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29th April 2010

SERVICE BULLETIN SB-EV97-UK-011, ISSUE 1
KIT BUILT EV-97, EV-97A & EV-97SL EUROSTAR AIRCRAFT
CHECKING THE STRENGTH OF THE LOWER WING SPAR CAPS

Classification - Essential

The CAA intend to classify the checking of the lower wing spar caps as mandatory and will therefore issue a Mandatory Permit Directive.

Nature of Defect

There is the possibility that some of the material for the lower wing spar caps was manufactured below the specified strength. This would result in a reduction of the overall strength of the wing(s).

Airworthiness implications

If the lower wing spar caps are made from material of reduced strength, the failure load could be reduced to less than the ultimate load required, resulting in failure of the wing under extreme conditions beyond the normal limit load.

The CAA have recognised the possibility of this and, with MPD 2009-10 have mandated a reduction in the Never exceed Speed (Vne) and the manoeuvring speed (Va) which reduces the maximum possible G loading by 25%.

In order to return all aircraft to their original limitations, checking of the wing spar caps strength is necessary, with rectification action if the strength is below a minimum agreed with the CAA.

Aircraft Affected

All kit built EV-97, EV-97A and EV-97SL Eurostar aircraft supplied by Cosmik Aviation before the date of this bulletin must be checked, with the exception of

a) Any aircraft which have had the spar material strength checked by Evektor before wing assembly, and have a declaration to that effect issued by Evektor or Cosmik Aviation.

Inspection Required

All affected aircraft must have their wings removed for inspection.

The inspection consists of measuring electrical conductivity at various points on the lower spar caps. The inspection requires specialised equipment and techniques, and can only be carried out by Cosmik Aviation or persons authorised and trained by them.

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Prior to the inspection it is necessary to cut an inspection hole in the undersurface of each wing, which after the inspection is sealed with a riveted and bonded cover plate. The incorporation of the inspection hole is detailed in Cosmik Modification No. 21, and will normally be carried out by Cosmik Aviation at the time of inspection.

The actual inspection process is detailed in Cosmik Aviation Document GEN/EUR/03 which is an internal document written for the persons carrying out the inspection.

The strength of the spar material is determined from the measurements taken during the above procedure.

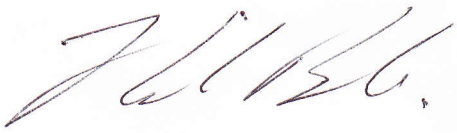
If the results satisfy the inspection criteria the wings may be returned to service.

If the results do not satisfy the inspection criteria, the wing(s) must have new spar caps fitted before re-fitting.

A logbook entry, including the serial numbers of both wings, is required confirming that the conditions of this bulletin have been complied with.

The refitting of the wings requires a duplicate inspection and two signatures in the aircraft logbook.

A copy of this Bulletin must be kept in the aircraft records.



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