

Popham power

by Martyn Ingelton

TENTATIVE discussions between Medway Microlights and UL Power at last year's Popham Microlight Fair seeded the thought that there could be a new choice in the 80hp to 100hp aero engine range for the SLA.

After gaining certification for the Rotax-powered SLA 80hp and 100hp microlight aircraft, and not being able to source engines, the SLA95i project was planned as a cooperative activity with UL Power. The goal was to fly a UL-powered SLA aircraft to the 2007 Popham Fair.

A new engine mount, bulkhead and upper engine casing were manufactured for the aircraft. UL Power loaned an engine plug for fit trials and load testing followed by an operational engine in mid-April.

Installation was achieved without any major problems, and downloads from the UL website provided most of the information required. The biggest issue was sorting out the instrumentation since the engine is not offered with a standard sensor set. A Stratomaster Ultra instrument with a combination of aero and automotive senders that suited the engine interfaces

was chosen. This was supplemented with analogue fuel pressure and vacuum gauges.

Roll-out was achieved six days prior to Popham. The engine had been fitted with a two-blade wooden propeller that had been previously flown on the Rotax 912S engine. The tethered aircraft started first time and sounded delightful with a low frequency growl... sadly too low! Ground rpm reached about 1800, releasing a mere 46 of the potential 95hp available. Clearly the propeller had to be adjusted or changed.

Fortunately, UL Power was able to loan a Sensenich two-blade ground-adjustable propeller and 2800rpm was achieved on the ground.

Flight testing started on the Thursday afternoon before Popham with the first flight achieved at 1800. Further testing on Friday concluded that the engine and installation were robust and reliable for the flight to Popham; the target had been achieved.

Two weeks after the aircraft's debut at Popham, the aircraft had accumulated eight hours' flight time. The engine has demonstrated clean starts and operated impeccably, maintaining



■ The UL-powered Medway SLA destined for Popham.

steady and balanced Ts and Ps and shuts down with smooth precision.

Vibration experienced during the early flights has been reduced by changing the angular alignment of the propeller blades to the crank, and more accurate blade pitching.

Flight performance data gathered so far suggests climb performance between the 80hp and 100hp Rotax-powered aircraft. Best climb

indicates about 83hp is being delivered.

More work has to be done to further reduce vibration, prove the reliability of the engine management system, assess the need for an oil cooler and finally improve the look of the test aircraft's engine cowling!

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W: www.ravenmad.co.uk

W: www.ulpower.com



■ Medway Microlights managed to beat the deadline for new UL engine installation.

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