The official magazine of the Aircraft Owner and Pilots Association

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AOPA UK

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THE NEXT CHALLENGE

WHO REMEMBERS Brexit and the challenges we were envisaging of leaving EASA? When I headed my last Chairman's Message 'A Brave New World' this was definitely not what I had in mind. However, a new world it is and we are being asked to be brave. Many of you and your families will be working in roles that, three months ago, you never expected to be life-threatening at all, or to the degree they are now. It's heartening to see they are getting the appreciation they deserve.

As the GA community, we should also show ourselves some appreciation and say thank you to everyone who heeded the Government's guidelines and stopped flying almost overnight. It was unfortunate that we then had to bear the warmest April for over three hundred years from inside our homes. However, the swift response meant the UK has avoided a blanket ban on all VFR flight, as has happened in many other European countries. The DfT and CAA recognised GA's compliance, and in turn, have worked fully with AOPA and the other GA organisations to implement temporary exemptions for licences, ratings and medicals until GA can get back in the air again. Of no less importance, Flight Training Organisations (FTOs) and other aircraft owners can now fly their aeroplanes monthly for essential maintenance. This is appreciated and it is hoped it will help GA to move quickly to resume flying as the restrictions start to be lifted.

However, this does not detract from what is probably the largest grounding of all aviation in its history. The consequences have already been felt with both British Airways and Ryanair announcing redundancies, specifically amongst aircrew. This must be a special concern to those who are trying to finish their Commercial Aircrew training and were expecting a career in a sector that was, until March, desperate for their skills and qualifications. Perhaps we'll see aspiring and existing aircrew keeping their hand in by instructing at their local FTO? However, it's also reasonable to speculate that many FTOs may not reopen for business when this is all over. Thinking further ahead, will this have an effect on the number of airfields needed by GA, and should consolidation be considered? Nor do we yet fully understand the economic impact this is going to have on everyone. The population is getting used to buying only essential items and as Deloitte has reported, leisure spending has dropped and they are expecting it to drop by 35 per cent over the next three months.

Aviation faces a huge challenge to reinvigorate when the time comes. AOPA's working relationship with the DfT and the CAA has undoubtedly been strengthened during this crisis and we want to continue to work with them to find ways to strengthen the sector when the time comes. On that note, I want to say thank you to everyone who is following the Dft and CAA's advice on their flying activities. Finally, I also want to thank the AOPA team who have worked hard with the DfT and the CAA to devise the exemptions and then explain them to us in clear language. There has never been a more important time for those who want to maintain their rights and privileges to fly, to support the work of AOPA and other GA organisations who are working on your behalf.

Stay safe. ■

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INSIDE THIS MONTH

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EDITOR'S MOMENT

Two months ago, when I was penning April's Editor's comment, I was sure that we'd be out flying and life would've returned to normal by June, but how wrong you can be!

As I write June's copy, not much has changed, but we are seeing aviation return to the skies – and that is thanks to the hard work of the AOPA board and their tireless efforts to ensure members' aircraft don't all remain grounded. I live quite near a cluster of several airfields and it's nice to hear the noise of a piston engine overhead again. Martin, Pauline and the rest of the team should be applauded for their work to ensure that GA comes out of this pandemic stronger. You can read about this on pages seven and 10. There are also great features from Matt Lane on how to stay sharp, and Malcolm Bird on how to keep your aircraft maintained.

Plus, if you are grounded, there's plenty more in this issue to keep you entertained. Enjoy...

David Rawlings
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POSITION REPORT FROM MID-MAY 2020

WE HAVE been cleared to the holding point, instructed to line up, cleared for take-off, accelerated down the runway and have begun our initial climb.

In all the years that I have worked for AOPA I can honestly say that the COVID-19 crisis has been the worst event in my lifetime, not just for GA but also for society.

I wish to express my sincere condolences to those families who have lost loved ones and also to express my gratitude to all the NH S staff. We are extremely fortunate to have a National Health Service.

I'm also aware that many of our members have volunteered to support the NHS during this crisis, from the use of light aircraft to deliver vital PPE equipment to hospitals, to those using motorcycles to deliver blood – I applaud your commitment to public service – thank you.

Like many people, the smallest room in my house has become my office. Working from home began in earnest on Tuesday 24 March 2020 and one of the first concerns that AOPA became involved with was in respect of the prolonged grounding of aircraft. The government's position at the time was that we all needed to stay at home to save lives and protect the NHS, only leaving home for short periods for exercise or to purchase essential supplies. The Department for Transport (DfT) issued a notice that stated that recreational flying is a non-essential activity, which effectively was a grounding of all General Aviation aircraft. However not all aircraft are the same, some are quite simple in their design and construct whilst others are much more complex, so if you think about the situation like thoroughbred horses, they need to be exercised regularly in to keep them peak of fitness.

PROPOSAL SUBMITTED

AOPA submitted a proposal to the DfT (which can be found on page 10) on the issue of maintaining the health and value of aero engines. The DfT then engaged with us on the subject and this eventually led to the CAA issuing guidance on how exercising the horses could be achieved. It is pleasing to be able to say that aircraft owners, with one or two exceptions, complied with the guidance. The DfT/CAA should be congratulated because they understood the financial and safety concerns that some owners had with regards to their engines. I would like to point out as well that many owners went to the trouble of inhibiting their aircraft engines, again taking an appropriate course of action and exercising a level of responsibility towards compliance with the government's instructions. The CAA guidance material gave aircraft owners a few choices on how to protect their investment and remain safe.

"This was a clear opportunity for the regulator, government and industry to work together"

This was a clear opportunity for the regulator, government, and industry to work together and achieve a positive outcome. Building on this new working arrangement it was eventually agreed to allow pilots to fly their aircraft either solo or with members of their household. This was achieved through a trusted partnership, and it is why GA pilots need to make sure they follow the guidance.

The CAA has also allowed professional flying schools to commence training again with their CPL students, including all relevant ratings.

I think the CAA has been very pragmatic at a time when all government departments must follow the advice of Public Health England, but behind the scenes we are working on a planned recovery for GA. We see an opportunity for the recommencement of check flights with flight instructors and for schools to finish off courses for their existing students. I hope this will be possible in June sometime, again subject to government policy. However a return to the full activity including trial lessons etc will take a little longer. Here again I think we are looking towards July for this to happen. Until there is an effective vaccination, social distancing is going to be a part of our lives, but we need to find a solution that enables the activity to recommence without contributing to the risk of spreading the virus.

CONCERNS GOING FORWARD

One of my concerns, and I have many, is that whilst everyone has an opinion and is entitled to it, I think it is far better for individuals to express them to a coordinating body like AOPA because it confuses both CAA and DfT when the message from GA is not clear.

In addition to the COVID-19-related work, we continue with other projects such as electronic conspicuity, GPS approaches, the issue of lead in AVGAS, future airspace policy and as you will have heard, how we exit from EASA at the end of 2020. All existing rules and regulations will become, without change, UK rules and regulations from 1 January 2021. From that date and until 31 December 2022 the government will continue to accept EASA licences and certificates and this will be known as the transition period. At the end of the transition there may be new red tape as the government may decide to amend the regulations to further support the development of GA in the UK. But whatever happens AOPA will be there voicing our opinions on behalf of GA, seeking the best possible outcomes. ■

Martin Robinson
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HELPING YOU STAY FLYING

Welcome to the **AOPA COMMUNITY** section of the magazine, bringing you all the **NEWS AND INSIGHTS** from the world of AOPA...

WORDS Martin Robinson **IMAGES** Various

AOPA'S PROPOSAL SENT TO THE DEPARTMENT OF TRANSPORT AND CAA

You're probably well aware of the work that AOPA has completed on behalf of pilots and aircraft owners to ensure aircraft can remain safe. Here is the proposal outlined by Martin Robinson

THE RECENT communication from DfT said: "The GA team in the Department for Transport is well aware of the structural threat this period of non-activity poses to recreational GA, including with regards to flight training (given that training flights are not currently possible due to directions on social distancing). We are therefore ramping up work to mitigate any long-term negative consequences." It is for this reason we are making this proposal.

AOPA recognises the need for social distancing and we believe it is important that pilots follow the government's advice, which we have also been promoting. However, AOPA is also concerned about the financial impact on GA infrastructure as well as the assets of individual aircraft owners and aerodrome operators as a result of COVID-19.

In the spirit of togetherness, we need to find solutions that can help to mitigate a future economic burden that GA might find it difficult to recover from. This could include the costs associated with not keeping engine and airframes in good working order, or the associated costs to aerodromes, where maintenance has not been carried out and therefore needs to be conducted.

"There is no doubt that the best advice is that regularly flying an aircraft once every three weeks (or even a month) would provide ample benefit"

PROPOSITION

We would like to propose the following as an accommodation: subject to individuals continuing to follow the PHE guidance, aircraft owners and aerodrome managers should continue to follow social distancing advice and frequently clean and disinfect objects and surfaces that are touched regularly, using standard cleaning products.

There is no doubt that the best advice is that regularly flying an aircraft once every three weeks (or even a month) would provide ample benefit, and possibly save some large repair bills later – an engine that has corroded may seem to run well, but could become a liability in the future with loss of power, etc. Maintenance should not be so necessary if aircraft can be flown every few weeks.

The recent announcement also said: "In some GA flights, the risk of transmission is undeniably negligible, for example where the flight is a solo flight, from a private airstrip, in which no ground travel is required to access the airstrip. Nevertheless, such flights should not take place, considering the blanket nature of the directive above, and the risk of an accident resulting in the need for social distancing measures to be abandoned." Whilst we recognise the

Thanks to AOPA's efforts maintenance flights are once again allowed.

Once every four weeks is acceptable

sentiment in this statement, we feel that there needs to be a better balance between the risks associated with COVID-19 and the economic benefits associated with keeping an aircraft airworthy.

From data that AOPA has been able to collate (it may not be a complete list) the numbers of airframes and engines below provide a reasonable guide to the size of the problem:

- Fixed wing aircraft 3,829 (across 451 types). Powered by 257 engines types.
- Helicopters 396 (across 21 types). Powered by 12 engine types.

What do we think could be a reasonable trade-off? Our proposal would include the following:

1. Aerodrome owners should be able to nominate an individual to carry out essential tasks in order that the facility remains safe, secure and in good order. Most aerodromes are in wide open spaces and therefore social distancing can be observed.

2. Aerodromes that want to take part in this scheme should be able to provide a maximum of seven slots per day for the activity of one aircraft flying at a time, piloted by a solo pilot (aircraft owner) without any passengers, in order that a maximum of four circuits can be flown by the individual aircraft owner. The airframe and more importantly the engine(s) can therefore be maintained in good condition. The aircraft owner would be permitted one slot every four weeks. The aerodrome operator would be required to maintain a full movement log including the name and address of the pilot/aircraft owner, as this could form part of an audit process if required.

