



AIR TRAFFIC INCIDENT

(Ref. Law on Aircraft Accident Investigation, No. 59/1996)

Boeing 767-300, American Airlines Inc , AAL-80/
Airbus A330, Canada 3000 Airlines Ltd., CMM-703.
At about 62°59'55''N 004°34'13'' W,
20th July 2000, at 03:58:30 hrs.

The aim of aircraft accident investigation is solely to identify mistakes and/or deficiencies capable of undermining flight safety, whether contributing factors or not to the accident in question, and to prevent further occurrences of similar cause(s). It is not up to the investigation authority to determine or divide blame or responsibility. This report shall not be used for purposes other than preventive ones.
(Law on Aircraft Accident Investigation, No 59/1996, par 1 and par 14.)

REPORT ON AN AIR TRAFFIC INCIDENT

Date and Time:	20 th July 2000, at 03:58:30 hrs *)
Place of the incident:	Inside the East Sector of Reykjavik Oceanic Control Area (OACC), at position 62°59'55''N 004°34'13'' W.
Aircraft involved:	Boeing B767-300, American Airlines Inc, Flight Number AAL-80/ Airbus A-330, Canada 3000 Airlines Ltd, Flight Number CMM-703.
Phase of flight:	En-route cruise at assigned flight levels.
Number of crew and passengers:	Unknown.
Injuries:	None.
ATS-unit involved:	Reykjavik Oceanic Area Control Center (OACC). East Sector.
Procedures:	The South/East Sector of the Reykjavik OACC is procedural controlled, radar assisted. The air/ground communications, including position reports and clearances are relayed between Reykjavik OACC and the aircraft through "Iceland Radio", a communication station located near Reykjavik.
Required separation:	Longitudinal: - 15 minutes at same level or crossing tracks, or Vertical: - 1000 feet.
Actual separation:	One minute prior to the time of the crossing tracks, the vertical separation was appr. 300 feet, but at the time of the crossing it was the required 1000 feet.
Notification:	The incident was reported to AAIB on 20 th July 2000 and the investigation commenced immediately.
Definition:	"An Air Traffic incident is an incident mainly related to regulations concerning Air Traffic Control Services and where aircraft pass each other at such a proximity that it causes a critical situation, or other difficulties caused by incomplete procedures, or non-compliance with procedures, or faults in ground equipment, are causing critical situation".

*) Note: - All times in this report are UTC.

1. CIRCUMSTANCES.

- 1.1 The incident occurred within the control area (CTA) of the Reykjavik OACC. Both aircraft involved were operating on IFR flight plans.
 - 1.1.1 Canada 3000 Airlines Ltd, an Airbus A-330, Flight Number CMM-703, was en-route from Calgary, Canada (CYYC) to Berlin Schönefeld, Germany (EDDB). At the same time -
 - 1.1.2 American Airlines Inc, a Boeing B-767, Flight Number AAL-80 was en-route from Chicago O'Hare, USA (KORD), to Stockholm Arlanda, Sweden (ESSA).
- 1.2 At the time of the incident, both AAL-80 and CMM-703 were in radio contact with "Iceland Radio" on VHF frequency 126.55 MHz. All position reports and clearances were relayed between Reykjavik OACC and the two flights via "Iceland Radio". Neither flight had been radar identified by Reykjavik OACC.
- 1.3 Every flight handled by the ATC is represented by a special strip. The Air Traffic Controllers organize the strips representing the flights within their responsibility, in their "strip bay" where strips at different Flight levels are separated by wooden bars. It is not stipulated in details in the ATC Manuals, how flight strips should be arranged within each Flight level.
- 1.4 Both flights were cruising at the cleared tracks and flight levels. Flight CMM-703 was all the time at FI-370 while in the Reykjavik CTA. The flight passed 68°N 030°W at 02:38 hrs, 67°N 020°W at 03:05 hrs and 65°N 010°W at 03:37 hrs, at FI-370, estimating GUNPA at 04:21 hrs, enroute to Berlin Schönefeld. Flight AAL-80 passed 61°N 030°W at 02:34 hrs, 62°N 020°W at 03:08 hrs and 63°N 010°W at 03:41 hrs, then at FI- 350, estimating ISVIG at 04:13 hrs, enroute to Stockholm Arlanda.
- 1.5 At the time of the incident the traffic flow was low. The incident occurred in the East sector of the Reykjavik OACC area. The Controller "A" responsible for the sector, took over the position at 03:30 hrs.

