



State Commission on Aircraft Accidents Investigation
INCIDENT 2022/2455
RESOLUTION
of 15th September 2023

Type and model of aircraft:	Airplane, Boeing 737-800 / Airplane, Cessna 525
Registration marks:	SP-LWF / T7-ACA
Date of occurrence:	24 th May 2022
Place of occurrence:	EPWA

After reviewing the notification and collected materials by a member of the State Commission on Aircraft Accidents Investigation (PKBWL), pursuant to Article 135 of The Act of 3rd July 2002 – Aviation Law (with later amendments) and § 18 of the Regulation of Minister of Transport of 18 January 2007 on air accidents and incidents (with later amendments), the PKBWL determined that:

1. The course of the occurrence was as follows:

On 24/05/2022, a Cessna 525 airplane with T7-ACA identification marks (referred to as "Cessna") taxied to a holding point on the taxiway (TWY) D2 ahead of runway (RWY) 15. A Boeing 737-800 airplane with SP-LWF identification marks (referred to as "Boeing") taxied behind the Cessna airplane. The Boeing airplane began taxiing more than 35 minutes after the scheduled takeoff time and about 10 minutes before the newly assigned takeoff time (CTOT¹).

The Cessna airplane was to turn left from TWY A3 into TWY S3, and the Boeing airplane was to taxi straight before TWY A3 to the holding point on TWY A0 before RWY 15.

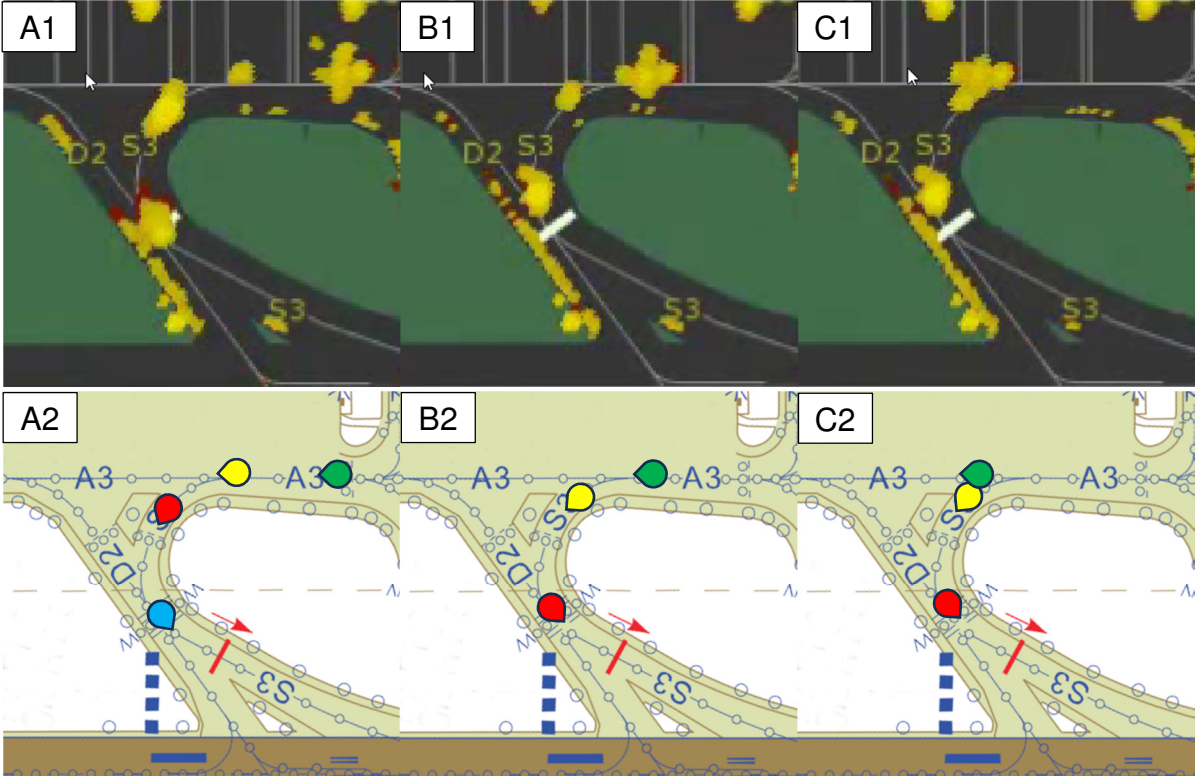
The GND controller granted the Boeing crew permission to taxi TWY A, being convinced that the Cessna airplane would quickly leave TWY A3 at TWY S3, which would allow the Boeing airplane crew to taxi without stopping. This is indicated by the fact that approximately 22 seconds later, the GND controller² instructed the crew of the Cessna airplane to establish communication with TWR controller. After transferring control of the Cessna aircraft, the GND controller could not directly influence its movement on the taxiways.

