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Technical Advice No.13
June 25th, 2007

Affected Aircrafts:
CTSW2006 model year 2006 and 2007
serial numbers 06-07-15 to 07-05-18 inclusive, when equipped with full span trim tab.

Discussion
Directly preceding this TA a CTSW 2007 exhibited significant stick vibration in pitch during high speed flight. The aircraft remained controllable, and, after slowing down, the vibration stopped.
The investigation ruled out the trim tab balance as these are mass balanced at the factory in accordance with detailed flutter and ground vibration tests and analysis.

Fig. A: Inspection area: Trim tab control horn attachment point
(Seen from underneath the stabilator)

The investigation did determine that a pitch control vibration could result from the de-bonding of the upper and lower trim tab (anti-servo tab) skin exactly in the area of the Trim Tab Bracket (Part No. KA 3011110) as evidenced by a crack located at the attachment point. (Fig. A)

Corrective Action
Flight Design is mandating an immediate inspection of the Trim Tab Bracket attachment area, with special consideration of the trim tab composite structure. The inspection will be performed before the next flight and thereafter prior to the first flight of the day. When performing the

inspection, the trim tab has to be carefully loaded by hand in the middle area, in order to enable finding of small damages.

If cracks are found in the area of bonding (attach point) (Fig. A), the aircraft must not be flown until the mandated reinforcement procedure is completed.

Regardless whether cracks are found, all aircraft listed in this Safety Directive are subject to the modification procedure within the next 25 flight hours, or at the next maintenance interval, whichever occurs first.

As an additional precaution, the maximum airspeed for the affected aircraft will be limited to Vne = 120 KIAS = 222 km/h IAS (maximum speed in level flight with maximum continuous power) in all regimes of flight including descending flight.

Procedure:
The reinforcement procedure consists of reinforcing the point at which the control horn is bonded to the trim tab by the addition of specifically designed part manufactured by Flight Design (WA 3011011). The part is glued (bonded) to the control rod bracket and the lower trim tab surface and delivers a secondary load path for the trim tab control forces. The modification can be done without removing the trim tab, and does not require painting action. (Figs.B1 & B2)

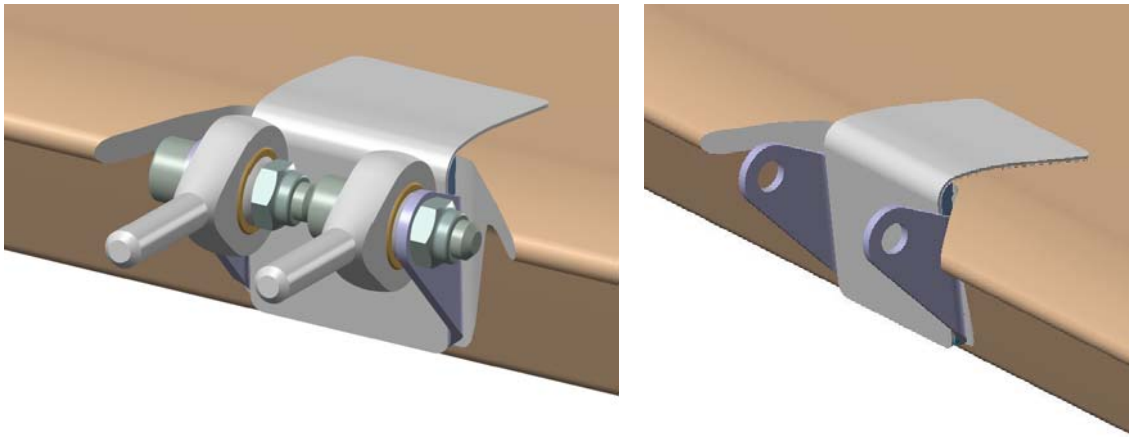

Fig B1 & B2: Reinforcement installed to the trim tab
(Tab shown bottom surface facing up)

The procedure shall be completed according to Flight Design document: “070625 – TRIM TAB REINFORCMENT PROCEDURE” that accompanies this Safety Directive, and supplemented by the Maintenance Manual.
The task specific training will consist of consulting with the nearest Distributor prior to performing the modification. Country specific qualification requirements have to be considered.

Completion of the procedure has to be marked in the planes logbook and confirmed by an appropriate aircraft inspector, as required by national valid regulations.

Cost:
The procedure will be performed for free at the nearest Flight Design dealership. Should an owner decide to have the work done locally, a credit of 120,00 Euro will be issued upon return of a written confirmation that the task has been performed according to the FD procedure. The task specific training will consist of consulting with the nearest Distributor prior to performing the modification.

The reinforcement part will be supplied at no cost by Flight Design and will be obtained by the owner at the dealership level.