



From the Cockpit – Permit to Fly

If you attended last month's lecture by Ben Syson of the LAA, you will have heard him talk about the *Permit to Fly*. For those who didn't, then a Permit is an alternative to the *Certificate of Airworthiness (CofA)*. It applies (mainly) to aircraft that are overseen by the Light Aircraft Association and the British Microlight Aircraft Association, and has a lighter regulatory touch than the CofA. Both the Permit and the CofA are the equivalent of a car's MoT, although what is involved is much more extensive than an MoT test, for fairly obvious safety reasons. There are no lay-bys up there!

Aircraft operating on a CofA require an annual check known as an *ARC (Airworthiness Review Certificate)*, so the airworthiness paperwork of an aircraft is a combination of its CofA and ARC. Similarly, while a Permit is normally issued for the life of an aircraft, it must be revalidated once a year to allow the aircraft to be flown, to obtain a *Certificate of Validity*. The ARC is an expensive process, and can typically cost several thousand pounds.

The Permit is an attempt to reduce the costs, but

UNITED KINGDOM CIVIL AVIATION AUTHORITY		
Certificate No: PR 054710/002		
PERMIT TO FLY		
Nationality and Registration Marks	Constructor and Constructor's Designation of Aircraft	Aircraft Serial Number
G-CCEM	ATHERDEN E AEROTECHNIK EV-97A EUROSTAR	PFA 315-13987
CLASSIFICATION: AEROPLANE		
This Permit to Fly is issued pursuant to the Air Navigation Order, hereby permitting this aircraft to fly within United Kingdom airspace only without a Certificate of Airworthiness being in force in respect thereof. This permission is for flight within United Kingdom airspace only and does not constitute a Certificate of Airworthiness issued pursuant to the Convention on International Civil Aviation dated 7 December 1944. This Permit to Fly is issued subject to the associated conditions and Popular Flying Association (PFA) Operating Limitations. EXEMPTION The Civil Aviation Authority in exercise of its powers under the Air Navigation Order, hereby exempts this aircraft from the provisions of the said Order which prohibit an aircraft from flying in contravention of the conditions of a Permit to Fly, from flying on any flight which does not begin and end in the United Kingdom without passing over any other country. This exemption is granted subject to the condition that before flying within any other country, permission is obtained from the appropriate authority of that country. A CERTIFICATE OF VALIDITY FORMS PART OF THIS PERMIT TO FLY The Certificate of Validity will be issued or renewed by an appropriately approved organisation upon being satisfied with the design, construction and airworthiness of the aircraft. The Certificate of Validity will remain valid for the period described below the seal of issue.		
Date: 6 JULY 2004		

No entries or endorsements may be made on this Permit or the Certificate of Validity except by an authorised person. If either document is lost, the Civil Aviation Authority should be informed at once. Any person finding these documents should forward them immediately to the Civil Aviation Authority, Safety Regulation Group, Aviation House, South Area, Gatwick Airport, West Sussex, RH6 0YR.

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070803

Permit to Fly

LAA Light Aircraft Association	
PERMIT TO FLY - CERTIFICATE OF VALIDITY	
National Permit Validity Reference: G-CCEM/DAI/1172/48/18122023	
Pursuant to the Article 41(4) of the Air Navigation Order 2016 of the United Kingdom and CAP 553 BCAR Section A Chapter A3-7.	
Light Aircraft Association Turweston Aerodrome, Nr Brackley, Northants, NN13 5YD Approval Reference: DAI/1172/48	
certifies that in respect of the following aircraft:	
Aircraft Manufacturer:	ATHERDEN E
Manufacturer's Designation:	AEROTECHNIK EV-97A EUROSTAR
Aircraft Registration:	G-CCEM
Aircraft Serial Number:	PFA 315-13987
An airworthiness review has been satisfactorily completed.	
Date of Issue	18/12/2023
Date of Expiry	17/12/2024
Signed	Name Fiona Storer

LAA Permit Validity August 2016

Certificate of Validity for an aircraft on a Permit to Fly

CERTIFICATE OF AIRWORTHINESS

United Kingdom Civil Aviation Authority		
Certificate Number: 061109/001	3. Aircraft Serial Number 19084	
1. Nationality and Registration Marks G-DHCV	2. Manufacturer and designation of aircraft ALEXANDER SCHLEICHER OHG SEGELFLUGZEUGBAU SCHLEICHER ASW 19 B	
4. Categories Sailplane or Powered Sailplane - Utility Category		
5. This Certificate of Airworthiness is issued pursuant to the Convention on International Civil Aviation dated 7 December 1944 and Regulation (EC) No 216/2008, Article 6(2)(c) in respect of the above mentioned aircraft which is considered to be airworthy when maintained and operated in accordance with the foregoing and the pertinent operating limitations.		
Date of Issue: 14 OCTOBER 2008	Signature: [Signature]	
Limitations/Remarks: None		
6. This Certificate of Airworthiness is valid unless revoked by the competent authority of the Member State of registry. A current Airworthiness Review Certificate shall be attached to this Certificate. EASA Form 25 07042008 This certificate shall be carried on board during all flights		