Flying within a five-mile radius would also prove much better for some engines that need to reach a certain temperature. A maximum permitted flight time of 45 minutes would be sufficient. Getting an aircraft up to temperature and soak for a few minutes to burn off nasties will be better achieved with this. It could be possible to police this by ModeS/ADS-B tracking and by asking the pilot to keep a copy of the flight log downloaded from either SkyDemon or GPS. If the pilot/owner cannot do this, then they shall be restricted to circuit-flying.

Flights from private strips should be restricted to a radius of 5 nm; one aircraft per slot once every 3/4 weeks.

Circuit-flying would contain the flights within the aerodrome boundary, and follows the 90-day rule of three take offs and landings which includes the critical elements of flying that pilots need to maintain. It might be possible to allow individual pilots to fly once every 90 days, but we are not proposing that at this stage.

Flying clubs could also nominate a flight instructor to fly club/school aircraft as above in order to maintain the fleet.

Schools/clubs are losing revenue at this time, and it would be an even bigger problem if they have to re-engine their aircraft.

We are NOT proposing cross-country flying, nor are we proposing positioning flights or suggesting any kind of gatherings. The objective behind this proposal is to maintain the safe and economic value of GA aircraft and infrastructure.

AOPA would be happy to act as an administrator of the scheme, without cost to individuals, if the DFT can agree that there is a need for this and it is essential for the industry in the long term. AOPA would be happy to handle requests where we would brief the pilot (electronically), and seek a signature from the pilots agreeing to follow the set process. Some words from the DfT/CAA could be incorporated into a letter that we would issue at that the time we are communicating with the pilot/owner, which could also be shown to a police offer if they were stopped and questioned about their activities.

AOPA believe that this is an essential activity in order to maintain the health of GA and to reduce the economic burden in the future.

What we are proposing is no different from going to the supermarket or driving a car, where we maintain social distancing. We are advocating that there are benefits in protecting the GA system because of the risks associated with the potential future financial impact on all of GA. There are always risks, but this is one that we think can be managed at an acceptable level whilst also maintain social distancing and personal hygiene.

All that is outlined above is not intended to be anything more than the basis for opening a discussion to consider what the possibilities might be.

I have heard individuals saying that they would run the risk of going to their aircraft in order to avoid large engineering bills! ■

Ensure that you follow the rules when it comes to flying during unprecedented times

MARTIN ALSO FOLLOWED UP WITH THIS POWERFUL LETTER

I wrote to you last week submitting a proposal which we would like to discuss at your earliest convenience although I need to further impress upon you the concerns of our membership and in general those of the community in the meantime.

There is a growth in the number of concerns that are being conveyed to AOPA daily, particularly with respect to the maintenance of aircraft engines and airframes, in line with manufacturers guidelines. As an example, Cirrus aircraft need to have the engine flown for at least one hour allowing the engine to reach a temperature that maintains its condition. The cost to the owners of not doing this for this kind of aircraft, or similar is estimated at £20,000. For the Cirrus fleet alone with approximately 200 airframes in the UK that would generate a cost in the order of £4-5 million.

Any warranty will be void and there will be no insurance policy to claim against. Clearly the overall impact will be in the millions of pounds as both fixed wing and rotary wing aircraft are going to be affected if we take no action.

Owners need to fly these aircraft and AOPA believes that this is an essential requirement: In the guidance material (www.legislation.gov.uk/uksi/2020/350/regulation/6/made) PHE para 6 (h) there is a reference to "fulfilling a legal obligation" and in the recent circulation from DfT there is a reference to essential maintenance. With this in mind AOPA believes that due to the OME's requirements for the maintenance of these types of engines that flights for the purpose of maintenance of the engine(s) should be considered as an essential task and one that fulfills the legal obligation of the aircraft owner.

Of course, we recognise the continued need for social distancing, personal hygiene, and for cleaning.

AOPA appreciates that you will have many priorities right now and that GA is not a priority, understandably, at this time. However, I do request that the DfT pays urgent attention to this subject and considers entering into some dialogue with us. As you know we have an expert engineering committee who will be available to help on this topic.

It is our intention to communicate with our members by the end of this week to explain how we are trying to find solutions to the problems; they need to hear form us given their concerns over the potential financial impact they are facing.

WORDS John Walker

THE LATEST NEWS ON UK AIRFIELDS

THERE ARE airfields across the UK currently under threat. Here are the latest developments, updated 4 May 2020.

BOURNE PARK

Planning application made on behalf of site owner to Test Valley Borough Council for demolition of buildings associated with Bourne Park Airfield and removal of existing airstrip and outdoor storage areas leading to cessation of all aeronautical activity.

NORTH DENES

The aerodrome with two grass runways is for sale having been disused since 2015 on the cessation of North Sea helicopter operations.

OLD SARUM

Site owner's planning application for housing development and 10 additional hangars refused on appeal in a Planning Inspectorate decision letter dated 11 July 2019. The owner applied for a Judicial Review of this decision but the application was refused by the High Court. In a letter dated 25 July 2019 the owner gave notice of the termination of site licences from 31 October 2019. Aerodrome notified as closed without express approval to all movements requiring a licensed or certified aerodrome and ATZ withdrawn until 21 July 2020. Multi-year agreement reached with effect from 1 February 2020 for site to be used as a parachute centre and aerodrome accordingly.

PANSHANGER

Homes England has bought the aerodrome site from Mariposa Investments. A public consultation by Welwyn Hatfield Borough Council ended on 1 April 2020 into providing additional housing sites for the Local Plan where schemes preclude a realigned grass runway to the north of previous runway 11/29 proposed in the current draft Local Plan. A planning application to re-open the aerodrome has been submitted.

SCATSTA

Due to close in July 2020 as a result of off-shore oil and gas industry flight operations being transferred to Sumburgh. ■

Scatsta Arport is set to close in July 2020

WORDS Matt Lane **WORDS** Various

HOW TO SURVIVE THE FLYING 'PAUSE'

Matt Lane has some advice for those looking to keep their heads inside the cockpit and remain current in these testing times

I WRITE THIS article during an unprecedented period for aviation. The news is full of the impact (which may be horrendous in the short term) for commercial aviation, but for UK General Aviation it of course has meant we have stopped flying, apart from essential maintenance flights.

I prefer to be positive in my approach and language, so would term this a necessary, but hopefully short-term, 'pause' rather than a 'grounding' or 'ban'. Most of us go stir-crazy without flying for a period, and by proxy many of our long-suffering partners and family feel similar!

The CAA has issued information about how to extend your ratings and medicals, but what else can we do during the pause to keep our aviation interest flowing and prepare for a return to flying?

EDUCATION

I know I am always meaning to read up on or revise some aspect to do with flying, but never get around to it and get distracted. We can spend this time refreshing our knowledge, and with so much information available free online and in PDF form and apps it has never been easier. Particular documents worth revising on include [from www.caa.co.uk or search via Google]:

- The Skyway Code
- CAP413 - RT Manual
- Safety Sense Leaflets (many now older and not updated, but still good reading)

This is also a good time to make sure you are signed up for Skywise updates from the CAA – go to skywise.caa.co.uk and register for updates by email or using the app. This will ensure you get essential licensing and safety information direct to your email inbox.

The General Aviation Safety Council site at gasco.org.uk and Airprox Board at airproxboard.org.uk have some excellent reading material, as does airspacesafety.com which brings together a lot of safety information and updates in one place.

Don't forget your old groundschool books you may have hanging around – still some great material in those and things like meteorology won't have gone out of date. I have dipped back into some of my instrument-rating notes and had a few 'I'd forgotten that' moments!

INTERNET GATHERINGS

Who had heard of Zoom before all this? Now we have a preponderance of conference and video calls and meet-ups with our work and social life. There are some really good uses of this technology coming out that will undoubtedly stay with us forever. Many flying clubs are hosting virtual club nights, video training and webinars, and the access for us to get together and learn remotely is better than ever before. I encourage the use of reputable online training and you can find many just by googling or searching social media. Beware – those from outside the UK may be based on different rules and regulations though!

There are also a number who hold well-known internet pilot forums and social media groupings. Some of the discussion, interactions and advice is brilliant to read and it is a nice way to engage with fellow pilots and make good friends and contacts. However, like any internet source, be aware that not everyone is who they say they are, and more commonly they may not have the experience and qualifications that they claim to have. I have sadly read some downright untrue and unsafe content on some of the UK forums, often from people who give a somewhat forceful and convincing appearance of authority. My advice is to enjoy but always stick to the reputable sites, don't take everything at face value and

There's every chance your aircraft may need some maintenance before you can go flying

don't get into slanging matches with those of extreme views!

FLIGHT SIMULATION

If you get 10 flight simulator pilot enthusiasts in a room, you will probably get 15 different opinions on what kit and software you need! Joking aside, as someone who has an entirely Apple ihousehold because 'it just works', the tech talk about specs and computing power goes above my head in literally minutes. What is clear is that there is a range of capabilities from free apps you can download on your phone right up to VR headsets, multiple screens, mock cockpits and almost commercial-like sim setups.

You can spend vast amounts on kit and software, but I recommend you just try and be realistic about what you wish to achieve. I have a really cheap app on my iPad that simulates the Garmin 1000 brilliantly and can do pretty much all the IR practice I need, similarly some of the popular software like X-Plane will run happily on the family PC if you don't have all the high-end things selected, and is enough to practise some general flight profiles.

If you do want to spend more and get a more realistic and capable setup, I strongly recommend engaging with someone who has been there before you and can recommend good equipment. In particular things like add-on yokes and control panels can be wasted money and hard to use if you get the wrong type, and money may be better spent in some areas rather than others. Perhaps an article from one of our readers could help us here?!

PILOT HEALTH

I know health is obviously a massive topic with COVID-19, and mental health may be a particular challenge for many at the moment, but there may be positives to take out of this period for our long-term health as aviators. After a life of racing from one commitment to another while grabbing unhealthy food, many of us have now got into a routine of daily exercise, better attention to cooking and food choices and are getting better sleep routines. If we can stick to some of these good habits, it may pay dividends at medical time! Having said that, my local bakery is now doing amazing cake and bread deliveries to my village, so not all is helpful...!

Try to keep your mind sharp with education

AIRCRAFT AND PILOT PREPARATION

Some of us have been able to use the 30-day engine health flights to get a short flight in, but some airfields have declined to open for various reasons. If your aircraft has been laid up and not flown, you should engage in good time with your maintenance organisation to see if any checks or scheduled maintenance are either due or recommended before flying again. I also recommend the Light Aircraft Association's Technical Leaflet 2.32 which is free on their website and is a good generic read about aircraft areas to check and inspect.

"You may also wish to think about what flights you are planning when we can resume regular flying"

You may also wish to think about what flights you are planning when we can resume regular flying. I would strongly recommend to ease yourself back in and pick a decent-weather day and relatively undemanding sortie profile. The first flight back is not the one to attempt a long IMC cross-country landaway in rough weather with nervous passengers! It is also worth reading Standards Document 19 from the CAA website and reading through all those long-ago-taught PPL exercises – could you confidently fly all those general handling exercises and stall recoveries? When did you last do a practice EFATO or forced landing? Perhaps time to engage an instructor for a refresher on something you are not confident on.

