

Follow-up Action on Occurrence Report

ACCIDENT TO STREAK SHADOW SA, G-TTOY, AT OLD SARUM ON 17 SEPTEMBER 2003
(MICROLIGHT DEPARTED RUNWAY ON TAKEOFF AFTER STRUCTURAL FAILURE)

CAA FACTOR NUMBER : F25/2004
FACTOR PUBLICATION DATE : 11 June 2004
OPERATOR : Private
CAA OCCURRENCE NUMBER : 2003/06445
AAIB REPORT : Bulletin 5/2004

SYNOPSIS

(From AAIB Report)

During the take-off run, a weld connecting the right stub axle to the right landing gear strut, failed. The end of the strut contacted the ground and twisted rearwards, the aircraft veered to the right and came to rest just off the runway. Fuel leaked from the slipper fuel tank located beneath the fuselage, as a result of the rearward twisting of the landing gear having crushed, and holed, the top of the slipper tank. The investigation revealed the very poor standard of this weld on this aircraft, and on eight other examples examined, suggesting that many other aircraft might be similarly affected.

FOLLOW UP ACTION

The two Safety Recommendations, made by the AAIB following their investigation, are reproduced below, together with the CAA's responses.

Recommendation 2004-02

The UK Civil Aviation Authority, in conjunction with the British Microlight Aircraft Association (BMAA) and the Popular Flying Association (PFA), should review the adequacy of the main landing gear lower fittings currently in service on Shadow aircraft, in light of the evidence suggesting that significant numbers of these are likely to contain weld defects which significantly reduce their static strength compared with that assumed at the time of certification.

CAA Response

The CAA accepts this recommendation. The CAA in conjunction with the British Microlight Aircraft Association (BMAA) and the Popular Flying Association (PFA), has reviewed the adequacy of the main landing gear lower fittings currently in service on Shadow aircraft. As result of this review, a new main undercarriage has been developed and is in the process of being approved under the control of the BMAA and PFA. This new undercarriage includes a redesigned lower fitting with increased strength and post welding heat treatment. The UK CAA has issued Mandatory Permit Directive 2004-007 making the replacement of the standard undercarriage mandatory on all UK registered Shadow, Streak Shadow and Starstreak aircraft types under the control of the PFA.

CAA will revise this MPD to address BMAA aircraft when the BMAA modification approval process has been completed.

CAA Status - Closed

Recommendation 2004-03

The UK Civil Aviation Authority, in conjunction with the British Microlight Aircraft Association (BMAA) and the Popular Flying Association (PFA), should review the adequacy of the slipper fuel tank mounting arrangement, insofar as this makes the tank vulnerable to fracture and leakage of fuel during any incident which causes a rearward rotation of the gear about its attachment to the fuselage.

CAA Response

This CAA accepts this recommendation. The CAA in conjunction with the British Microlight Aircraft Association (BMAA) and the Popular Flying Association (PFA), has reviewed the adequacy of the slipper fuel tank mounting arrangement, insofar as this makes the tank vulnerable to fracture and leakage of fuel during any incident which causes a rearward rotation of the gear about its attachment to the fuselage. The new main undercarriage, developed under the control of the BMAA and PFA, includes strengthened main undercarriage attachment fittings and reinforcement of the fuselage floor at the attachment point, to prevent rotation of the gear about its attachment point and minimise the risk of slipper tank fracture and leakage of fuel. The UK CAA is in the process of mandating the replacement of the standard undercarriage on all UK registered Shadow, Streak Shadow and Starstreak aircraft types.

CAA Status - Closed