

AIRCRAFT ACCIDENT REPORT No. 3/92

*This report was published on 9 July 1992 and is available from HMSO Bookshops and accredited agents*

REPORT ON THE INCIDENT TO DE HAVILLAND DHC-7, G-BOAW  
BETWEEN BRUSSELS AIRPORT AND LONDON CITY AIRPORT ON 30 JANUARY 1991

Shortly after a night take-off from Brussels, the aircraft experienced a sudden uncommanded pitch-up. As the flight progressed the crew became aware that a pitch control problem was present in both autopilot and manual controlled flight. An emergency was declared and the aircraft diverted from the London City Airport, its planned Short Take-Off and Landing destination airfield, to carry out a successful flapless landing at Stansted, a conventional aerodrome.

The following causal factors were identified:-

- (i) Condensation was able to collect in and around the elevator servo-drive drum bracket and freeze causing an elevator control restriction which affected pitch control in both automatic and manual controlled flight.
- (ii) Following earlier known cases of water collecting in and around the elevator servo-drive drum bracket no effective modification action was implemented.
- (iii) The flight deck crew's ability to discuss and analyse their predicament was impaired by the distraction provided by the continuous operation of the autopilot disconnect warning.

Four Safety Recommendations were made during the course of the investigation.

- (i) The CAA make the Boeing Canada De Havilland Division service bulletin 7-55-10 mandatory. (A water deflector to be installed onto the front spar of the vertical stabilizer directly above the elevator servo-drive to prevent water ingress.)
- (ii) The CAA and the manufacturer take steps to ensure that provision for drainage of the elevator servo-drive drum bracket is incorporated in DHC-7 aircraft.