

98/21E/15

22 May 2009



Dear Sir

Fletcher FU24 Fin Engineering Review – Final Report

In November 2005 an FU24-950 ZK-DZG was involved in an accident near Whangarei with the loss of two lives. This aircraft had been previously converted to turbine power in accordance with a CAA Supplementary Type Certificate (STC). After a period of investigation the CAA attributed the accident to the in-flight separation of the vertical fin and the Aircraft Certification Unit (ACU) commenced an engineering review to establish the airworthiness of the Fletcher aircraft vertical fin from a damage tolerance, structural design and fatigue strength perspective.

In February 2008 a workshop with interested parties was hosted by the ACU to share the information gathered up to that time. It was also an opportunity for comment and discussion on the review findings to date.

The engineering review investigated the effect of the STC conversion on Fletcher Aircraft, including:

- Measurement and analysis of Fletcher fin loads for both piston and Walter turbine powered aircraft.
- Review of Fletcher and Cresco fin defect and accident history.
- Review of Fletcher certification and STC fin structural reports.
- Recommendations for improvements to CAA's STC process and the Continuing Airworthiness process.
- Recommendations to improve the airworthiness of the Fletcher fin structure.

The engineering review has now been completed and is available on the CAA website at; www.caa.govt.nz/aircraft/aircraft.htm

The engineering review is just one of a number of initiatives that CAA has underway with respect to agricultural aircraft.

The CAA recently issued an Airworthiness Directive (DCA/FU24/178) for FU 24 vertical fin replacement. There are two other principal bodies of work that will now progress in parallel, the joint CAA/Industry Project Working Group (PWG) rewrite of Part 137 and matters arising from the Agricultural Aircraft Safety Review (AASR). The two bodies of work overlap to a degree but will address largely separate issues.

The PWG rule rewrite issues are familiar to most industry members and will result in significant improvements to operational standards across the agricultural sector.

The issues arising from the AASR, completed in December 2008, are no less important. Accordingly, an internal CAA Project Team has been established, chaired by the undersigned and made up of CAA staff from aircraft certification, operations, rules and policy units, which will work with industry to determine the way forward. The intention is to meet with as many operators as possible over the next few months.

Yours sincerely

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