

Boeing 737-3M8, G-EZYD

AAIB Bulletin No: 6/2003	Ref: EW/G2003/02/03	Category: 1.1
Aircraft Type and Registration:	Boeing 737-3M8, G-EZYD	
No & Type of Engines:	2 CFM56-3B2 turbojet engines	
Year of Manufacture:	1989	
Date & Time (UTC):	8 February 2003 at 1425 hrs	
Location:	Edinburgh Airport	
Type of Flight:	Public Transport (Passenger)	
Persons on Board:	Crew - 5	Passengers - None
Injuries:	Crew - 1 (Serious)	Passengers - N/A
Nature of Damage:	None	
Commander's Licence:	Airline Transport Pilot's Licence	
Commander's Age:	46 years	
Commander's Flying Experience:	11,800 hours (of which more than 3,000 hours were on type)	
	Last 90 days - 151 hours	
	Last 28 days - 46 hours	
Information Source:	Air Accident Report Form submitted by the operator and other enquiries made by the AAIB	

History of the event

The crew had flown from Luton to Edinburgh and, after landing, the aircraft was directed to Stand 7 where it parked at 1425 hrs on a southerly heading. The passengers were disembarked and the crew completed their shut down checks prior to leaving the aircraft. The crew taking over the aircraft were not due for some time so the commander instructed his crew to secure the aircraft. (The company standard procedure when leaving an aircraft unattended is to leave all doors closed with the airstairs retracted.) Prior to leaving the aircraft the crew assembled at the foot of the airstairs at the forward, left door (L1 door) and the commander climbed the stairs in order to close that door. Whilst shutting the door he lost his balance and fell, head first, through the gap in the right hand rails onto the tarmac approximately 2 metres below.

The commander suffered a fractured skull. Immediate first aid was given by the senior cabin crew member. The emergency services were called and arrived three minutes later. Additional medical assistance was provided by the on-coming cabin crew and two doctors and a nurse who had responded to requests made on the public address system in the terminal. Paramedics arrived on the scene at 1455 hrs and an ambulance arrived at 1500 hrs.

Meteorological conditions

At the time of the accident the surface conditions were dry. There was a strong wind warning in force with westerly winds forecast to be 15 kt, gusting to 27 kt. The recorded wind at the time of the accident was 230°/15 kt.

With the aircraft parked on a southerly heading the wind would have been able to pass over the nose of the aircraft and blow down the side of the cabin and the First Officer suggested that wind might have been a factor. However, considering the proximity of nearby buildings, vehicles and other structures, it is difficult to define clearly the local wind velocity or its effect.

Security regulations

As part of the heightened security measures the Department for Transport has mandated that: *'The aircraft operator shall ensure that, when aircraft within a restricted zone are not in service and are unattended, their doors are closed, steps removed and air bridges withdrawn'*. (For security purposes the main apron is considered to be part of the restricted zone.)

Inspection of the door and airstairs

An initial investigation was conducted by the local Police and the Health and Safety Executive. The Police released the aircraft at 1930 hrs and the operator conducted an inspection of the airstairs. At the time of the inspection the airstairs were fully deployed and locked and the aircraft engineers confirmed that they had not been moved since the accident. There was no evidence of any contamination on the stairs and no damage was apparent to the non-slip covering of the steps or to the handrails. The L1 door was operated throughout its full range and no evidence of any malfunction was apparent. No defects relating to the door or the airstairs had been entered into the aircraft technical log.

The process of closing the door from the outside requires the handrails to be in the stowed position. This leaves a gap of approximately 0.75 metres on both the left and right hand sides at the top of the stairs; the gap is necessary to allow room for the door to be swung closed. In order to close the door a person needs to stand on step four or five, release the gust lock (which holds the door in the open position), and swing the door through 180°. It is necessary to use both hands to complete this manoeuvre. They then need to stand on the top step and operate the external locking handle to fully lock the door in place. Handles are placed on the inner skin of the door to facilitate this operation, one approximately half way up the door near the hinge and another on the bottom edge on the opposite side to the hinge.

Previous incidents

Data provided by Boeing indicate that there have been no reports of injury to flight crew during the operation of the L1 door from the forward airstairs. However, there have been three reports of other people falling from the airstairs. The first event involved a cleaner falling from the airstairs whilst probably operating the door from the stairs. The second event also involved a cleaner, who fell from the airstairs whilst operating the door during heavy rain. The third event involved a mechanic who was found unconscious on the tarmac close to the airstairs, the L1 door was partially opened. The mechanic had no recollection of the event and the airline speculated that he may have fallen whilst operating the door.

Securing an unattended aircraft

As a result of the injuries sustained by the pilot involved in this accident it has not yet been possible to establish accurately his experience on the Boeing 737. He has flown for his present employer for five years during which time he has accumulated more than 3,000 hrs; he had previously flown the Boeing

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737 with other operators. At the time of the accident this pilot, aged 46 years, held a valid Class 1 medical certificate. This accident therefore involved a fit, experienced pilot, using serviceable equipment in benign conditions.

Immediately after this accident the operator produced an Aircrew Notice describing the circumstances of the event and reminding crews of the need for care if faced with the need to close the L1 door from the airstairs.

There is no guidance in either the Boeing manuals or the operator's manuals on how to close the L1 door from outside the aircraft with the airstairs deployed. In-house training in opening and closing the L1 door and extending and retracting the airstairs is given to ab-initio pilots during an aircraft visit on initial training. However, pilots who are already type rated do not receive formal training in this operation. During line training pilots may get the opportunity to open and close the door from the outside but only on a 'need to' basis.

During normal operations the requirement to fully secure the aircraft is rare, which means that even if hands-on training were provided the need to practice the procedure will not occur frequently, moreover, the training itself would increase exposure to the risk. The operator opted instead to revise the procedure for securing unattended Boeing 737 aircraft. The L1 door is now secured from inside the aircraft, an operation for which the cabin crew are fully trained and use every flight, and the crew then leave the aircraft via the rear steps. The rear door is then closed and the rear steps removed.