¹ CTOT – Calculated take-off time

² GND – ground movement controller

There was an Embraer airplane at the holding point on TWY D2 in front of RWY15, followed by a De Havilland airplane. In order to maintain separation from aircraft waiting to enter RWY15, the crew stopped the Cessna airplane on TWY A3. The Boeing airplane also stopped on TWY A, behind the Cessna airplane.

As the Embraer airplane entered RWY 15, the De Havilland airplane behind it taxied to the D2 holding point. The Cessna airplane taxied by turning left and stopped so that it remained at the intersection of TWY A3 and S3, as did the De Havilland airplane before it. The crew of the Cessna aircraft determined that the distance behind the preceding airplane was correct. The Boeing airplane crew began taxiing straight ahead on TWY A3 behind the Cessna airplane. The taxiing speed of both airplanes was similar. The Boeing airplane crew considered asking GND controller to suggest to the Cessna airplane crew to taxi forward but did not do so. Observing the left-wing tip of their airplane and the Cessna airplane, the Boeing airplane crew assessed that collision-free passing was possible. The assessment of the distance between the airplanes was incorrect. At 08:17:10 hours³, the tip of the left wing of the Boeing airplane struck the tail of the Cessna airplane.



Airplanes: ● Embraer, ● De Havilland, ● Cessna, ● Boeing.
A1, B1 C1 –SMR⁴ imagery, A2, B2, C2 –EPWA airport diagram.
A1, A2 – Boeing airplane stopping behind Cessna airplane on TWY A3, 08:15:23 hours
B1, B2 – Cessna airplane stopping at the intersection of TWY A3 and S3, 08:16:53 hours
C1, C2 – airplanes collision, 08:17:10 hours

Figure 1. Locations of Cessna and Boeing airplanes before and during the collision
[source: PANSA⁵, PKBWL]

³ The times in the Resolution are expressed according to LMT = UTC + 2 h
⁴ SMR – Surface movement radar
⁵ PANSA – Polish Air Navigation Services Agency

Both crews informed the GND controller of the collision. Airport services secured the scene. The crews of the Cessna and Boeing airplanes confirmed that they could taxi autonomously and taxied to the designated apron positions, where they shut down their engines. After inspection, the closed part of the maneuvering field was opened to traffic.

As a result of the collision, both aircraft were damaged to a degree that made flying impossible. None of the people aboard the two airplanes were injured.

VMC conditions were present at the time of the incident, and atmospheric conditions allowed observation of aircraft on the maneuvering field of EPWA airport. The crew of the Boeing airplane was able to observe the Cessna aircraft preceding it.

Traffic intensity at EPWA airport was high. A queue of aircraft for departure had formed on TWY A.

The GND controller was located approximately 1,500 meters from the point where the planes collided. The GND controller was provided with SMR imagery to support the observation of the airport's maneuvering field. In this imagery, the Cessna and Boeing aircraft were clearly visible (Figure 1. A1-C1), and their shapes reflected their actual horizontal sizes.

SMR imaging allowed for consideration of the stop of the Cessna airplane at the intersection of TWY A3 and S3 (Figure 1. B1) as a collision with traffic on TWY A3. The Boeing crew and GND controller did not exchange observations regarding the position of the Cessna airplane.

2. Causes of the occurrence:

The decision to taxi next to another airplane at the intersection of TWY A3 and S3.

3. Contributing factors:

- 1) The time pressure associated with the upcoming new CTOT for the Boeing airplane.
- 2) The failure to use SMR imagery to assess conflicts between airplanes on the A3 taxiway.

4. The Commission accepted the following preventive measures proposed by the operator:

Not formulated.

5. In addition, the Commission has proposed the following safety recommendations:

Not formulated.

Investigator-in-Charge

PKBWL Chairman

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(signature on original only)

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(signature on original only)