2. FACTUAL INFORMATION.

- 2.1 At the time, one Air Traffic Controller was in charge of the East Sector of the Reykjavik OACC, involving traffic at all Flight levels. The East Sector Air traffic Controller (A) was relieved for about one hour by another Air Traffic Controller (B). Controller (A) returned and took over the position from Controller (B) at 03:30 hrs. Upon returning, he accepted the responsibilities after having been briefed by Controller (B).
- 2.2 The Air Traffic Controller (B) had planned AAL-80 at FI-360 after passing the position 63°N 010°W , due to traffic at FI-350.
- 2.3 The Air Traffic Controller (A) re-organized the strips in his strip bay shortly after he took over his position at 03:30 hrs. He states that this most likely occurred around the time the flight AAL-80 reported at position 63°N 010°W.
- 2.4. At 03:41 hrs AAL-80 reported to "Iceland Radio", at position 63°N 010°W to "Iceland Radio" and requested FI-370. Controller (A) states that when checking the appropriate Flight levels, he did not see any conflicting traffic at FI-370 and subsequently at 03:49 hrs he cleared AAL-80 to that flight level.
- 2.5 Controller (A) states, that at about 03:55 hrs he saw on his radar scope, that the flights CMM-703 and AAL-80 were on converging courses, both at FI-370. At the same time he realized that the relevant strips were not posted at the same flight level in his strip bay, as CMM-703 was posted under FI-380.

- 2.6 Controller (A) then at 03:56 hrs immediately issued a clearance through "Iceland Radio" to AAL-80, to "*Descend Fl-360 now due traffic!*"
He also called on the ATC working frequency 132.2 MHz, asking other aircraft to call the two aircraft and request their attention. AAL-80 quickly got the clearance from "Iceland Radio" and started the descent.
One minute prior to the time of the crossing tracks, the vertical separation was app. 300 feet. The two aircraft tracks crossed at about 03:58:30 hrs. At the time of the crossing, the vertical clearance between them was 1000 feet.
- 2.7 CMM-703 called at 03:58 hrs and asked for traffic information. Also that he would file a report on the incident.

3. ADDITIONAL INFORMATION.

- 3.1 The Aircraft Accident Investigation Board refers to a Report issued by it's predecessor, The National Air Safety Board (NASB), concerning an ATC incident (M-06486) that occurred 2 June 1986 in the Oceanic Control Area. In the report the NASB made 10 Safety Recommendations. One of the ten Safety Recommendations was as follows:
a - "The computization be increased and improved, ensuring that a monitoring system will alert the Controller of mistakes and that appropriate measures be taken prior to ATC incidents or accidents occur".
In August 1986 the CAA responded to this recommendation as follows:
"The ICAO Council has approved a realization of a plan starting this year. This project will take four years. Thus in the year 1990 and 1991 a modern and computerized system should be implemented and fully operational, fulfilling these demands. The cost is estimated 5 to 7 million US dollars".
- 3.2 According to the CAA, this plan was too optimistic and it was never realized. However a new system, Flight Data Processing System (FDPS), is being implemented by the CAA and this system is expected to be fully operational in the middle of year 2001. This new system is intended to prevent Air Traffic Incidents such as the the one handled by this Report.

4. CONCLUSIONS.

- 4.1 The flights, CMM-703 and AAL-80, operated in every way according to received clearances.
- 4.2 The Air Traffic Controller took the most appropriate action available at the time the error was discovered.
- 4.3 The Air Traffic Incident was most likely caused by the Controller (A) misplacing the CMM-703 flight strip at incorrect altitude in his strip bay.

5. SAFETY RECOMMENDATIONS.

None.

Reykjavík, 5th January 2001

**Aircraft Accident Investigation Board
Iceland**