I do hope all readers and their families and friends have kept safe and well during this period, and fingers crossed we can safely resume our flying in the near future. If any members have queries about licensing or extensions that are troubling them please feel free to contact me at matt.lane@aopa.co.uk ■

WORDS Malcolm Bird

MAINTAINING AIRCRAFT DURING LOCKDOWN

The Maintenance Working Group has been working hard so owners can ensure that their aircraft will not turn to rust during the pandemic

AS IT becomes clear that lockdown will be in place for several months, we have to start being concerned with the state of our aircraft as they sit unused.

Typically, aircraft engines do not like sitting idle and many, particularly the older engine types, can suffer from corrosion problems. The advice from the manufacturers of these engines is that a flight of around an hour once a month is the minimum that should be employed to keep an engine lubricated and to prevent the build-up of corrosive elements in the oil. What is almost universally NOT advised is to hand turn the engines from time to time (as this wipes any protective oil film off the important friction surfaces) or ground running (as this does not get the engine up to proper soak temperature thus allowing acidic components to accumulate in the oil). Ignoring this potential corrosion problem can result in a very expensive engine rebuild, much earlier than would normally be expected, apart from the possibility of having engine problems in flight!

"Typically, aircraft engines do not like sitting idle and many, particularly older engine types, can suffer from corrosion problems"

In addition, there are aircraft with annual checks and other scheduled maintenance due, and in many cases these aircraft are not based at the maintenance facility.

Clearly with lockdown in place, the idea of flying aircraft has been out of the question and so AOPA raised the concerns with both the DfT and the CAA. We are pleased to say that we were listened to and now there are options available to aircraft owners and to airfield operators:

The primary advice remains to not fly and find other means to protect aircraft, for example winterise the aircraft as per manufacturer's advice.

However, under new CAA guidance, essential maintenance flights can be flown.

Also, for those engines that really need it, local flights can be made once a month.

Clearly these new options need to be used with care and with the agreement of airfield operators. For more information, look on the CAA website for: COVID-19-Quick Link> Commercial-and-recreational-aviation>Airworthiness>GA Maintenance check flights.

Follow engine Manufacturers' recommendations for preserving your engine

PERMIT SURVEYS

There is a group of aircraft operating in the UK under enduring EASA Permits to Fly. There is a long story behind this but the system works! However, one aspect that has always been surprising is the CAA's insistence that a CAA surveyor visit the aircraft each year to issue the Permit to Fly. Even fully certified aircraft do not need this. We were very pleased to hear that during the lockdown the CAA will implement a new approach, as the AOPA Maintenance Working Group has long requested, and issue the permits (on advice and paperwork from the maintaining Licenced Engineer) from a desk at Gatwick. The CAA will retain the right to undertake a surveyor visit but hopefully this will not be required very often. We will also hope that this more proportionate approach can continue after the lockdown is eased ... ■

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The spectacular night show will be back in 2021

EAA'S AIRVENTURE CANCELLED FOR 2020

In news that will surprise nobody – the EAA has cancelled this year's Oshkosh

by **AOPA News Team**

CEO AND Chairman of EAA Jack Pelton has penned a letter explaining why this year's Airventure at Oshkosh has been cancelled.

Due to the uncertainly of the COVID-19 still raging, the EAA thought it better to cancel the entire event, scheduled to be held on 20-26 July 2020.

In the letter, Pelton said: "This is when we start our preflight planning for Oshkosh.

"By this time, we should have begun ramping up our entire site in preparation for our July convention. Volunteers from across the country and world would have descended on Oshkosh.

"But because of circumstances beyond our control, none of this can happen now. We cannot even get to the hangar so our preflight is left to watching the progress charts. While this certainly makes the ability to prepare for the event a scheduling problem, it does not preclude the bigger issue of predicting what will be the health guidelines in July. Right now, there are three phases that have been defined in Wisconsin as the recommended procedures. As I write this, we are not in Phase 1 yet. Phase 2 restricts gatherings to 50 people. Phase 3 allows for mass gathering with restrictions.

"Our convention attracts EAA members not only from the U.S. but around the world. Today we cannot predict when we will be at a point that our event meets the all clear Phase 3 milestone for mass gathering with restrictions. As your leader, I see no clear path to meet our own requirements to ensure the health and safety expectations our organisation demands for our employees, members, volunteers, exhibitors and attendees.

"I see no clear path to meet our own requirements to ensure health and safety"

That includes sanitization, separation and personal protection requirements.

"My conclusion is, like in any good flight planning, don't take the risk. Therefore, I have no choice but to cancel AirVenture 2020. Together, we can come back stronger, safer and ready for AirVenture 2021 and create a memorable world-class aviation event. Because of our dedicated and enthusiastic EAA members, our Association is strong. We know that at some point this storm will pass. And over the next 12 months we will continue to support all of you as we again, together, grow EAA in the Spirit of Aviation."

The 2021 AirVenture will be held 26 July to 1 August. ■

APPG ASKS GOVERNMENT FOR SUPPORT DURING CRISIS

by **Robert Care**

THE ALL-PARTY Parliamentary Group on General Aviation (APPG-GA) has asked for Government intervention to support the UK's aviation industry through the Covid-19 pandemic.

Co-chair of the APPG-GA, Lord Davies of Gower, writes in a letter to the Rt Hon Rishi Sunak MP, Chancellor of the Exchequer, that the aviation industry was one of the first to be impacted by global restrictions aimed at containing the virus.

Lord Davies said, "Airports across the country have seen their revenue disappear as passenger numbers rapidly declined. Yet airports by their very nature have a high proportion of fixed costs, which haven't gone away – especially as some airports are obliged to remain open as critical national infrastructure."

The parliamentary group has asked Government to do more to assist airports and other aviation companies financially during the crisis that is gripping the globe.

The letter calls for temporary relief from Business Rates, Corporation Tax and VAT as well as direct financial support in the form of loans. They also suggest that the Government should create a committee made up of aviation bosses to coordinate the recovery effort.

Lord Davies added, "We know how valuable aviation businesses can be to local communities. That is why it is vital to the UK's economic interests that we protect our world-leading aviation industry, which is worth over £22 billion to the economy and employs 230,000 people nationwide.

"If businesses are allowed to buckle under the financial pressure of this crisis, they won't be there to assist the country's economic recovery. A diminished aviation sector would fatally undermine our global connectivity and damage our future prosperity." ■

VL3 915 FLIGHT TESTS DONE

by **AOPA News Team**

On 24 April, JMB Aircraft performed the last flight test of the VL3 Evolution ROTAX 915is.

The Czech-based company is understandably proud of its achievements over the last few months.

After more than 100 hours of flight tests with two aircraft, it has managed, with success, to perform V-dive test reaching 381 km/h IAS and 425 km/h TAS. This enabled the VL3 915 to safely increase its VNE up to 340 km/h IAS.

In the final test, with all nominal operating parameters, the flight test crew climbed to FL180 in 13 minutes with one short level off due to climbing too fast, which was reported to the pilots by local Air Traffic Control.

The conditions were ISO 7 oC and flying at the 600 kg Maximum Take-Off Weight (MTOW).

The company's test pilots performed a level flight of several minutes at maximum continuous power and reached 380 km/h TAS and broke the mythical 200 kt barrier.

JMB Aircraft would like to thank the five new customers who ordered the VL3 915 last week.

The company has already reached 21 orders, with two VL3 915s already flying and eight on the production line.

In a statement, JMB was also proud to announce its new website where you can see the new 915 flying. The company thanked the hard work of its marketing and web department. ■

The VL3 915 has now completed its flight tests

LOOK BACK... THIS MONTH 87 YEARS AGO

DC-1'S FIRST FLIGHT

On 1 July 1933 The Douglas DC-1 (Douglas Commercial) made its maiden flight. It was the first DC airliner series that found its greatest success with the DC-3. Development of the DC-1 began in 1931 after the high-profile crash of a Fokker F.10 trimotor that suffered a structural failure which was traced to its wooden wings. With Boeing selling its successful Model 247 exclusively to United Airlines, TWA (Trans World Airlines) approached Douglas to build an all-metal airliner for them.

Donald Douglas was initially reluctant to engage with the invitation from TWA. He doubted that there would be a market for 100 aircraft, the number of sales necessary to cover development costs. Nevertheless, he submitted a design consisting of an all-metal, low-wing, twin-engined aircraft seating 12 passengers, two crew and a flight attendant. Though only one DC-1 was built, rigorous testing showed it to be significantly superior to the aircraft it was meant to replace, and it formed the basis for the improved DC-2, which entered service with TWA in 1934 and nearly 200 were built.

AIRBUS BACKS MOSQUITO BUILD

Airliner builder Airbus has thrown its hat in the ring to ensure that there will be a Mosquito flying once again in the skies

by **AOPA News Team**

AVIATION HERITAGE in the UK received a welcome boost in March 2020 with news that Airbus has announced its support for The People's Mosquito.

Financial backing from the aerospace giant represents a significant step forward in delivering the first de Havilland DH.98 Mosquito to be manufactured in the UK for more than 70 years.

"Naturally, we're excited and proud to be able to announce the link up with Airbus. The support of such a high-profile industry name provides a significant boost to our efforts to deliver an airworthy Mosquito FB.VI to the five million people who attend UK airshows every year," said John Lilley, Managing Director of The People's Mosquito.

Jeremy Greaves, Vice President Corporate Affairs and Strategy, Airbus UK said: "Airbus is a strong believer in preserving wider aviation heritage and we are proud to be supporting The People's Mosquito in this endeavour. For us the Mosquito is more than a beautiful and iconic aircraft, Airbus has a direct relationship to it as more than 90 were built at our Broughton factory in Flintshire.

"Airbus has a direct relationship to it as more than 90 were built at our Broughton Factory"

"That passion and dedication is reflected today in our skilled workforce whose talents are focused on building wings for the Airbus commercial aircraft fleet."

The collaboration celebrates Airbus' historic connection with the de Havilland Mosquito.

