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REPORT
SERIOUS INCIDENT

Captain's incapacity, diversion

Aircraft	Boeing 777-228 registered F-GSPM
Date and time	17 January 2011 about 11h 30[(1)]
Operator	Air France
Place	In cruise, over the Atlantic ocean
Type of flight	Scheduled international public transport of passengers
Flight crew	Captain (PNF), Co-pilot (PF)
Consequences	None

[(1)]Unless otherwise specified, the times in this report are expressed in Universal Time Coordinated (UTC).

HISTORY OF FLIGHT

At 8 h 48, the co-pilot took off from Paris Charles de Gaulle airport for New York J.F. Kennedy one and a half hours late. About 30 minutes later he was cleared to follow a route in oceanic airspace, which he estimated entering at 10 h 27.

At about 10 h 00, the Captain felt ill. At the crew's request, a doctor who was a passenger carried out an initial check-up. The operator's operational coordination centre (OCC) was not informed of this. The Captain stayed on the flight deck and decided to continue the flight. The aeroplane was 80 NM from Shannon.

At 10 h 27, the aeroplane entered oceanic airspace. The crew received several METAR updates from the two ETOPS alternate airports (Shannon in Ireland and Gander in Canada) and from Keflavik in Iceland.

At about 11 h 30, the Captain felt some abdominal pain. The doctor's presence was again requested. The aeroplane was 760 NM from Shannon and 585 NM south of Keflavik.

At 11 h 42, the crew decided to re-route to Keflavik airport, the nearest. In HF radio contact with Gander ATC, the co-pilot transmitted a Mayday because of medical distress on board.

At 11 h 50, the co-pilot informed the OCC. The Captain remained in the pilot's seat. He was taken care of by the chief purser and the doctor.

During the descent an improvement in the Captain's condition allowed him to assume the duties of PNF.

At 13 h 13, the co-pilot landed at Keflavik on runway 02. At the gate, the medical service evacuated the Captain. The cabin crew carried out normal passenger disembarkation.

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ADDITIONAL INFORMATION

Meteorological Information

At 11 h 47, after the decision to divert was made, the co-pilot received the following information:

BIKF 171130Z 25019KT 9999 VCSH SCT010CB SCT095 01/M06 Q0995=

The Keflavik ATIS that was received before the descent indicated a wind from 240° at 17 kt, visibility of 10 km, scattered clouds at 1,000 and 1,500 ft, showers, a temperature of 0 °C and a QNH of 995 hPa.

Aerodrome

Keflavik airport is open to public air traffic and provides operating and ground-handling services twenty-four hours a day. It has two crossed runways more than 3,000 m long and 60 m wide.

There is an ILS/DME procedure for each of the QFU's.

The procedure in service was for an ILS DME RWY 29 final without GP. However to facilitate arrival, the controller suggested an ILS DME RWY 02 final, accepted by the crew.

Medical factors

The first check-ups performed on-board led the doctor (a cardiologist) to suspect gastro-enteritis. Basic antispasmodic treatment improved the Captain's condition. This was why he decided to continue the flight.

In his second intervention, the doctor observed that the Captain was very pale, with stiffness, shaking and severe pains in the abdominal region. The diversion was initiated due to the doctor's fear of an internal haemorrhage.

The doctor used the on-board first aid kit and injected an anti-inflammatory to ease the pain. The Captain remained where he was with his seat pushed back. He did not lose consciousness and was able to communicate with the co-pilot and the chief purser.

It was not possible to determine the factors that triggered the Captain's illness. The latter reached a hotel in the evening after a short period of observation in hospital.

The information obtained during the investigation did not make it possible to know if the Captain had any medical history.

Operator's procedures

The airline's Operations Manual[2] and the safety/rescue manual[3] cover flight crew incapacity with regard to the reorganisation of the flight deck, inter-crew call-outs and medical assistance. However, treating a passenger's illness, which allowed for emergency services assistance, was not transposed for flight crew illness.

The cabin crew informed the flight deck that the passengers had noticed the change of flight path. The Captain requested the cabin crew to inform them of a diversion for medical reasons.

The co-pilot did not contact the OCC due to the presence of a doctor on board. He was not able to have the benefit of the emergency services' opinion

[2] GEN.OPS 02/01/02 Crew operation/ Incapacity of a pilot.

[3] MSS.GEN/ Emergency procedures /Flight crew incapacity / procedure.

CONCLUSION

The serious incident was due to the Captain suffering abdominal pain in flight, the symptoms of which had not been noticed before undertaking the flight.

The investigation could not determine the exact nature of the Captain's pains.

The BEA has published an Incidents in Air Transport bulletin (ITA n°12) with flight crew incapacity as its theme (http://www.bea.aero/ita/pdf/ita.012.pdf).

The diversion was initiated as a doctor (cardiologist) feared a haemorrhage. He was called on by the cabin crew. The crew decided on the diversion but did not inform the OCC of this. The latter could have contributed, whether for the diversion strategy or medical assistance (emergency services).

Responsibility for the conduct of the flight was not the subject of an explicit transfer of Captaincy. No information was forthcoming as to whether the Captain had been partially or totally deprived of his faculties during his discomfort or if he had recovered them when he assumed the role of PNF. In this situation, there was a risk for the co-pilot of a partial takeover of the Captain's duty and of deferral to the authority of the Captain, still present on the flight deck.

The operator's documentation is imprecise on the transfer of responsibilities and this favours situations like this incident. Likewise, the procedure for those taken ill on board is more concerned with passengers than with members of the flight crew.