ACCIDENT TO BOEING 737 G-BGJL AT MANCHESTER AIRPORT ON 22 AUGUST 1985

The report on this accident is due to be published on Monday 13 March. The accident resulted from an uncontained failure of the left engine. The reasons for this failure were quickly established, enabling the CAA and the FAA to issue an Emergency Airworthiness Directive a few days after the accident.

Beyond this immediate safety action lay the important question of survivability. Most fatalities resulting from fire in otherwise survivable aircraft accidents are caused by inhalation of smoke and toxic gases and this was the case here - causing 48 out of the 55 deaths. This was particularly disturbing as many of the factors which affected this accident should have biased events towards a favourable outcome. The passengers were mostly young and fit adults. The cabin was initially intact, the aircraft remained mobile and controllable, and no one had been injured during the abandoned take-off. The volume of fuel involved, although capable of producing an extremely serious fire, was relatively small compared with the volume typically carried at take-off. The accident occurred in daylight on a well equipped major airport with fire cover considerably in excess of that required for the size of aircraft, and the fire service was in attendance within 30 seconds of the aircraft stopping.

It was thus decided to devote exceptional resources and time to conduct a large scale examination of the survivability aspects of the accident. Because of a lack of up to date information this led into a research programme to establish the chemical make-up of the atmosphere in an airline cabin fire, and measures whereby passengers could be protected against incapacitation for long enough to make their escape.

The programme took longer than expected - but was internationally recognised as high quality work in an important safety area. It sparked off much collateral work by the CAA and others in the UK, and re-awakened international interest in passenger survivability aspects of aircraft fires. The results of these tests and data from the investigation were then compared with current conceptions of the nature of aircraft fires and airworthiness requirements.

The draft report was completed in April 1988, before going through the consultation period required by the Civil Aviation (Investigation of Accidents) Regulations 1983. On completion of this it was submitted to the Secretary of State for Transport in December. As no party then asked for a Review Board publication was authorised.

The end result is a report which is one of the most thorough and detailed ever written on an aircraft fire and which will be of considerable value to the aviation industry. AAIB has devoted £200,000 and over double the average time to this especially important investigation.

31 Safety Recommendations were made during the course of the investigation - a greater number than in any previous AAIB investigation. The CAA will issue a statement co-incident with publication of the report saying what action has been taken on these.