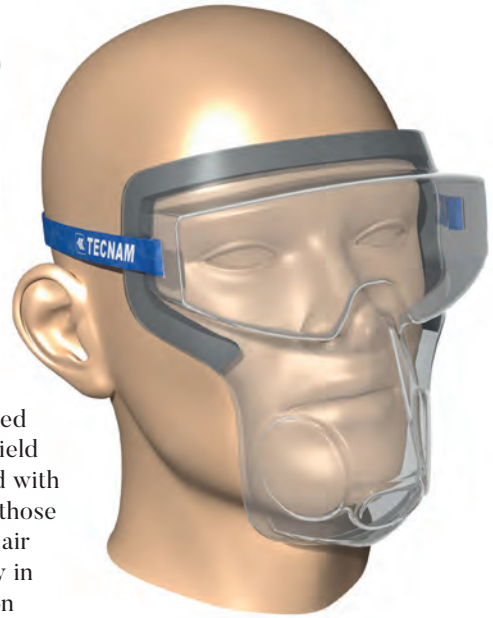
Production of the wooden wonder was transferred in 1948 to Hawarden, now Airbus' Broughton site, where the last Mosquito ever built in the UK, an NF.Mk38 serial number VX916, rolled out of the facility in November 1950. Hawker Siddeley Aviation went on to acquire de Havilland in 1960, before it became a founding member of British Aerospace (BAe), subsequently BAE Systems which was a 20% shareholder in Airbus until 2006.

"We believe the Mosquito to be an exemplar of British aeronautical design excellence – an engineering pedigree that Airbus carries forward today," added John Lilley.

"We continue to engage with Airbus, and we look forward to a fruitful and productive relationship as our restoration progresses. These are exciting times and we hope this won't be the last link up with the UK's engineering, aerospace and manufacturing sectors in 2020." ■

TECNAM TO PRODUCE FACE SHIELDS TO FIGHT COVID-19

by **AOPA News Team**



TECNAM ANNOUNCED today that it has started production of protective face shields to help prevent the spread of COVID-19. This initiative is the company's response to the lack of personal protective equipment (PPE) currently in the market, particularly during Italy's Phase 2 lockdown, where certain activities are permitted only when using adequate protective devices. Production will run in parallel with Tecnam's ongoing aircraft manufacturing activities.

For these special products, the Tecnam Research and Development department has channelled all its commitment and aeronautical design know-how into creating an innovative face shield with a multipurpose solution to protect the eyes and airways. The Tecnam TFS (Face Shield) provides eye protection against droplets and sprays of fluids containing biological agents, while also protecting the nose and mouth from direct inhalation of biological matter that may contain the coronavirus. The Tecnam TFS has been designed to fully adapt to the face. A single elastomer fascia allows the face shield to be worn comfortably, thanks to the polyolefin foam that is widely used in medical applications. Ventilation is free but airstream is forced rearward.

"Also being developed is a version of the shield that can be equipped with air-intake filters"

The device is currently in advanced testing phase in compliance with the applicable UNI EN standard to allow for use in a Health Environment, but it is already compliant for normal daily use in highly crowded spaces (such as supermarkets, open markets, public transport, etc.) to replace the standard bulky and movement-restricting face shields.

Also being developed is a version of the shield that can be equipped with air-intake filters, for those environments where air filtration is necessary in addition to protection from fluids containing biological matter.

As an aircraft manufacturer, Tecnam is developing a range of further specific variants in order to provide protection for the company's pilots, passengers, flight instructors and flight-school cadets.

Commenting on this initiative, TECNAM Managing Director Giovanni Pascale says: "In difficult times like these, companies such as Tecnam need to do their part. Protecting our first responders and healthcare workers has never been more important. We've marshalled the best resources of Tecnam to focus on immediately installing the production capacity for making PPE and supporting those most in need on the frontline of this pandemic. We are also pleased to provide a transparent device able to let everyone's smile be visible once again! Last but not least, we hope this will contribute to a quick return to flight activities for our pilots, passengers and flight-training organisations."

SOUTHERN HELICOPTERS RECEIVE AOPA'S SPECIAL AWARD

by **Malcolm Bird**

SOUTHERN HELICOPTERS has received the AOPA Special Award. David and Jonathan Bull of Southern Helicopters owned a family farm next to Stansted Airport but as the airport expanded, much of their family farm was lost. Being helicopter enthusiasts, they used this as an opportunity to follow their love of flying and went from farming to running a kit helicopter business in 1995. They help people build their kits with incredible knowledge and also help maintain the aircraft after completion. David and Jonathan were nominated for their outstanding customer care and contribution to the excellent safety record of Rotorway helicopters. They work tirelessly with the CAA to maintain high standards of build and piloting.

Southern Helicopters receive the Special Award

AOPA NEWS HIGHLIGHTS

GULFSTREAM G600 EARNS EASA APPROVAL

Gulfstream has announced that, nearly a year after receiving approval from the FAA, its Pratt & Whitney PW815GA-powered G600 has been given its Type Certificate approval from EASA. The 19-passenger G600 has a maximum operating speed of Mach 0.925, range of 6,500 nm and maximum cruise altitude of 51,000 ft and is equipped with Gulfstream's Symmetry Flight Deck.

SKY TYPING IS LEGAL AGAIN IN UK

Sky typing is now legal again in the UK following a long campaign by the MPs and Lords of the All-Party Parliamentary Group on General Aviation (APPG-GA). The practice of using a choreographed formation of aircraft to write messages in the sky using smoke trails was made illegal by cautious officials in 1960. After six decades, the spectacle is set to return to UK skies.

UK CIVIL AIR PATROL TO DELIVER NHS SUPPLIES

Best known for supporting the emergency services and local government, offering cost-effective air observation, the UK Civil Air Patrol is now helping the NHS in response to COVID-19 with a 'pony express' flying courier service. The service utilises light, fast aircraft, flown by pilots belonging to the UK Civil Air Patrol, to deliver critical supplies and spare parts for medical equipment on behalf of the NHS.

Keep flying – sort of, with Pipistrel

PIPISTREL OFFERS FREE ONLINE TRAINING

Pipistrel has made all of its computer-based training courses free of charge and online for anyone to use for three months

by **AOPA News Team**

PIPISTREL HAS decided to provide open access to all online training materials during the current period of world-wide enforced isolation as a testament and dedication to safety through continuous training and learning. Pipistrel Academy computer-based training courses are now available free of charge to anybody, for three months. The hope is to motivate non-flying pilots, student pilots and flight instructors to stay connected to their passion and learn more every day.

Anybody, whether student pilot, pilot, flight instructor or aviation enthusiast, flying clubs, flight schools can apply and join the online course free-of-charge for a period of 3 months, from April 2020 until end of June 2020.

"Training Courses are now free of charge to anybody"

This unique offer is available worldwide to all, including to non-pilots who are interested in aviation.

During the current almost worldwide lockdown period, the free online course will help to refresh and revise the theoretical knowledge required to fly and learn the specifics about modern Pipistrel aircraft series, including the Alpha Electro, the only certified electric trainer in serial production in the world. The online course gives detailed information and knowledge of different Pipistrel aircraft.

Pipistrel is offering the specially designed for the Alpha Trainer UL/LSA/BCAR, the Virus SW UL/LSA, Virus SW121 and the Alpha Electro.

Normally the online course fee is €147.30 for 14 days or €247.30 for permanent subscription. Courses can be accessed from anywhere in the world, with a laptop, tablet or mobile phone.

Anyone who successfully finishes an online training course will receive a voucher for a free demo flight in one of Pipistrel's aircraft at any Pipistrel distributor over the World, the voucher will be valid until the end of September 2020.

To register and begin learning visit: www.pipistrel-online.com Click 'Create new account', follow the instructions and select the online course you're interested in. ■

ELIXIR RECEIVES EASA CERTIFICATION IN RECORD TIME

by **AOPA News Team**

ON 20 MARCH, 2020 the Elixir in its 100 hp VFR version received its type certificate in the CS-23 category, under the most recent amendment (5), which reflects the highestpossible level of safety today.

A statement from Elixir said: "Although it is hard to rejoice when our entire planet is fighting an invisible enemy, we should look back to fully appreciate how far we have come since our first certification meeting with the team of European agency in charge of the certification (EASA) on 24 January 2017, only three years ago.

"The Elixir, to our knowledge, is the only modern light aircraft in the world designed from a blank sheet of paper to have obtained its certification following the latest amendment of the most rigorous category: CS-23, and doing this with safety objectives regularly exceeding the certification objectives!

The Elixir is now certified by EASA

"The Elixir is also the only aircraft on the market to bring together so many innovations, equipment and performance." Arthur Leopold-Leger, CEO, stated.

"On a personal note, I would therefore like to congratulate all of those who made this possible: the members of Elixir Aircraft, the close advisers and consultants of course, but also the EASA team, our investors, our customers, our banks, our design and production subcontractors, the administrations, and of course our families, whose support and encouragement are irreplaceable. Bravo and thank you!"

The production of the first aircraft started in December 2019, at Elixir's aircraft plant based at La Rochelle airport.

The facility of Elixir Aircraft covers 2,300 m² and is dedicated to the production and assembly of the aeroplane, which began to roll out of the factory at the end of May 2020.

The company is now contacting each and every customer to announce the news personally, before broadcasting to the public, as well as presenting the provisional flight programme.

Each customer will be invited to spend a day at Elixir Aircraft's headquarters. Half the day will be devoted to a detailed presentation of the Elixir, which will run through the POH and a look at the factory, with the rest of the day dedicated to flights in the aircraft. This will allow the new owner to discover and be taught about the aircraft's features and assets.

The flight team will show owners the aircraft's manoeuvrability, exceptional stall safety, performance and handling capabilities. ■

GARMIN'S AUTOLAND NOMINATED FOR WORLD-CHANGING IDEA AWARD

by **AOPA News Team**

FAST COMPANY, a business magazine that focuses on innovation in technology leadership and design, has chosen Garmin's Autoland as a finalist in its 2020 World Changing Ideas Awards. Autoland is designed to land aircraft when the pilot cannot. Among some 3,000 entries – the largest number the award program has ever received to date – Garmin Autoland was chosen as a finalist in the Transportation category and selected as an honorable mention in the all-encompassing Best World Changing Idea Award in North America."We are truly honoured and proud to be selected by Fast Company and their editors along with a list of venerable judges for our commitment to innovate within the aviation industry," said Phil Straub, Garmin Executive Vice President and Managing Director of Aviation. "This recognition is representative of the hard work and dedication of the entire Garmin team who challenged conventional ideas that led to the development of the world's first Autoland system in GA aircraft. Congrats to everyone at Garmin who contributed to one of the most significant achievements in aviation history."

In the event of an emergency Autoland is capable of completely taking control of the aircraft and landing at the nearest most suitable airport without human intervention. Elements taken into consideration when identifying the most suitable airport include a wide range of performance operational and environmental factors according to Garmin officials. Throughout an Autoland activation, the system provides visual and verbal communications in plain language so passengers know what to expect. Autoland will soon be available with the G3000 integrated flight deck pending FAA certification. ■

TRAVEL – THIS MONTH

DOING THE DAMBUSTERS

WORDS & IMAGES Paul Emms

The Möhne Dam has been a historic feature of interest for many people who are or have been involved in aviation... Paul Emms recounts his aerial excursion, when he flew over this bucket-list destination

APPARENTLY, according to my wife, I had been banging on about the Möhne Dam for quite some time, when last year we seemed to have a gap in our busy lives. She middle wicketed me by saying: "Well why can't we fly to Germany and check the Möhne Dam out?"

