

BULLETIN CORRIGENDUM

AAIB File:	EW/C2001/3/4
Aircraft Type and Registration:	DHC-8-311, G-JEDD
Date & Time (UTC):	20 March 2001 at 1545 hrs
Location:	Bristol International Airport, Avon
Information Source:	AAIB Field Investigation

AAIB Bulletin No 1/2002, page 1 refers

The final two sub-sections of the report should be replaced with the following wording:

Operator's Checklist

The Operator's Normal Checklist that was current at the time of the incident indicated that the Ice Protection/Ignition should be selected 'as required' during the Line Up checks. Additional advice contained in their Dash 8 Operational Notice 48/00 dated 13th October 2000, valid until 13 April 2001, indicated that '*During icing conditions, open by-pass doors and select ignition to MANUAL immediately after engine start (series 100, 200 and 300 not incorporating Auto Relight System MODSUM 8Q100813/Service Bulletin 8-74-02)*'

After this incident, the operator revised the aircraft checklist to provide an additional check of ice protection prior to taxi. Had the ignition been selected manually to ON at this stage, then it is unlikely that the engine flameouts would have occurred.

Manufacturer's Service Bulletin

When operating in icing conditions, it is an Aircraft Flight Manual Limitation requirement that engine ignition be selected to Manual. This was not complied with in this incident. The commander had briefed to use Manual Ignition for take-off, however, the Line Up checks (where Ice Protection/Ignition was specifically listed) had not been completed prior to the engine flameouts.

Experience from a previous incident has shown that should a temporary interruption of the intake air flow occur due to ice breakaway, then having the engine ignition selected to Manual (on) is sufficient to enable the engine to recover to normal operation after a transient power loss.

The aircraft manufacturer produced a modification Service Bulletin (SB), No. 8-74-02, Installation of an Auto Relight System, which linked igniter operation to engine HP spool speed (Nh). With this modification embodied, when the condition levers are selected above FUEL OFF, the igniters automatically operate if Nh falls below a threshold value. Whilst the 'Reason' paragraph of the SB implies that the modification is intended to enhance economic operation and compliance is 'at operator's discretion', there is clearly an additional safety benefit because the engines are protected against transient 'flameout' conditions at any phase of flight. The SB was incorporated at build from Aircraft Serial Number 541 and above: G-JEDD (serial number 533) did not have this modification at the time of the incident.

Because of the possibility of a repeat of this type of incident, AAIB proposed that the incorporation of Service Bulletin (SB) No. 8-74-02 be mandated on all aircraft by the Canadian airworthiness authority (Transport Canada). However, Transport Canada responded negatively to this proposal, citing that the current maintenance and operational procedures afforded an equivalent level of protection to that offered by the SB. They considered that the choice of which of the two alternative ways of achieving the intent of the recommendation was a business decision which was best left to the operators.

Within the United Kingdom, all operators of the Dash 8 have elected to modify their aircraft in accordance with the SB to afford maximum protection from this type of event.

The manufacturer also indicated that it would revise and reissue DHC-8 Service Letters DH8-SL-12-006E (100/200/300 series aircraft) and DH8-12-001C (Q400 series) to highlight the importance of ensuring that the engine intakes are clear of frozen contaminant prior to departure.