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SERVICE BULLETIN SB-EV97-UK-012 Issue 1 KIT BUILT EV-97 & EV97A EUROSTAR AIRCRAFT CHANGE OF CYLINDER HEAD TEMPERATURE LIMIT

Classification - Recommended

<u>Aircraft Affected</u> All Kit built EV97 & EV-97A Eurostar aircraft.

Background

Cosmik recommend the use of a conventional Ethylene Glycol antifreeze mixed with 50% water as engine coolant. See Rotax Service Instruction SI-912-016 (latest revision) for further information and some recommendations.

When the Pilots Operating Handbook for the EV-97 was originally written, Rotax specified a maximum Cylinder Head Temperature (CHT) of 150°C. Since then they have revised their recommendation and now specify a maximum coolant temperature of 120°C if 50/50 water/antifreeze mixture is used. If a homebuilt EV-97 is only fitted with a CHT gauge this Bulletin applies. There is, however a relationship between coolant temperature and CHT.

When Rotax changed their recommendation Evektor did not change the POH which is supplied for homebuilt aircraft, and Cosmik inadvertently did not revise it either. Fortunately the cooling system on the Eurostar is extremely efficient and tests have shown that a coolant temperature of 120°C has never been reached even in severe operation.

The CHT is typically somewhat higher than the coolant temperature. On this basis we have decided to reduce the maximum CHT to 120°C, which will mean the coolant temperature will always be below its boiling point, and a separate coolant temperature gauge need not be fitted.

For current recommendations from Rotax, see the latest issue of the Engine Operators Manual and Installation Manual which are available for free download from the Rotax website www.rotax-aircraft-engines.com

Aircraft owners are advised to regularly check for additions and changes to Rotax publications.

Action Required

Owners of homebuilt EV-97 aircraft are requested to do the following

1) In the Pilots Operating Handbook EV2000RPOHUK on page 2-3 amend maximum CHT from 150°C (302°F) to 120°C (248°F).

On Page 2-4 amend Caution Range from 100-150°C (212-302°F) to 100-120°C (212-248°F) and amend Maximum Range from 150°C (302°F) to120°C (248°F).

2) If the aircraft is fitted with the optional Kiev propeller, amend page 3 of the Pilots Operating Handbook Supplement (POH/EUR/01 Supplement 01) to show maximum CHT of 120°C (248°F) instead of 150°C (302°F). Amend the Engine Limitations Sample placard on page 4 to read maximum CHT of 120°C instead of 150°C.

3) If the aircraft is fitted with the optional Woodcomp Klassic propeller amend the Pilots Operating Handbook Supplement (POH/EUR/01 Supplement 02) exactly the same as in 2) above.

4) IF the aircraft is fitted with the optional Rotax 912 ULS (100 hp) engine, please amend the 912 ULS supplement to the POH as follows.

On page 2-3 for 912 ULS engine amend maximum CHT from 135°C (275°F) to 120°C (248°F).

On page 2-4 amend caution range from 100-135°C to 100-120°C and maximum range from 135°C -120°C.

5) On the aircraft instrument panel revise the Engine Limitations placard and/or the CHT gauge to show a maximum CHT of 120°C instead of 150°C.

6) Make an entry in the Aircraft logbook stating that Service Bulletin SB-EV97-UK-012 Issue 1 has been complied with.

7) Keep a copy of this Bulletin in the aircraft records.

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