

Follow-up Action on Occurrence Report

SERIOUS INCIDENT INVOLVING BOEING B727 230F, OO-DHY, AT EAST MIDLANDS AIRPORT ON 19 NOVEMBER 2002
(COMPRESSOR BLADE FRACTURE CAUSED ENGINE FAILURE ON TAKE OFF)

CAA FACTOR NUMBER : F3/2004
FACTOR PUBLICATION DATE : 12 January 2004
OPERATOR : DHL
CAA OCCURRENCE NUMBER : 2002/08350
AAIB REPORT : Bulletin 12/2003

SYNOPSIS

(From AAIB Report)

The crew reported a loud grinding sound immediately followed by illumination of the 'engine failure' light. They aborted the takeoff at approximately 30 kt and as the thrust levers were closed the commander was aware of resistance within the No 1 thrust lever system. Subsequent examination revealed significant fire damage centred around the underside of No 1 engine, evidence of penetration from inside the engine casing and a fracture of a second stage low pressure (LP) compressor fan blade at the root attachment. There was no evidence of cowl penetration.

Previous incidents, where JT8D second stage LP compressor blade root fractures have caused the release of a blade from the disk, resulted in a manufacturer's Alert Service Bulletin (ASB) No 5729 requiring an ultrasonic and fluorescent penetrant inspection of all second stage fan blade roots. The fan blades from this engine had been inspected in accordance with the ASB but this failure occurred before a re-inspection was required. A blade redesign is available through implementation of a further Service Bulletin (SB). There have been no reported failures to modified blades.

FOLLOW UP ACTION

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

Recommendation 2003-113

It is recommended that the FAA, in conjunction with Pratt & Whitney review the inspection and re-inspection period for the LP compressor second stage fan blades as detailed in ASB 5729 and mandated in AD 87-14-01.

CAA Response

This Recommendation is not addressed to the CAA.

CAA Status - Closed

Recommendation 2003-114

It is recommended that the FAA, in conjunction with Pratt & Whitney, mandate SB 5866 that provides a more durable second stage fan blade root attachment and a higher life second stage disk.

CAA Response

This Recommendation is not addressed to the CAA.

CAA Status - Closed