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PRELIMINARY REPORT

of

State Commission on Aircraft Accidents Investigation

dated 27 September 2024

from the investigation of an aviation accident

2024-0073

OCCURRENCE NUMBER

EC 120B helicopter, SP-PBW

27 August 2024 r., Jastrząb / Szydłowiec

This Preliminary Report was issued by the State Commission on Aircraft Accidents Investigation on the basis of information available on the date of its issue.

This Report presents the circumstances of the aviation occurrence concerned and safety recommendations, if issued.



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1. Course of the occurrence

On 27 August 2024, the pilot planned a flight in a private EC 120B helicopter, SP-PBW registration marks, along the route Wólka Załęska - Jastrząb "Aerodrom" near Starachowice. The pilot familiarized himself with the meteorological situation, checked the occupancy of the zones on the route of the planned flight and filled a flight plan at around 12:00 hrs LMT¹. After arriving at the helicopter basing place, the pilot began to perform a pre-flight inspection. After the inspection, the pilot took the seat on the right seat of the helicopter and started the engine. After obtaining the take-off parameters, the pilot took off and a moment later established contact with FIS Warsaw on the frequency of 128.575 MHz, and was cleared to fly. During the start-up, take-off and flight to the planned landing site, the parameters of the power unit were normal, the flight proceeded uneventfully. The pilot landed at the place agreed with the event organizer, turned off the helicopter and went to the place where the racing cars were presented. The landing site was located on the Autodrome grounds in a safe, remote location. After a break of approximately 40 minutes the pilot refilled a flight plan for a flight to the helicopter base. At about 13:30 hrs, during, with the pilot's consent, a group of parents with children came to see the helicopter. The pilot also allowed the children to sit in the helicopter cockpit. The presentation lasted about 15 minutes, after which the group moved away to a safe distance. The pilot performed a pre-flight inspection, sat in the cockpit, and started the engine.

The pilot stated that he set the GRIP to the marker and applied idle and began to start the engine. According to the pilot's statement, at the moment of start-up, "flames erupted" and then there was a rapid increase of temperature to about 1100 degrees. A moment later, the pilot felt a large vibration of the helicopter and after 2-3 seconds the helicopter fell over to the right side. The pilot could not remember that phase of the occurrence. He only remembered the high temperature and quite intense vibrations of the helicopter.

The pilot tried to turn off the engine by setting the initial position to GRIP, but did not have time to close the fuel stop valve. The engine was still running after the rollover, the pilot does not remember when the engine stopped working. Before leaving the helicopter, the pilot turned off the power and the generator and then left the helicopter unaided through the left door.

A moment later, the fire brigade arrived at the scene and prevented the fire from breaking out by applying firefighting foam.

As a result of the accident, the pilot suffered minor injuries.

¹ All times in this Report are given as LMT. On the day of the occurrence LMT=UTC+2.



Fig. 1. The probable landing site of the helicopter was marked with a white marker, Autodrom Jastrzab (source: torjastrzab.pl)



Fig. 2. EC 120B wreckage (source: private person)



Fig. 3 and 4. EC 120B wreckage (source: private person)

2. Injuries to persons

Table 1. Summary of the number of injuries.

Injuries	Crew	Passenger	Total in the aircraft	Others
Fatal	-	-	-	-
Serious	-	-	-	-
Minor	1	-	1	-
None	-	-	-	-
TOTAL	1	-	1	-

3. Aircraft damage

The helicopter was destroyed. All damage to the helicopter was a result of its fall over to the right side and collision with the ground. There was no other visible damage, including engine and drive train damage, that could have occurred before the accident. The main damage of the helicopter was shown in Figures 5 and 6.



Fig. 5. Damage to the main rotor hub, main rotor blades and fuselage.



Fig. 6. Visible thermal changes on the fuselage after the hot engine start.

4. Other relevant information

On 27 August 2024, in the afternoon, stable weather conditions prevailed over most of Poland. It was a sunny, cloudless day with slight and moderate cloudiness. The weather had no influence on the course of the occurrence.

5. Activities undertaken by the SCAAI Investigation Team

The helicopter wreck was inspected at its base. The THALES/VEMD EC120 device was dismantled to obtain data recorded during the occurrence.

6. Safety recommendations

None.