AIRWORTHINESS REVIEW CERTIFICATE

United Kingdom Civil Aviation Authority	
ARC Reference: 061109/001/001	
Pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council for the time being in force, the Member State hereby certifies that the following aircraft:	
Aircraft Manufacturer:	ALEXANDER SCHLEICHER OHG SEGELFLUGZEUGBAU
Manufacturer's Designation:	SCHLEICHER ASW 19 B
Aircraft Registration:	G-DHCV
Aircraft Serial Number:	19084
is considered to be airworthy at the time of issue.	
Date of Issue: 14 OCTOBER 2008	Date of Expiry: 5 MAY 2009
Signed: [Signature]	
EASA Form 15a - 01/04/2008 This certificate shall be carried on board during all flights	

Example of Certificate of Airworthiness and ARC ('annual')

only applies to specific aircraft types – the owner is not offered a choice. Whereas an ARC must be carried out by a licensed engineer, a Permit inspection requires an approved Inspector, a much less detailed examination and hence vastly reduced cost. My last Permit inspection cost 'just' £180 and took around three hours, although it costs another £280 to have the Certificate of Validity issued – rather more than the 20 minutes or so that an MoT takes, and more than the £50 or so it costs in total. A limitation is that Permit aircraft, with the exception of microlights, are not allowed to be used for *ab-initio* pilot training unless the pilot either owns the aircraft or at least owns a share of it, or for any other commercial work.

Another advantage of a Permit aircraft is that the owner is allowed to do much more of the maintenance than they could for an aircraft on a CofA. I came away with a list of work that needed to be done before the inspector is able to release the aircraft for its test flight, but am able to do all the work myself – no expensive licensed engineers required. Once completed, I will call the inspector back to check the work has been done satisfactorily.

A car MoT doesn't involve a test drive, but for a Permit revalidation, a test flight is required. Again, there are no special restriction on which pilot conducts the test flight,



and it is usually the owner. At each stage of the flight, a note is made as to whether the behaviour of the aircraft is satisfactory. In some cases, specific measurements are to be made, such as a timed climb through a 1000-foot height gain. This can then be compared with the previous year's rate of climb to look for anomalies.

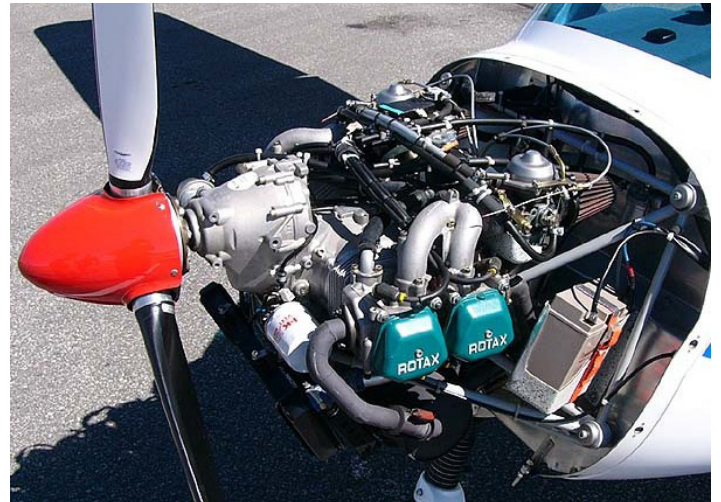
A couple of 'interesting' conditions that need to be flown are the stall, and flight to *Vne* – the never-exceed speed. The latter is generally uneventful except that it requires a shallow dive to reach, which means diving towards the ground at speeds that are not otherwise seen. The former can be a greater test of nerve – the stall. Unless they practise such manoeuvres occasionally, pilots will normally experience a stall only when carrying out a test flight. Any other time is unintended and definitely not recommended.

The flight test requires a stall in each of two conditions – clean (no flaps) and in the landing configuration (with full flap). My Eurostar shows a very benign stall with the flaps retracted, just a gentle nod of the nose and an easy recovery. With flaps down, it's rather different. The nose drops quite sharply as the wing stalls, and is usually accompanied by one wing dropping. The result from the pilot's seat is that aircraft, which was pointing skywards, suddenly pitches down and rolls quite strongly, presenting the pilot a clear view of the hard stuff. Recovery is simple – push the nose down and allow the wing to regain its airflow, then roll the wings level. Trying to level the wings first won't work because the wing is stalled, so the ailerons don't work! Of course, that's the reason why these manoeuvres are carried out at a decent altitude. Fortunately, the Eurostar's behaviour does not extend to having a wing drop developing into a spin.

This year's renewal has been more of a problem than I've experienced before. The inspector produced a list of work that needed to be done, and some have been quite time-consuming. Also, in doing one job, I created another due to the condition of parts I was taking off, and making that good the resulting problem means taking the wing off. I'm told it's

a straightforward job, but that remains to be seen. At least the weather is bad, so this down time isn't costing much in the way of flying opportunities, even if it's hitting the bank balance harder than expected.

Ray Wilkinson



*Rotax 912 engine (not mine) with cowls off for maintenance.
Image: Ahunt/Wikimedia*