

**DSAC
RECOMMENDATION
BULLETIN**

Issued by : OSAC pour DGAC FRANCE

On : 23 JUILLET 2014

Subject : CAP10B wing – flight envelope

Publication Ref. :

Airworthiness Directive DGAC No 2003-375 dated 1st October 2003.

Aircraft concerned :

CAP10B aeroplanes with a wooden wing.

Context :

Following in-flight wing fractures of CAP 10B aeroplanes in 2001 and 2003, the DGAC issued AD No 2003-375 mandating a limitation of the flight envelope (-3.5 g / +5g in solo flight and -3.5g / +4.3g with two persons on board, airspeed for flight manoeuvres limited to 160 km/h / 86 kts) and periodic inspections of the extrados and intrados wing spar caps in the wing root area.

No further accident has occurred since this AD has entered into force.

The load factor reduction mandated by the AD has probably reduced the risk of initiation of new compression cracks.

However such cracks may have initiated previously, in particular if the limit load factors have been exceeded during the service life of the aircraft, and there are uncertainties regarding:

- their detectability during the existing periodic inspections (cracks have been found outside the areas covered by these inspections)
- their propagation speed, despite the reduced load factors mandated by the AD.

Recommendation :

The DGAC recommends application of modification/repair solutions extending the fatigue life of the structure and allowing to restore the initial flight envelope (-4.5g / +6g).

As of today, two such solutions are available:

- The installation of a wood/carbon wing in application of Apex Aircraft modification No 0032 (CAP 10C) ; the equipped aeroplanes are not subject to AD No 2003-375.
- A carbon reinforcement of the wing in application of Air Menuiserie GM200 repair ; it has been approved by EASA as an alternative means of compliance (AMOC) to AD No 2003-375 and allows to restore the initial flight envelope and to avoid extrados wing cap periodic inspections.

Note : in both cases, the maximum speed for flick manoeuvres remains limited to 160Km/h / 86 kts.