult and the engine is more likely to run rough. Using winter blend (higher RVP) in summer will cause fuel to evaporate more easily, increasing the chances of vapour lock.

Ethanol

Ethanol complicates the situation, as it has an effect on octane rating (how much a fuel can be compressed before igniting) and RVP (volatility). Additionally, Ethanol is hygroscopic (able to absorb water). Certain factors affect water uptake, such as the percentage of ethanol, the overall age of the fuel and its storage conditions. BP offers the following advice:

- The storage life of petrol is one year when kept under shelter in a sealed container.
- Once a seal is broken, fuel-storage life is six months at 20°C or three months at 30°C.
- The storage life of petrol in fuel tanks is one month.
- This can be extended by topping up with one-third of fresh fuel, which restores the volatile components that will have evaporated.
- Keep the tank at least half full to stop water vapour from being sucked in and condensing.
- Check your fuel for signs of phase separation, this is where the Ethanol/water mixture visually separates and sinks below the rest of the fuel (which is subsequently reduced in Octane, as the Ethanol was previously boosting it). Fuel in this state must be discarded and replaced with fresh.

Our general advice is that if the fuel has been standing for any reasonable period of time, take it out and put it in the lawn mower!

Other useful things to check if your aircraft hasn't flown for some time are shown in the panel.

USEFUL CHECKS

when waking an aircraft from hibernation

ENGINE

- Use fresh fuel!
- Debris inside tanks
- Fuel filter
- Blocked breathers
- Carb bowls and rubber sockets
- Condition of hoses
- Exhaust
- Plugs and caps

AIRFRAME & SYSTEMS

- Tyre condition and pressures
- Wheel bearings
- Brakes
- Lubrication – controls
- Cable tensions
- Battery condition – if it requires charging, use the correct type of charger (lead acid or lithium)
- Electrics
- Instrumentation / avionics

GENERAL

- Signs of corrosion / contamination / damp
- Water / moisture / insects in pitot and static lines
- Critters
- Hangar rash
- Look for signs of leakage
- Be mindful of temperature, does the radiator need blanking adding or removing?
- Service bulletins – have any appeared since your last flight?
- Propeller – check the torque of bolts, this is essential for wooden props as the material expands and contracts due to moisture exposure, ie from winter to summer (see photo)

A wake-up call

By Steve Uzochukwu

LAST month we ran an abridged article on wake turbulence written by David Acton at NATS. The AAIB has just provided us with a practical example of the theory we read, with a bulletin on a flexwing incident which was a direct consequence of wake turbulence.

On 15 September last year, a Quik GT450 suffered a very heavy landing with damage to the landing gear and distortion to the underside at Perth Airfield.

A helicopter took off while the GT450 was on the downwind leg, and the assessment was made that the wake turbulence would have dissipated by the time the flexwing was landing. While holding off, the aircraft encountered turbulence and the instructor applied full power, but the aircraft still made heavy contact with the ground before continuing the go-around.

Further information from *AAIB Bulletin 3/2019 G-DTAR EW/G2018/09/12*.

MICROQUIZ

- 1 The holder of an NPPL (M) with Operational Limitations must have an in-flight visibility of at least...
 - a 1.5km
 - b 5km
 - c 10km
- 2 Class B Airspace is...
 - a found above FL245 in the UK
 - b found above FL195 in the UK
 - c not found in the UK
- 3 A low-level temperature inversion, will produce...
 - a thunderstorms
 - b windshear at the inversion boundary
 - c strong surface winds
- 4 2/8 Oktas cloud coverage would be described on a METAR as...
 - a BKN
 - b FEW
 - c SCT
- 5 When asking ATC to repeat their last message, the correct terminology is...
 - a Repeat last message
 - b Say again
 - c Words twice
- 6 If the weight of an aircraft is increased, the stalling speed will...
 - a increase
 - b decrease
 - c not change
- 7 If the weight of an aircraft is increased, the manoeuvring speed will ...
 - a increase
 - b decrease
 - c not change
- 8 Wet grass compared to dry grass will...
 - a increase take-off distance
 - b decrease take-off distance
 - c decrease stopping distance
- 9 The angle between the chord line of the wing and the longitudinal axis is called...
 - a the angle of attack
 - b the angle of incidence
 - c the climb path angle
- 10 Which source of information would provide advice on temporary airspace restrictions?
 - a White AICs
 - b Mauve AICs
 - c Pink AICs

MF's quizmaster Lawrence Bell is the developer of QuizAero, the online ground school for microlight student pilots, quizaero.co.uk. **Answers on p23**

Below
Broken bolts on a wooden propeller due to insufficient torque. Motty asks us to point out that the glorious pink fingernails do not belong to him!

