

4. Safety Recommendations

In order to enhance the overall safety of the aviation system, the Accident Investigation Board makes the following recommendations to the regulatory authority (DGCAM), Sultanate of Oman, the owner-States of the airline (Gulf Air), Civil Aviation Affairs, Kingdom of Bahrain, and the International Civil Aviation Organisation (ICAO).

The Board recommends to the DGCAM, Sultanate of Oman:

To review whether safety oversight surveillance is adequate to ensure airlines' timely compliance with all critical regulatory requirements. (B-01-1)

To ensure that Gulf Air updates the crew resource management (CRM) programme, by integrating it in a Line Oriented Flight Training (LOFT) in accordance with DGCAM regulatory requirements, and consider implementing a Line Operations Safety Audit (LOSA) programme. (B-01-2)

To ensure that Gulf Air reviews and enhances, in accordance with DGCAM regulatory requirements, the A320 flight crew training programmes to ensure full compliance with the standard operating procedures, and increase the effectiveness of the first officer. The training in 'CFIT avoidance and GPWS responses' should be augmented by including it in the recurrent training programme, with a detailed syllabus in accordance with DGCAM requirements. The Approach-and-Landing Accident Reduction (ALAR) toolkit produced by the Flight Safety Foundation, with extensive airline industry input, could be a key element in the updated training programme. (B-01-3)

To ensure that Gulf Air company's training and evaluation of flight crew performance consistently meets the required DGCAM standards. (B-01-4)

To consider requiring Gulf Air to include in its flight crew training programmes (initial as well as recurrent) comprehensive information on spatial disorientation. (B-01-5)

To ensure that Gulf Air reviews and improves the functioning and utilisation of the A320 flight data analysis system, in accordance with DGCAM regulatory requirements. (B-01-6)

To consider requiring Gulf Air to augment the accident prevention strategies and adopt programmes, such as the Procedural Event Analysis Tool (PEAT), and implement a comprehensive integrated safety and risk management programme. (B-01-7)

The Board recommends to the owner States of Gulf Air: Abu Dhabi, Bahrain, Oman and Qatar:

To ensure that the civil aviation regulatory authority for Gulf Air (DGCAM), Sultanate of Oman, has the full and continuing support of the governments of those States in implementing regulatory compliance by the airline. (B-01-8)

To ensure that the management of Gulf Air complies with civil aviation regulatory requirements effectively and expeditiously. (B-01-9)

The Board recommends to Civil Aviation Affairs, Kingdom of Bahrain:

To enhance guidance to air traffic controllers for addressing requests from pilots to execute non-standard manoeuvres (such as an orbit) during the final approach. When on final approach, requests from pilots to conduct non-standard manoeuvres should only be approved by controllers after they have ascertained the required safety parameters. (B-01-10)

The Board recommends to the International Civil Aviation Organisation:

To consider making the following as a standard applicable in all classes of airspaces: "a speed limit of 250 knots below 10,000 ft amsl". (B-01-11)

To consider prohibiting non-standard manoeuvres (such as orbit) when an aircraft is on the final approach, unless safety considerations demand otherwise. (B-01-12)

Manama
Kingdom of Bahrain
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