PARTY SUBMISSION OF BOMBARDIER INC.

TO THE

UNITED STATES NATIONAL TRANSPORTATION SAFETY BOARD

Comair
Bombardier Aerospace CRJ 100
N431CA
Lexington, Kentucky
August 27, 2006
DCA06MA064

I FACTUAL INFORMATION

History of Flight

On August 27, 2006, about 06:07 eastern daylight time (EDT), Comair flight 5191, a Bombardier CL-600-2B19 (CRJ-100), N431CA, crashed during takeoff from Blue Grass Airport, Lexington, Kentucky (LEX). The airplane, which had been cleared for take-off on runway 22, taxied and attempted take-off from runway 26. The aircraft ran off the end of the runway, became momentarily airborne, struck an airport perimeter fence, impacted trees and terrain, and came to rest against fencing on farm property. Of the 47 passengers and 3 crewmembers on board, 49 were killed, and 1 received serious injuries. The airplane was destroyed by impact forces and the post crash fire.

The flight was operating under the provisions of 14 Code of Federal Regulations Part 121 and was en route to Hartsfield-Jackson Atlanta International Airport, Atlanta, Georgia (ATL).

Notification

Upon receiving notification of this accident, Bombardier Inc. dispatched three technical advisors to the scene with the Transportation Safety Board of Canada Accredited Representative, to assist the National Transportation Safety Board with its investigation.

II ANALYSIS

Aircraft Airworthiness

The aircraft was equipped with a flight data recorder (FDR), and a cockpit voice recorder (CVR). The FDR and CVR were recovered.

The FDR recording provided a digital record of the aircraft parameters during the accident event.

The CVR recording provided an audio record of the events that occurred in the cockpit from the time the crew selected electrical power on the aircraft to the time of the accident.

Post accident inspection of the aircraft wreckage in the days following the accident was used to confirm system status and aircraft configuration.

Information obtained from the FDR and CVR, in conjunction with the aircraft wreckage examination revealed the following with respect to systems operation:

1. The FDR data revealed that all aircraft and engine system parameters were normal until the aircraft impacted obstacles after departing the end of runway 26.

2. The aircraft was properly configured for take-off. Flaps were selected and set to 20 degrees. The horizontal stabilizer trim actuator was set to 6.8 units.

3. Engine power was set to 91% N1 on both engines. This was a full power take off.

4. The Captain and First Officers magnetic compasses indicated an aircraft heading appropriate for a take-off on runway 26 (approximately 265 degrees magnetic).

5. Neither ATC (Air Traffic Control) tapes nor the CVR communications revealed that the flight crew was faced with any aircraft system anomaly during the take-off attempt.

6. No EICAS aural alerts are heard on either the ATC tapes or on the CVR recording. On all CL-600-2B19 CRJ 100/200 aircraft, major aircraft system malfunctions are annunciated to the flight-crew by both visual and aural means.

7. No unusual aircraft sounds were recorded by CVR during engine start, taxi, or during the takeoff sequence.

Aircraft Performance

1 A review of the aircraft weight and balance found the weight and center of gravity of the aircraft were within appropriate limits for the take-off.

2 A detailed review of aircraft performance for the accident flight by Bombardier Aerospace Flight Sciences, found no anomalies.

3 Runway 26 was 3500 feet in length. The intended departure runway 22 was 7000 feet in length. The aircraft required 3744 feet to achieve a Vr (appropriate rotation speed) of 138 knots at the selected engine thrust setting.

Other Findings

A review of all factual reports in the NTSB docket DCA06MA064 revealed the following with respect to the conduct of this flight:

1. The flight crew arrived at the aircraft at approximately 0515 hours and spent 5 to 10 minutes performing a walk-around inspection on the wrong aircraft.

2. There was construction on taxiway Alpha which is near the threshold of runways 26 and 22.

3. The take-off was attempted during conditions of nautical twilight.

4. Take-off was attempted on a general aviation un-lighted runway.

5. Contrary to FAA regulatory requirements, the Lexington Airport control tower was staffed by a single Air Traffic Controller, rather than the two that were mandatory.

6. The ATC controller on duty worked approximately 14.5 hours of the previous 24 hours leading up to the accident. The ATC controller slept 2 hours between the two shifts he worked leading up to the accident.

7. The Lexington Airport Jeppesen chart, used by the flight crew, did not reflect the current airport taxiway construction status.

8. The crew was not advised and was unaware of the construction on taxiway alpha.

9. The CVR did not reveal any discussion between the flight crew to confirm appropriate taxiway and runway number or magnetic heading.

III CONCLUSIONS

1. All aircraft systems were functioning normally during the attempted take-off.

2. The aircraft was properly configured and the weight and balance was within center of gravity limits for this take-off attempt.

3. The aircraft performance during the take-off attempt was normal.

4. The take off attempt was not on the runway assigned by ATC.

IV PROBABLE CAUSE

The aircraft Captain (PNF – pilot not flying) selected an incorrect runway for the take-off attempt. The First-Officer (PF – pilot flying), did not notice the incorrect runway selection.

Runway 26 was not of sufficient length to accelerate the aircraft to the appropriate rotation speed and permit safe take-off.

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