Crikey she had thrown down the proverbial gauntlet. "Right," said I, "I'll get on with planning it." So I did.

Using Google then the trusty SkyDemon planner, I was able locate the dam. It seemed Arnsberg-Menden EDLA airfield just south of Dortmund was the obvious choice as it is quite close. A telephone call to them confirmed no issues with landing there, offering secure parking with 100LL fuel readily available and no flak!

I mused flying direct to Germany over the North Sea as our forefathers had done with four Merlins to carry them along. At our humble Piper speed this would take about 3 hr 20 minutes direct . As a backup I planned a second wimp route across the channel via Ostend.

The die was cast and the route was planned: south-east routing first waypoint Fenland, then Earls Colne, then Southend overhead to Ostend to clear customs, before our jaunt into uncharted territory.

The morning dawned to a crisp blue chilled sky and the European synoptic charts indicated a stubborn anticyclone right across Europe for the duration of our trip. Wow, perfect.

LET'S GET GOING

Our departure was smooth and quiet and even though we all understand flight I am always a little thrilled and enthralled when we load our aircraft with heavy pre-weighed bags, dinghies and life jackets, and all the travel paraphernalia – and we just levitate into the sky as if by magic. We climbed to FL55 and cruised down the east side of Britain, calling the various agencies for traffic service – one of my favourites being Lakenheath on 128.90 and their machine-gun-speaking American controller who drawled GBXXX "Rada Contarct".

As always with Southend you ask for a crossing clearance to transit their class D airspace and I find them very helpful. It was granted with no fuss which is always a relief. On the face of it Ostend airspace looks extremely hostile and prohibitive, but my prior telephone call to them assured me there would be no problem and they looked forward to seeing us! What a friendly bunch they appeared to be. I had recently read that the manager was jealous of Le Touquet and actually wanted to encourage the likes of us to visit his airport, and this response confirmed it.

Once overhead Southend and under Radar Control they cleared us DCT to Ostend because EGD138D was cold, which was another plus. We just flew over the tip of Margate to keep one toe over land a little longer before heading off across the sea to Ostend. The sight of all the wind farms never ceases to amaze as we travelled on our planned route over the sea.

After London Info it was Ostend, and after copying the ATIS I thought I would ask for vectors to ILS 08 as it seemed quiet and it's always good for practise, even in VMC. Ostend duly obliged and we touched down on their huge 2,900 m LDA runway 08.

A follow-me van met us and we were whisked away for the usual 'belt off, shoes off,' security check, and passport check. We were told the NEW GA terminal would soon be completed and to please come again to sample its delights. The fuel bowser quickly topped us up for our next leg so we flight-planned with the ever-ready SkyDemon and we were at the hold for checks quicker than I anticipated.

"The weather was behaving better than I could ever imagine as we called Dutch Military for traffic service at FL55"

From here I had planned to route up the coast to the HST VOR then east DCT to the HMM VOR in Germany before heading south to EDLA via the Möhne Dam located South East of Dortmund. This route allowed us to transit up to FL55 if necessary so gave us lots of flexibility. The weather was behaving better than I could ever imagine as we called Dutch Military for traffic service at FL55. They were superb albeit with their usual guttural Flemish throaty tones.

Pretty soon they handed us over to Langen Information and for the first time ever I was flying in German airspace speaking with a German

Time to pre-flight for the trip home

Flying over the dam

German countryside in CAVOK

Paul and his wife on the first leg of their journey

controller offering me their QNH and traffic service ... it was slightly surreal but I don't know why, maybe it was just me.

At the HMM VOR we turned south and headed for the Möhnesee after requesting descent to 2,000 ft QNH to avoid Dortmund CTA. It was then I somewhat hesitantly asked Langen Information if I could overfly the Möhne Dam before recovering to Arnsberg-Menden. I thought he must be thinking: "Oh yes, yet another GB aircraft wanting to overfly the Möhne Dam, what is it with these English?". His reply brought a smile to our faces. I quote: "Zat is up to you."

At this point I could see the high ground and the mass of forestry, but not the Möhnesee, but I had planned this meticulously and I knew where it was and where to look.

As we continued down to 2,000 ft across the forestry the huge Möhnesee came into view and slipped beneath our wings. We looked to the right and my heart leapt as, exactly where I knew it was, sat the Möhne Dam with its two towers, squat, powerful, and foreboding. We descended to a safe altitude – definitely not 60 ft – and flew right over the centre of the dam between the two towers before climbing gently away over the wind farm on the high ground, and headed to EDLA which was only minutes away.

A quick call to them with heart still racing and we were downwind left hand 05 then on finals to land EDLA.

"At this point I could see the high ground and the mass of forestry, but not the Mohnesee"

The airfield sits 778 ft AMSL surrounded by forestry and has the appearance of an aircraft carrier sat in trees.

Our welcome was warm and a chap came out to assist with tying our trusty steed down and helping with our suitcases.

I was quite elated as we booked in and saw their Hotel JU52 (adjacent to the terminal) which was themed on the WWII German tri-motor aircraft.

At this point we hit the first snag, as we could not get a taxi to our hotel, no matter how hard we and the office staff tried. Eventually the helpful office receptionist gave a big grin and thumbs up indicating a taxi was on its way and should be with us in 10 minutes.

As is often the case I entered our hotel in my Nav app on my iPhone to check he wasn't going miles off route then settled back for the 40-minute drive to the hotel. An hour later after repeated U-turns and stops to ask directions with the taxi mounted on the pavement, I realised this cab driver had not the slightest clue where he was going, so I offered to help with my iPhone showing him the route, and offering directions such as "links " and "rechts". He completely ignored my help and became quite angry to the point where we were about to get out of the cab. An hour and a half or maybe two hours later we arrived at the hotel and the driver demanded €100. We had a disagreement and some gesticulating about him being lost and wrong to charge for his lack of knowledge to which he shouted "Polizei!". I thought "bring it on, pal" but my wife had had enough, saying pay up and forget it. I guess she was right. We went to get our bags and our euros. He shouted: "Nein, nein, Polizei," again and blocked access to the cases thinking we were not going to pay, such a lovely chap!

After checking into the hotel and enjoying a very warm welcome we arranged to get the local car hire company to drop a set of wheels off so we could drive back to the dam the next morning and carry out a full land recce.

DAM, THAT'S GOOD

It was about 40 minutes drive (not two hours) back to the dam and once again there it was. The photographs show its rock-solid construction as it sits there holding back millions of tons of water. As you stand on it and look out at 90 degrees to the Dambusters' bomb run, you see how short the distance was for those guys to set up their bombing run at night.

There is a small peninsula of high ground which they must have had to fly over before descending to 60 ft at night and lining up for the bomb run. It quite simply is jaw dropping to think what events occurred that night, right where my

The cobbled streets of Münster

The immaculate Arnsberg-Menden EDLA airfield

wife and I stood looking at the surrounding terrain and the huge dam. It has a historical presence about it which is quite daunting. It sits solid and silent in the picturesque beauty of the area which has to be experienced to be fully appreciated, it is truly awesome.

After walking across the dam to the other side and underneath the two infamous turrets; you get a feel for its size and construction. We noted quite a few other tourists ambling about the place.

Afterwards we retreated to a restaurant on the banks of the Möhnesee in full view of the dam and had a superb lunch, taking in the views of what now seems to be a huge recreational park area.

To sit there relaxing in the still, silent atmosphere with a glass of wine and lunch, with the Möhne dam as backdrop was something neither of us will ever forget. How time has thankfully changed matters.

The next day we drove to Münster which turned out to be a beautiful place with cobbled streets, shops and more restaurants. We sat and had a beer in one square and noticed a photograph of the very same square after a bombing raid, where fire-fighters are working next to a statue of a man with a basket on his back. We realised we were sitting in the exact same place beside that same statue which was unscathed ... another poignant moment.

"After walking across the dam to the other side and underneath the two famous turrets, you get a feel for its size and construction"

HEADING HOME

For the return trip the weather was still behaving and we dropped the little hire car off at EDLA, and loaded up for Ostend. I can't recommend EDLA highly enough – everyone was friendly and helpful. The airport was immaculate and has a Piper repair centre which fortunately was not needed. The tower operator bade us farewell and asked that we tell our English friends to visit them, which I have done.

We departed on 05 and at 1,000 ft commenced a 15 degree angle of bank, climbing left turn and headed north for HMM VOR, calling Dortmund who asked that we go to Langen Information for traffic service. The lady at Langen Information was excellent and kept an eye on us as we routed up to HMM VOR then west DCT back to HST at 4500 QNH. The ground slipped slowly by as we crossed the Rhine then passed Nijmegen down our starboard side – all very famous historic landmarks.

We resumed with Dutch Military to HST then back down the coast and on to Ostend approach again, requesting vectors to ILS 08 for practice. In the haze we could see Zeebrugge container-ship and ferry port on our left as we descended under the control of Ostend.

Again another superb turnaround at Ostend with fuel and customs etc, and a quick drink at the Runway 26/08 Restaurant where my life was made eaiser by using the SkyDemon's flight plan facility.

As we climbed out runway heading 08 we were cleared direct to Southend, where we watched the wind farms in their perfectly straight lines slide down our starboard side. Luckily EGD138D was cold yet again and Southend cleared us straight through their class D airspace to Earls Colne overhead but asked us to maintain 4,000 ft to allow a commercial jet to depart. I was worried that they had missed the fact that I had to be below 3,500 ft very soon, and gave them a gentle reminder but of course they knew and my concerns were unfounded. To be sat at 4,000 ft and watch an EasyJet depart underneath you is another vision that we aviators are so privileged to experience. Once the jet had climbed away en route to its destination we were cleared to descend.

We landed back at our home airfield at 14.30 and drove home for a cuppa, wondering "Have we really just done that?!"

It was one of those trips we will never forget, which aviation makes possible; an end to a fabulous trip, then back to the grind, with eyes always skywards – dreaming of our next adventure. ■

The old warbirds at the forefront of technology

WORDS & IMAGES Henry Simpson

World-famous company **Martin-Baker has saved more than 7,500 lives with its ejector seats** and it is working on Mk18, using the latest technology. Their test beds, however, aren't the newest – they're **venerable Gloster Meteors**

THE UK-based ejector-seat manufacturer Martin-Baker continues to operate examples of the RAF's first jet fighter – the Gloster Meteor – in the ejector seat testing role. I visited their Chalgrove base to see how these classics are still earning their keep, 77 years after the type's first flight.

The world-renowned firm was founded by Sir James Martin and Captain Valentine Baker in 1934, with the original purpose of building aircraft.

The company produced the MB 1, 2, 3, 4 and 5 though none of the designs entered production.

In 1942 Valentine Baker died when the engine seized in the MB 3 he was flying, forcing an emergency landing. The wingtip struck a tree stump, causing the aircraft to cartwheel. Baker was only 54 years old.

