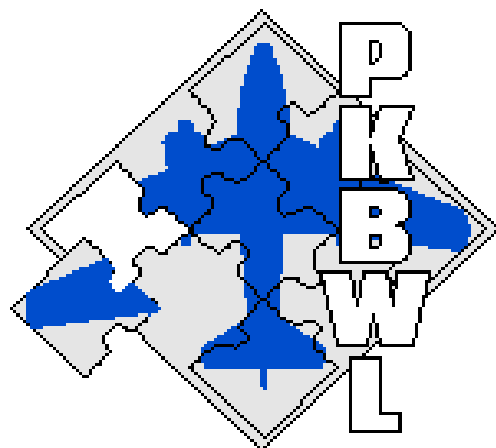


PRELIMINARY REPORT

ACCIDENT 345/21



Państwowa Komisja Badania Wypadków Lotniczych

UL. CHAŁUBIŃSKIEGO 4/6, 00-928 WARSZAWA | EVENT NOTIFICATION +48 500 233 233

PRELIMINARY REPORT

ACCIDENT

OCCURRENCE NO 345/21

AIRCRAFT – Bell 429 helicopter

Date and place 22 FEB 2021, Studzienice near Pszczyna, Poland

This Report is a document presenting findings of the State Commission on Aircraft Accidents Investigation concerning circumstances of the air occurrence. The report was drawn up based on the information available on the date of its completion.

The use of the Report for any purpose other than air accidents and incidents prevention can lead to wrong conclusions and interpretations.

The Report was drawn up in the Polish language. Other language versions may be drawn up for information purposes only.

WARSAW 2021

GENERAL INFORMATION

Occurrence reference number:	345 / 21			
Type of occurrence:	ACCIDENT			
Date of occurrence:	22 February 2021			
Place of occurrence	Studzienice near Pszczyna, Poland			
Type and model of aircraft:	Bell 429 helicopter			
Aircraft registration marks:	SP-KKS			
Aircraft User/Operator:	Private			
Aircraft Commander:	CPL (H)			
Number of victims/injuries:	Fatal	Serious	Minor	None
	2	2	–	–
Domestic and international authorities informed about the occurrence:	ULC, ICAO, EASA, TSB of Canada			
Investigator-in-Charge:	Mieczysław Wyszogrodzki			
Investigating Authority:	PKBWL			
Accredited Representatives and their advisers:	Accredited Representative of Canada			
Document containing results:	PRELIMINARY REPORT			
Safety recommendations:	NONE			
Addressees of the recommendations:	NOT APPLICABLE			

1. History of the flight

On 22 February 2021, around 22:27 hrs UTC, a pilot with three passengers on board of Bell 429helicopte, SP-KKS, took off for a private flight from a helipad located approximately 5 NM north of Opole city. The pilot did not file a flight plan and did not establish radio communication with air traffic services. Around 22:28 hrs UTC, the secondary radar contact with the helicopter was lost, then around 22:34 hrs UTC, the primary radar signal appeared, with a high probability corresponding to the above-mentioned helicopter. It was continuously tracked by a radar system until 22:51 hrs UTC, when the radar contact was finally lost. At that time the helicopter could have been located around 10 NM from the EPPY landing site (Pszczyna).

During the approach to landing around 23:00 hrs UTC, the helicopter collided with tall trees in the forest and then with the ground. The pilot and the passenger sitting next to him were killed on the spot. Two passengers seated in the passenger compartment were seriously injured. The helicopter was destroyed.

2. Personnel information (crew data)

Pilot-in-Command: male, aged 51, holder of a valid CPL(H), valid aero-medical certificate, extensive experience as a helicopter pilot, little on Bell 429.

3. Aircraft information

Serial Number	57412
Year of Manufacture	2020
Engines	PWC 207D1
Registration marks	SP - KKS
State of Registration	Polska
Manufacturer	Bell Textron Canada

4. Meteorological information

The weather forecast at the planned landing site: temperature around 0°C with a downward trend, relative air humidity close to 100% and the possibility of fog. Visibility about 500 m with a downward trend. PKBWL has no information as to whether the pilot was familiar with the weather forecast prior to the flight.

5. Wreckage and impact information

The helicopter collided with the ground with the nose part of the fuselage and then fell on its left side. As the accident occurred in a wooded area, numerous elements of the helicopter collided with tree trunks and branches.

The elements of the control system preserved after the accident moved smoothly, without jamming. The pedals on both sides of the cockpit, despite the deformation, remained connected and moved freely, transmitting their movements to other elements of the control system. The same was true for levers and rods located under the cockpit floor, connected with broken cyclics.

The tail gear, along with the remaining part of the tail rotor drive shaft, retained the possibility of movement, and the performed inspection excluded the possibility of this component malfunction in flight.

The nose part of the fuselage was completely destroyed. There were numerous local cracks inside the fuselage and displacements of structural elements and equipment. The crush zone reached the area from the nose of the fuselage to the pedals, which, despite deformation, remained in their place. The cyclics (both left and right) were broken - most likely as a result of a collision with the bodies of persons occupying the front seats. The left stick was broken in one place, and the right one in two places, which proves the great force of the pilot's body acting on the stick.

The zone of the front seats retained its geometry after the accident. The structure of the passenger compartment floor, the seats and their supports, the levers and rods of the control system and other components in this zone were only slightly deformed. The interior of the passenger compartment retained its geometry, allowing the travelers to survive. The helicopter wreckage and fuel samples were secured for further testing.

The helicopter wreckage and fuel samples were secured for further testing.

6. PKBWL actions and findings

PKBWL has completed the field phase of the investigation and until now has determined that:

- the accident occurred approximately 300 m from the place of intended landing;
- the on-board landing light was deployed;
- there was about 300 l fuel in the helicopter tanks;
- fuel and oil were clean and without water;
- all chip detectors were clean;
- power shafts of both engines were rotating at the moment of the impact;
- the helicopter was not fitted with FDR;

- ADIU, FADECs and DCUs have been removed from the helicopter - all look like brand new, without visible damage.

In addition, data on the weather forecast and the actual weather at the place and time of the occurrence have been collected, passengers and witnesses were interviewed.

7. Planned actions

In the nearest future:

- the collected data will be analyzed;
- after analysis, decisions on further actions will be made;
- the collected weather data, data on the human factor, survivability and other factors that may have had an impact on the occurrence will be analyzed.

END

Investigator-in-Charge

.....
Signature on hard copy only