

PFA AIRWORTHINESS INFORMATION



ELIMINATION OF ELEVATOR FLUTTER ON STREAK SHADOW, STAR STREAK AND PFA SHADOW D SERIES AIRCRAFT

Applicability:

All CFM Streak Shadow, Star Streak and those Shadow D series aircraft which are issued Permits to Fly on PFA recommendation.

Compliance by: 4th April 2005.

Background:

A recent flight test investigation carried out by the PFA on Streak Shadow and Shadow D Series aircraft has shown that there is a possibility of elevator flutter occurring in flight, when the pilot's hand is not resting on the side-stick control. This is seen as a rapid oscillation of the elevators and elevator control system from stop to stop which, if left unchecked, might lead to a structural failure.

Investigation suggests that the amount of friction in the elevator control system is the main variable determining the likelihood of flutter developing.

This bulletin mandates fitting a modification which prevents the elevator flutter from occurring. Compliance with this bulletin is legally mandatory as a result of the CAA's issue of Mandatory Permit Directive number 2005-003.

Due to the dynamic similarity of the Star Streak aircraft to the Streak Shadow this variant is also included in the applicability of this bulletin.

Actions required:

1. Before the first flight that occurs after 5th April 2005, fit a PFA modification approved for the purpose of preventing undamped oscillations of the elevator control system.
2. Modification SM11419 which fits a flutter damper to the base of the rear cockpit control stick is one modification accepted for this purpose. The alternative rear fuselage mounted elevator damper modification 11420 already fitted to G-MYTY and mass balance arm modification 10777 already fitted to G-BZWJ are also accepted for this purpose on these specific aircraft only.
3. PFA inspector to inspect modification for quality, conformity and function, update the weight and balance schedule, make a suitable airframe logbook entry stating the modification number and MPD number 2005-003 and when entirely satisfied with the modification installation, issue a Permit Maintenance Release (PMR) releasing the modification work and allowing the aircraft to be returned to service.