"James Martin was so affected by his friend's death that he devoted the company to saving lives of aircrew"

It had a radical impact on the company; James Martin was so affected by his friend's death that he devoted the company to saving the lives of aircrew, thus Martin-Baker became the pioneering ejection seat manufacturer we know today.

Martin-Baker is still run by the late Sir James Martin's descendants, and since operations began, has received 11 Queen's Awards.

Martin-Baker has since produced the Mk 1 to Mk 18 range of seats (with no Mk 13 for the obvious superstitious reasons), and has delivered over 90,000 seats, with over 17,000 of those still in service today.

STRONG HERITAGE

Ninety-three different air forces around the world use Martin-Baker ejection seats. Alongside ejection seats, the company has developed a range of special crashworthy seats for helicopters and fixed-wing aircraft, currently equipping more than 60 helicopter variants.

The first tests of seats began in 1945 with employee Bernard Lynch attempting the first static ejection. A year later he conducted the first mid-flight test by ejecting out of a specially modified Meteor 3 at 320 mph, 8,000 ft in the air.

The first live, non-test ejection took place on 30 May 1949 by Jo Lancaster. Jo was flying an Armstrong Whitworth AW52 aircraft and was forced to eject using a pre-Mk1 ejection seat over Southam, Warwickshire. Jo only died in 2019, at the age of 100.

The latest Mk 18 seat is equipped with head and arm restraints and has recently won the contract to be fitted to Korea's forthcoming KAI KF-X fighter.

At time of writing, 7,619 lives have been saved by Martin-Baker ejection seats, an impressive total that is proudly displayed by the company on the home page of its website.

Martin-Baker seats have been fitted to an illustrious range of types including the Sea Vixen, F-4 Phantom, Arrow, Harrier and F-35, but the first aircraft to receive one was the Gloster Meteor.

"At the time of writing, 7,619 lives have been saved by Martin-Baker ejection seats"

VISITING MARTIN-BAKER

Although is Martin-Baker's headquarters is based in the UK, the company has facilities around the world, offering a complete 'end-to-end service', from helping the customer establish operational safety and escape requirements to ongoing support throughout the entire service life of the aircraft and the seat. The company still relies on its passion for engineering, strong family ties and an extremely loyal and skilful workforce.

At Chalgrove I met Alan "Al" S Clarke, the engineer in charge of looking after the Meteors. He took me on a tour of the facilities and spoke to me about the company's history and work today.

In addition to testing, Martin-Baker's Chalgrove facility is responsible for the production of the seat rocket motors and other vital components, as well as the maintenance and disposal of older seats.

A Martin-Baker Mk 1 and two ejection tests in aircraft

The Meteor with the open rear cockpit

The Meteor flying in formation with a Typhoon, which has a Martin-Baker Mk 16

One half of the company's hangar contains several cockpit mockups sent by manufacturers for testing while the other half contains the Meteors and the company's King Air support aircraft. Two of the multiple stages of testing are performed with the Meteors, the fourth stage being an ejection from a Meteor at 175 ft over the airfield and the sixth stage being a high-altitude ejection from 24,000 ft for which the team must head to Sardinia. (The fifth stage is an ejection from a rocket sled that takes place in Northern Ireland.) Test ejections are carried out with sensor-filled mannequins to record the forces experienced on a body.

The company's two Meteors are the black-painted WA638 and the silver-painted WL419, WA638's scheme purportedly inspired by the John Player Special F1 car colours. WA638 was delivered to the RAF over 70 years ago in November 1949 whilst WL419 is slightly younger at 67, having been delivered in 1952. Upon approaching the aircraft there are obvious differences between them and standard Meteors: both have been modified to 'T7½' standard with the front of the aircraft consisting of a two-seat T7, while the tail section is derived from an F8. This is due to the requirement of a second seat for ejection tests but the longer F8 tail section was added to increase stability and stop the potentially deadly phenomenon of 'phantom dive' that earlier Meteors encountered. Fuselage stiffeners have also been fitted to the top of the fuselage to protect the fuel tank.

"Both aircraft are fitted with ventral fuel tanks to provide 50 minutes of flying time while the under-wing tank points are no longer used and have been isolated"

SAME BUT DIFFERENT

When seen side by side there is also a clear difference between the two aircraft. The older WA638 has noticeably smaller engine intakes than the WL419, the larger intakes being introduced on later aircraft to help with engine relights at altitude by allowing more air in. Both aircraft are fitted with ventral fuel tanks to provide 50 minutes of flying time while the under-wing tank points are no longer used and have been isolated.

One restriction that is placed on the aircraft is that they cannot fly in wet weather conditions due to their open rear cockpit, under which sits the main fuse junction box.

Many may wonder why Martin-Baker continues to use such old aircraft but as Al explained, the Meteor is the perfect platform for ejection-seat tests. Its two engines provide redundancy while also being situated far apart from the fuselage and far enough forward so that they don't ingest rocket efflux during the tests. The aircraft are only required to fly a very limited number of hours a year, generally

WL419 can often be found at airshows and is always a crowd favourite

performing only two or three tests annually, and sometimes none at all.

AGE ISN'T IMPORTANT

Despite being the younger airframe, WL419 has used up 85 per cent of its airframe life and so only flies about two and a half hours a year, a rate at which it can continue for another 15 to 20 years.

WL419 recently performed its first ejection-seat test in 15 years, in February 2019, after a period of being grounded whilst transferred to the civil register.

WA638 conversely, has 40 per cent of its life left – enough for it to continue to fly for another 30 years in its current role, due to being rebuilt between 1995 and 2007 (having being originally decommissioned in 1977) and introduced as a replacement for another time-expired airframe, WA634, which now resides at the RAF museum at Cosford.

This means the venerable Gloster Meteor could still be earning its keep with Martin-Baker when it is even more than 100 years old!

"WL419 recently performed its first ejection-seat test in 15 years, in February 2019"

THE PERFECT TEST BED

Al describes the aircraft as "brilliant to work on, an example of proper engineering".

In total Martin-Baker has 7,000 individual line spares and nine airworthy engines (two in each aircraft and five spares). With no engine support all work is done in-house with an old Ford D550 truck used as an engine test bed.

One engine that had been stored since its overhaul 15 years ago was recently run up and "ran like a dream". Looking into the engine, the age of its power plants is clear; the Rolls-Royce Derwent centrifugal compressor turbojets have many of their accessory components such as the fuel pump, starter motor and oil tank at the open front of the engine.

Al himself has a long RAF history as an aircraft engineer first on Tornadoes at Marham in 1991 before moving to Nimrods in 1994 and Jaguars in 1997, then spending eight years on C-17s at Brize Norton, which was the highlight of his career as it involved flying with the crew.

In 2017 he left the RAF but continued to work on the C-17 procurement for Boeing before joining Martin-Baker in 2017.

He is proud to work on such iconic aircraft and keen to share their history and current use. As he says: "Its keeping heritage flying".

In addition to testing, the Meteors proudly represent Martin-Baker at several airshows, including The Royal International Air Tattoo and Duxford. With the recent decline in airworthy classic jets within the UK, these Meteors are the last of their type airworthy in the country or currently in the world. It's great to see that Martin-Baker's Meteors will be flying for many years to come.

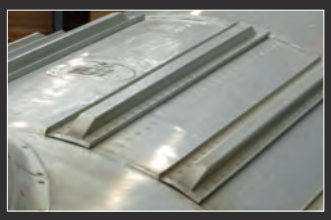
I would like to thank Alan S Clarke and Martin-Baker for supporting this article. ■

TECH SPEC Gloster Meteor

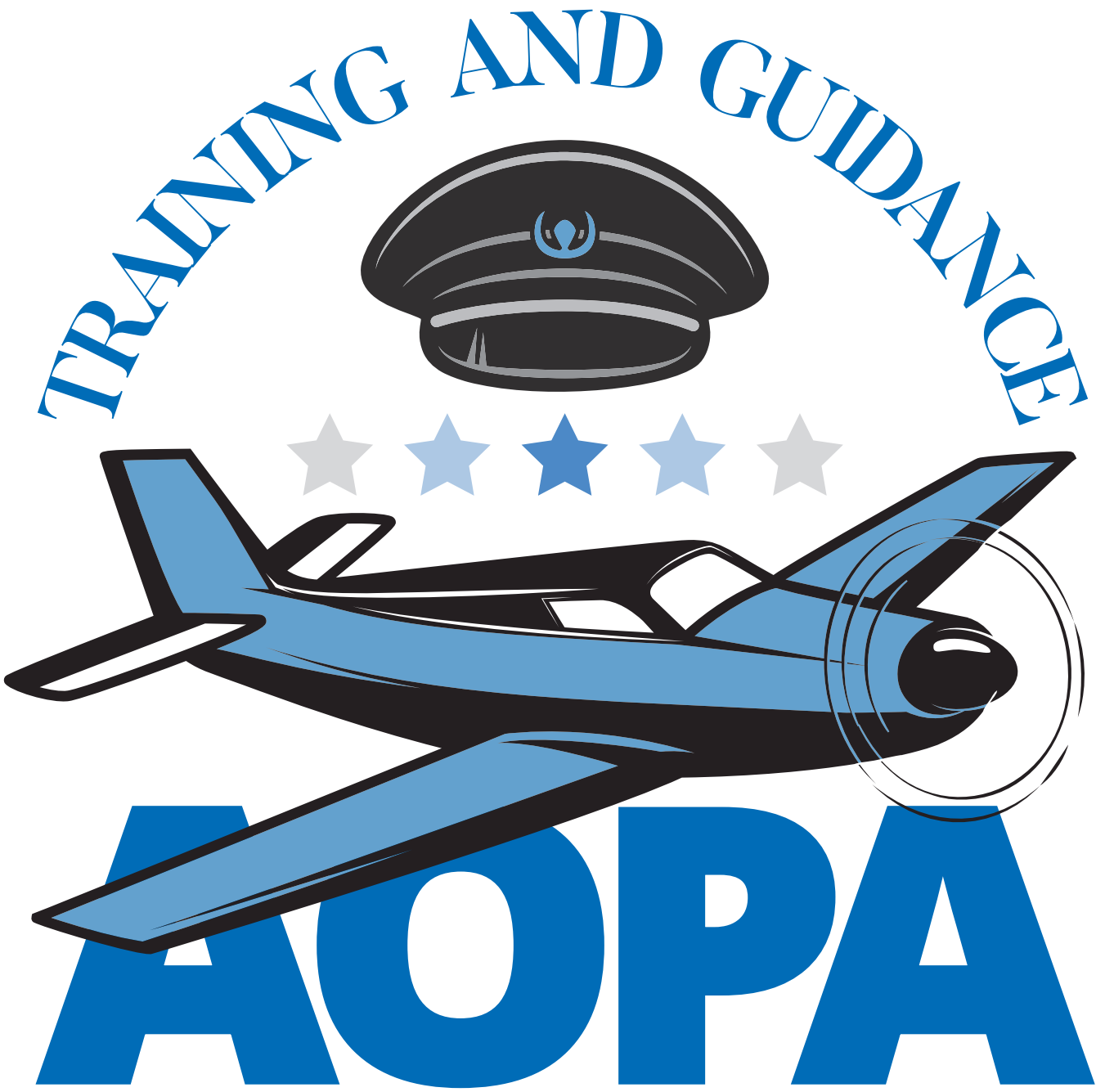
PERFORMANCE
Power plant: 2 × Rolls-Royce Derwent 8 centrifugal flow turbojet engine
Thrust: 3,600 lbf (16 kN)
Max speed: 600 mph (Mach 0.82)
Range: 520 nm (970 kmh)
Service ceiling: 43,000 ft
Rate of climb: 7,000 fpm
Time to altitude: 30,000 ft in 5 minutes
Wing loading: 44.9 lb/sq ft (219 kg/m²)
Thrust/weight: 0.45

