Safety Regulation Group
Safety Investigation and Data Department

Follow-up Action on Occurrence Report

ACCIDENT TO CESSNA F152, G-BIJX, AT HEADCORN AERODROME ON 1 JULY 2003
(AIRCRAFT OVER-RAN RUNWAY AFTER ENGINE PROBLEMS DURING TOUCH AND GO LANDING)

CAA FACTOR NUMBER	:	F23/2004
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OPERATOR	:	Club-Group
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AAIB REPORT	:	Bulletin 5/2004

SYNOPSIS

(From AAIB Report)

The instructor and her student were on a training flight from Lydd to Headcorn. The student who had accumulated 36 hours was the handling pilot and the intention was to do a touch and go at Headcorn and then return to Lydd. The engine power checks at Lydd were normal and the acceleration during takeoff was also reported as normal. During the cruise, at an altitude no higher than 2,100 feet, they observed some showers in the area and applied carburettor heat several times as a precautionary measure. After a direct join to the downwind leg at Headcorn, the student applied carburettor heat for approximately 10 seconds and then set it back to COLD. On base leg the student re-applied carburettor heat and reduced the power to 1,700 RPM to begin a descent. The aircraft was lined-up on finals for an approach to Runway 29 (grass) with full flap (30°) at 65 KIAS. At approximately 200 feet agl the student set the carburettor heat back to COLD.

The instructor reported that the final approach was stable and she estimated that the aircraft touched down 30 feet beyond the runway threshold marker boards. During the landing roll the instructor reduced the flap setting to 10° and visually checked that the flaps had been retracted to this position. She then realised that the aircraft was not accelerating normally and called to the student “Full power! Full power!” She then placed her hand on the throttle, over the student’s hand, and confirmed that the throttle was set to full power. She glanced at the RPM gauge, which was indicating approximately 2,100 RPM. The aircraft was still not accelerating normally and the airspeed indicator was rising slowly. At approximately 40 to 45 KIAS the instructor took control and aborted the takeoff because she did not believe the aircraft would gain sufficient speed to clear the hedge at the end of the runway. She closed the throttle, pulled the yoke aft and applied the wheel brakes. At this point she estimated the aircraft had used up more than two thirds of the runway length (landing distance available was 796 metres). The braking action was not very effective and the instructor believed that they were probably skidding on the short wet grass. The aircraft ran off the end of the runway and penetrated a hedge approximately 180 metres from the runway threshold. It came to a rest on a country road on the other side of the hedge. Both pilots had been wearing lap and diagonal harnesses and were able to exit the aircraft unaided and uninjured.

FOLLOW UP ACTION

The one Safety Recommendation, made by the AAIB following their investigation, is reproduced overleaf, together with the CAA’s response.

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Recommendation 2004-01

The CAA should sponsor or conduct research to determine:

a. How readily carburettor ice can form at low power settings with carburettor heat ON.

b. How quickly carburettor ice can form when carburettor heat is OFF;

c. Whether the Authority's advice on the use of carburettor heat during an approach to land should be revised in the light of its research findings.

CAA Response

The CAA accepts this recommendation.

A CAA sponsored research programme has been initiated at Loughborough University to investigate a wide range of issues relating to Carburettor Icing. The scope of this research includes the need to determine the propensity for carburettor ice to form with the carburettor heat in both the on and off positions.

The CAA's advice on the use of Carburettor Icing during an approach to land will be reviewed against the conclusions of this research and revised as necessary.

This work is expected to be complete by December 2005.

CAA Status - Open