DIMENSIONS
Length: 44 ft 7 in (13.59 m)
Wingspan: 37 ft 2 in (11.33 m)
Height: 13 ft 0 in (3.96 m)
Wing area: 350 sq ft (33 m²)

WEIGHTS
Empty weight: 10,684 lb (4,846 kg)
Gross weight: 15,700 lb (7,121 kg)



An unmodified Meteor with the standard enclosed rear cockpit



TRAINING – THIS MONTH

REFRESHER FLYING

WORDS Carol Cooper & Mike Derrett **IMAGES** Various

Experienced Instructors Carol Cooper and Mike Derrett offer some ideas and guidance on the content of the refresher flying, which is required every two years to revalidate an SEP or TMG Class Rating based on experience

CURRENTLY THERE are no guidelines issued by EASA or the CAA for the content of a refresher training flight, except that the exercises to be covered should be decided and agreed between the Instructor and the pilot. It is not a test with a pass/fail requirement and the Instructor cannot refuse to sign the pilot's log book.

The refresher flight training requirement may now be conducted by more than one FI or CRI and in more than one flight providing that the total achieved is a minimum of one hour. All Instructors must sign the pilot's log book for such flights. The Instructor who completes the hour may also sign off the Certificate of Revalidation in the pilot's licence if the Instructor's licence is endorsed with FCL.945 or if they are an appropriate Flight Examiner. Should the pilot be willing, a refresher flight is the ideal opportunity for further training both on the ground and in the air. The option of a more detailed ground school and an extended flight should be emphasised and promoted.

Current minimum requirements for revalidation by experience for PPLs with SEP and/or TMG Class Ratings are:

- 12 hours' flight time in the 12 months preceding rating expiry, to include a minimum of six hours PIC, 12 t/o & landings;
- Refresher training totalling at least one hour with an FI or CRI in the last 12 months of rating validity, with the flight signed off in the pilot's log book and the licence signed when all requirements have been met. This hour of refresher flying may be replaced by an appropriate LPC, skill test or assessment of competence in any other class or type of aeroplane.
- Revalidation by experience may be completed at any time in the last 12 months of rating validity.

Current minimum requirements for maintaining LAPL recency are different and the following minimum requirements need to be met within the 24 months preceding the date of flight:

- 12 hours' flight time as PIC including 12 t/o & landings;
- Refresher flight training of at least one hour total flight time with an FI or CRI (log book sign-off is not required at LAPL level, but is strongly advised. Instructors are also advised to keep a record of with whom they flew).

COMMON POINTS OBSERVED BY INSTRUCTORS CONDUCTING CHECK FLIGHTS

The average private pilot once qualified will probably only fly with an Instructor during refresher flight training, therefore the flight is a valuable opportunity to evaluate common points of weakness as well as including exercises that the pilot may want to cover, with emphasis on safety and good practice. The following is a list of points commonly noted by Instructors carrying out checks and refresher flights:

"The average private pilot once qualified will probably only fly with an Instructor during refresher flight training"

PRE-FLIGHT

- The Threat and Error Management (TEM) concept is very rarely used, many PPL holders have not heard of or do not understand the concept.
- Difficulty in preparing a mass and balance calculation.
- Lack of departure briefing and passenger safety briefing.

DEPARTURE

- Lack of lookout in the climb – few check-flight pilots do this properly, if at all.

UPPER AIR WORK

- Incorrect standard stall recovery.
- Poorly flown steep turns.

EMERGENCIES AND SYSTEMS FAILURES

- Partial engine failure is rarely practised and many pilots may never have practised this before. However, according to studies in Australia, it is three times more likely than an outright engine failure.
- Incorrect procedures for handling in-flight fires.
- Lack of knowledge of emergency descent procedures.
- Lack of knowledge of the aircraft's systems.

After the office admin has been taken care of, time for the pilot to begin pre-flight checks

• Lack of understanding of the symptoms of a failure or problem.

NAVIGATION

• A practice diversion using map reading and paper PLOG is proving a difficult exercise for many, especially without GPS or other electronic aids.
• Lack of correct use of paper PLOG and map due to over reliance on GPS.
• Incorrect use of GPS due to a lack of structured training in its use.

CIRCUITS

• Poor speed control on final approach especially with wind shear issues in the last 200 ft. This is especially noticeable with lighter GA types which are more susceptible to this issue. This has contributed to fatal accident statistics in the past.
• Inability to fly a standard overhead join.
• Inability to fly precision landings on short runways.

REFRESHER TRAINING – FORMAT AND EXERCISES TO BE INCLUDED

The following is a suggested list of exercises which could be included in refresher training. A very effective teaching aid is to set up scenarios that will help the pilot relate to real flying-world issues, including emergencies and how to handle them successfully.

BRIEFING AND PRE-FLIGHT

• Check licence, medical, address, ID and log book etc. Very often there are issues here that may require an LPC rather than a refresher flight.
• Check English language proficiency is valid if not level six.
• Check the pilot is aware of the Skyway code (new edition version 2 published May 2019) and where to ascertain information such as met, Notams etc.
• Mass, balance and performance calculations (if time is short this could be prepared by the pilot before the briefing).
• Discuss with the pilot the use of threat and error management and get them involved. For example, ask them about any threats to their safety during their flight with you and how they can be mitigated, such as a wet grass runway or a crosswind. Are they aware of 'Take 2' (maintain 200 ft vertical and 2 nm lateral separation from controlled airspace)?
• Suggest self-study of a long briefing on TEM such as (at time of writing): https://www.airpilots.org/file/2868/ppl-lesson-plans-2018.pdf
• Use of the WANT mnemonic: Weather, Aircraft, Notams and Threats.
• Use of the I'M SAFE mnemonic: Illness, Medication, Stress, Alcohol, Fatigue and eating.
• Does the pilot give a take-off/eventualities briefing? If not, discuss one suitable for them.
• Suggest a briefing pack to help with mass and balance, Notams and weather etc. Some of the flight planning/nav systems such as SkyDemon include these and are quick and easy to use once the aircraft is in the library. If a number of aircraft are routinely flown, they can all be put in the library for use when required.
• Is the pilot aware of listening squawks, where to find them, what they are for and how to use them?
• Review other less well-known squawks applicable to GA such as the lost code 0030, aerobatics 7004 and operations in some aerodrome traffic patterns 7010. Others are to be found at AIP ENR 1.6 ATS Surveillance Services and Procedures.
• Prepare a written PLOG for any navigation flight (if time is short this could be prepared by the pilot before the briefing).

"Other possible scenarios are that the brakes have failed and what action should be taken, or what to do if the door opens in flight"

FLIGHT EXERCISES: DEPARTURE, NAVIGATION AND EMERGENCIES

• Bring TEM into the pre-flight briefings and engage the pilot in this.
• It would be useful to do some navigation during the refresher flight (perhaps to the local flying area before the upper air exercises) due to the high number of infringements of controlled airspace. For example a short cross-country using a PLOG and map without GPS to establish the pilot's basic navigation and map-reading skill level.
• If the pilot uses GPS, get them to plan a short leg to your local flying area and then maybe suggest that a diversion is

planned without the use of GPS. Are they able to do so?

• During the flight, a mid-air emergency collision avoidance steep turn, perhaps briefing beforehand that this will be carried out as an exercise at short notice by the Instructor.

• Departure stall recovery for a private pilot can be an unsettling, high-nose-attitude, high-power, slow-speed event which if not corrected will ultimately lead to an unpleasant stall and likely wing drop. A refresher training flight provides an ideal opportunity to demonstrate this manoeuvre to the stalled condition. GASCo research indicates that loss of control accidents are more likely on departure than on the approach.

• According to the Australian Transport Safety Board research report AR–2010-055 at www.atsb.gov.au, occurrences of partial engine power loss are three times more common than a total power loss. So consider a partial power scenario with a rough-running engine with only enough power for level flight available. Ask your pilot what actions they would carry out; perhaps if they suggest diverting, ask them where to? What heading and what RT call? Then suggest that the engine is running more roughly and power is now down to a setting where level flight is no longer possible. Hopefully the pilot will suggest a precautionary landing which can be carried out to a safe height or you can then simulate a total engine failure as you close the throttle to complete a PFL.

• Consider the scenario of an engine fire with a practice emergency descent (a procedure which is not always given in flight manuals), a choice between a VNE dive, full flap descent at VFE or a side slip. Some of these procedures may need a demonstration and subsequent practice.

• Suggest a scenario where the low-voltage light has come on, or vacuum pressure is low. Does the pilot go to the check list to carry out the correct actions, or do they know the correct actions?

• Other possible scenarios are that the brakes have failed and what action should be taken, or what to do if the door opens in flight.

• On return to base, with destination in sight or from an overhead join, set up the scenario that the airfield is closed and you have to divert. Check for suitable planning with map and estimated heading, ETA etc. This exercise could also be done with GPS to check the correct use of the system's facilities ('Direct To' button etc.). It is not necessary to carry out a complete diversion, as an assessment of planning and initial track will probably be sufficient.

"Suggest a scenario where the low-voltage light has come on, or vacuum pressure is low"

• Simulated fuel leak – what actions to take?

• Simulated stuck throttle – what actions to take?

• Simulated bird strike, with some damage to a wing leading edge – what actions to take?

• Simulated asymmetric flap – what actions to take?

• Simulated poor visibility and low cloud base and the need to carry out a 180 degree turn on instruments.

ARRIVAL AND CIRCUITS

• Carry out a standard overhead join.

• A flapless landing will show the additional runway length required. Ensure the pilot aims to touch down at a pre-determined point using a precision landing technique; this may sometimes be demanding for pilots not used to shorter runways. Encourage precision landings with accurate touchdowns to use the minimum length of the runway.

• Carry out a landing simulating failure of the air speed indicator.

• Go-around actions simulating a blocked runway.

DE-BRIEF

• In addition to the flight de-brief, additional items can be reviewed such as the use of marshalling hand signals (few pilots will be able to recall the hand signal used to indicate a fire) and the importance of knowing the location of fire extinguishers on the ground. It is understood that you will not be able to carry out all these exercises, but we hope that this document will give Instructors some ideas so that they can discuss and choose appropriate exercises for the pilot with whom they will be flying. It is our hope that the pilots will both enjoy and learn from their refresher flight training. ■

THE AMERICAN WOMEN IN WWII

A book that looks at one of the forgotten groups of people who were essential during World War II

"THE WOMEN With Silver Wings is the true story of America's unsung heroines of World War II. Katherine Sharp Landdeck has written a beautifully researched tribute to the courageous women who bravely served their nation in a time of need," said author Fannie Flagg, about this book.

When the Japanese attacked Pearl Harbor in December 1941, Cornelia Fort was already in the air. At 22, Fort had escaped Nashville's debutante scene for a fresh start as a flight instructor in Hawaii. She and her student were in the middle of their lesson when the bombs began to fall, and they barely made it back to ground that morning. Still, when the U.S. Army Air Forces put out a call for women pilots to aid the war effort, Fort was one of the first to respond. She became one of just over 1,100 women from across the nation to make it through the Army's rigorous selection process and earn her silver wings.

The brainchild of trailblazing pilots Nancy Love and Jacqueline Cochran, the Women Airforce Service Pilots (WASP) gave women like Fort a chance to serve their country – and to prove that women aviators were just as skilled as men. While not authorised to serve in combat, WASP helped train male pilots for service abroad, and ferried bombers and pursuits across the country. Thirty-eight WASP members would not survive the war. But even taking into account these tragic losses, Love and Cochran's social experiment seemed to be a resounding success until, with the tides of war turning, Congress clipped the women's wings. The programme was disbanded, the women sent home. But the bonds they'd forged never failed, and over the next few decades they came together to fight for recognition as the military veterans they were – and for their place in history.

Author Katherine Sharp Landdeck is an associate professor of history at Texas Woman's University, the home of the WASP archives. A Guggenheim Fellow at the Smithsonian National Air and Space Museum, and a graduate of the University of Tennessee, where she earned her Ph.D., Landdeck has received numerous awards for her work on WASP and has appeared as an expert on NPR's Morning Edition, PBS, and the History Channel.

Her work has been published in The Washington Post, The Atlantic, and HuffPost, as well as in numerous academic and aviation publications. Landdeck is a PPL holder who flies whenever she can.■

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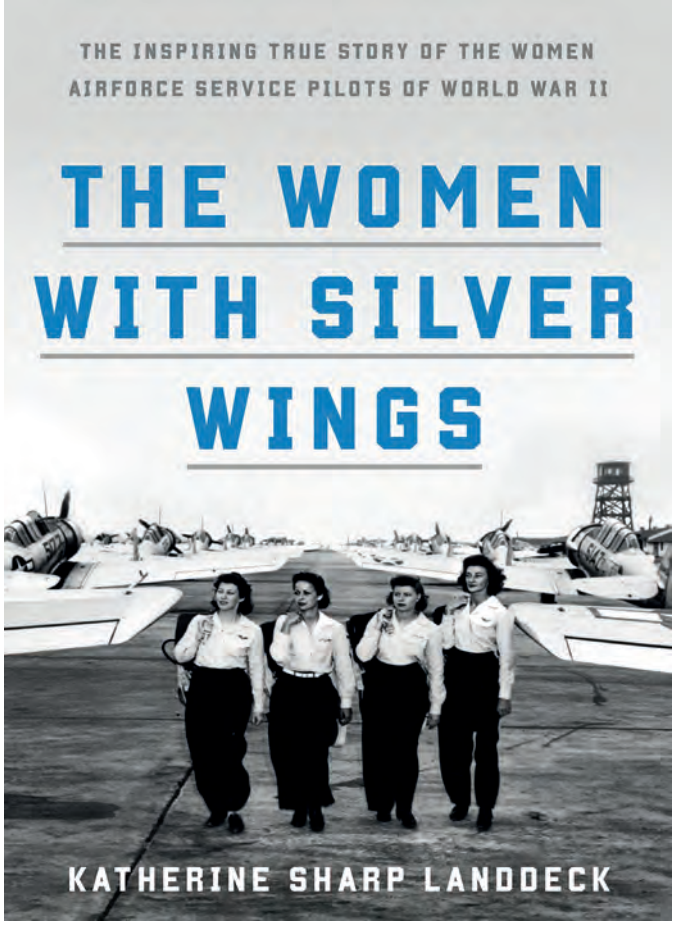

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Founded in 1961 as Euravia by British businessman Ted Langton and aviation consultant J.E.D. Walker, at a time of considerable turmoil for the independent sector of the British air operators' industry, Britannia Airways went on to become the world's largest holiday airline.

Just as Court Line evolved from Autair, so Britannia Airways evolved from Euravia. Both UK airlines had strong links with the travel industry: Court Line with Clarksons Holidays, and Britannia with the Thomson Group, in particular the 'Sky Tours' brand. Both were innovative in their own ways, and both grabbed the UK travel industry by the scruff of the neck and shook it into the jet age – Court Line travelling down the brasher cheap-and-cheerful road, while Britannia took the more staid, upmarket route. Drawing on the author's in-depth research and knowledge, as well as first-hand interviews, this is the full story of one of the most important airlines in the history of civil aviation.

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TEAMX UNVEILS THE AERA 760 GPS

Garmin release the seven-inch large-format portable navigator

THE AERA 760 boasts a seven-inch sunlight-readable touchscreen display complete with chart options in a compact and dedicated portable GPS.

Additional features include the option to load instrument approach procedures, arrivals and departures, approach chart overlay on the map, Garmin Connext wireless connectivity, as well as the option to integrate it with select Garmin avionics. The aera 760 is expected to be available in May for a list price of $1,599.

Carl Wolf, Vice President of Aviation Aales and Marketing said: "The aera 760 has the most robust aviation feature set to date, that is designed exclusively by pilots – for pilots."

The aera 760 is an all-in-one aviation portable complete with a built-in GPS/GLONASS receiver. It can run on battery power for up to four hours on a single charge. Along the bezel, an industry-standard USB-C connection is used to charge and power the aera 760, while a microSD card slot allows pilots to load topography and street maps or use it to easily transfer user waypoints. The aera 760 features an intuitive user-interface resembling that of many other Garmin products such as the GTN Xi series, G3X Touch and Garmin Pilot, allowing pilots to easily transition between products.

New to the 760 is that pilots can load departures, arrivals and instrument approach procedures (IAPs) within a flight plan, which can be wirelessly transferred to a navigator in the cockpit. Once a procedure is loaded within the aera 760, pilots have the option to view the chart or they can overlay it on the moving map. IFR en route charts, VFR sectionals and Jeppesen electronic charts are compatible.

Built-in Wi-Fi and Bluetooth allow the aera 760 to take advantage of Garmin Connext wireless connectivity inside and outside of the cockpit. When connected to Wi-Fi, pilots can download aviation database and software updates without the need to physically connect it to a computer. Prior to departure, pilots can also view worldwide weather information on the aera 760 when connected to Wi-Fi.

In the cockpit, it is capable of wirelessly connecting to select products such as the GTX 345 or the GDL 52 to display the benefits of Automatic Dependent Surveillance-Broadcast (ADS-B) traffic, Flight Information Service-Broadcast (FIS-B) weather, SiriusXM aviation weather and more via Bluetooth. Exclusive features such as TerminalTraffic and TargetTrend can be viewed on the moving map and dedicated traffic pages.

The aera 760 also features fuel price information, an E6B flight computer, and weight and balance calculators. Helicopter operators have access to features tailored to their unique operations, such as WireAware wire-strike avoidance technology.

WireAware overlays power line locations and relative altitude information on the moving map and provides both aural and visual alerting when operating near power lines. With optional map data, pilots can enter street intersections or non-aviation waypoints. ■

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ESTABLISHED AND FRIENDLY GROUP STARTED IN 1975.
GOOD AVIONICS, 2 SEATS, 115K CRUISE,
4 HRS ENDURANCE, GOOD AVAILABILITY.

Garmin G5 EFIS 2x 8.33 Comm, 2 Nav, ILS, Mkr, DME, Mode S Tx, PLB, OAT, Htd Pitot, Life raft & Jackets, Cover, G meter etc etc.

Currently £135 per month, £75 per hour.
(We also run a voluntary account to pre pay your flying costs)
SHARE PRICE £3000 BUT NEGOTIABLE

FOR MORE INFORMATION
Call **David Hall** on 01462 743799
or talk to **Bob Bushnell** in the Rochester Tower
(generally on Mondays) or on 07787 852855.

This very well-maintained BAe Bulldog is a real pilot's aeroplane. With a one sixth share available/ it comes with all AD's complete, inc. fresh hand-grips & engine bearer inspection. Avionics comprise: GNS430/8.33hz, second radio, separate VOR/ILS, DME & Garmin Transponder. Fly with the friendliest of groups, price £10,800.

For details contact **ROGER HAYES**
01825 851311 - 07860 257333 - roger@skysport-uk.com

Semi aerobatic 2 seat tourer based at Biggin Hill. 160hp engine approx 700 hrs Prop 375 hrs. Constant speed prop & retractable nose wheel. Good avionics with Mode S & new Trig 8.33 radio. Always hangared. Good availability.

£100 PM £125 PH WET. OFFERED AT £2500.00
Contact Gary 07785340368 or papaechogroup@gmail.com

Comfortable 4 seat aircraft with long range tanks.
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£115/hr Share price £4000 ono. 80 hours P1 required.
Small friendly long established group. Online booking with good availability. Non equity share also available.

Contact **Nick Brown** 07702 975348 or **Arun Sarwal** 07971 481012

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160 hp Lycoming IO-320 B1A. 1600 lbs MTOW.
Vortex generators. Roncz canard. Wilhelmson nose-lifter.
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£24,000. Based Tatenhill.

PLEASE CONTACT G SINGLETON
07739 582005 gphly@gmail.com

New at Cotswold Airport, this British Classic has an extremely low houred engine; new Trig 8.33 VHF Comm and flight duration of 4.5 hrs. With its excellent handing qualities at £85phr this is an ideal touring or hour building aircraft. Two £3k shares remain. We even have our own dedicated instructor.

CONTACT ROGER HAYES
01285 851333 or 07860 257333 or roger@skysport-uk.com

£4000 plus costs renewing N reg Trust, £170/month and £90/hour wet

- Airframe 5768hrs - Engine TSN 4193hrs, TSO 1950 hrs (we have an engine fund) - Cruise at 130-135kts true at FL090 - Fully IFR equipped - Bendix/King KLN89B IFR GPS - Garmin GTX330 Mode S transponder - Piper Autocontrol III autopilot (tracks heading, VOR, LOC, GPS) - Digital CHT monitor/Fuel flow computer

A friendly and well established 5 person group based at Denham is looking for a 5th member to join them.

PLEASE CONTACT andrewflyboy1@aol.com or 07956 282 940

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