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PRELIMINARY REPORT

of

State Commission on Aircraft Accidents Investigation

dated 30 August 2024

from the investigation of an aviation accident

2024-0057

OCCURRENCE NUMBER

Robinson R44 Cadet, SP-NHM

1 August 2024, Toruń Włociański

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 1 August 2024 the pilot planned a private flight on Robinson R44 helicopter, SP-NHM registration marks, on the Warszawa Modlin (EPMO) – Niedźwiedzi Róg route. The pilot arrived at the EPMO aerodrome around 14:00¹ hrs, filed the flight plan, got familiarized with the meteorological situation and checked the zone occupancy along the planned flight route. After obtaining information about the synoptic situation and the lack of zone occupancy, the pilot began performing a pre-flight inspection. In accordance with the checklist, he found that there were approximately 140 liters of AVGAS 100 LL fuel in the tanks, double-checked the sediment (clean fuel) and secured the fuel sample. The oil level in the main gearbox and tail rotor angle gear was in accordance with the manufacturer's recommendation.

After the inspection, the pilot took the right seat in the helicopter cabin, established contact with EPMO TWR, and was cleared to start the engine. During start up, the pilot performed an engine test without any problems. Having obtained the take-off parameters, the pilot received clearance to take off and a recommendation to maintain 1000 ft in the airport CTR. The pilot confirmed the recommendation and began to take off from point "FATO", heading to "YANKEE" navigation point. During climb, while in CTR, the pilot had the impression that the helicopter had less power than usual. Climb parameters were initially normal, loading pressure was 22-23 PSI. Flying at an altitude of about 1,000 ft at a speed of about 90 kt, the pilot observed fluctuations in the loading pressure (of four units) in the range of 18-22 and 17-21 PSI.

Due to that situation, the pilot decided to make a precautionary landing. He initiated an autorotation towards the selected landing site. Before touchdown, the pilot performed "FLARE" manoeuvre, then touched down and made a landing roll of approximately 10 meters (Fig. 1).

In the final stage of the landing roll, the helicopter overturned, hitting the ground with the left side of the cabin, and then the helicopter fall over on its right side. By that time the engine was no longer running.

The pilot left the helicopter unaided, notified the public services, and after their arrival, he was transported by an HEMS helicopter to the hospital in Płońsk.

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

The helicopter was destroyed.

¹ All time points in this Report are LMT. LMT=UTC+2.

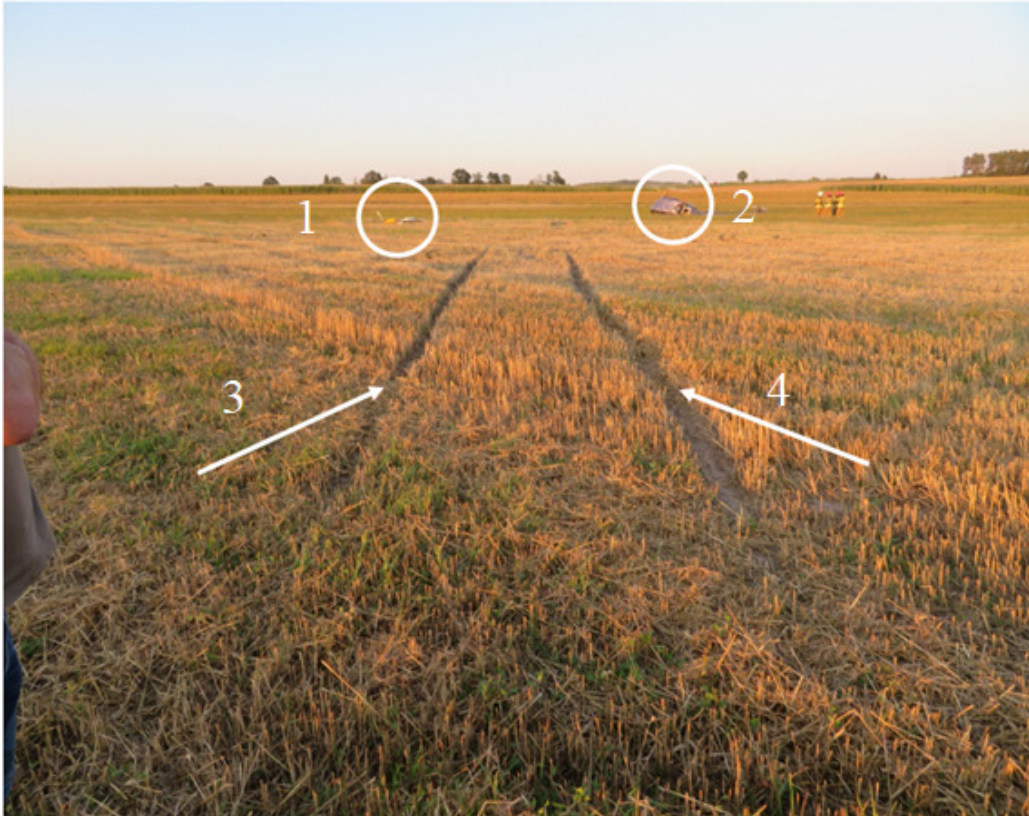


Fig. 1. Emergency landing area: 1 – part of the tail boom with the final drive and tail rotor blades, 2 – helicopter wreckage, 3 and 4 – skid landing gear marks



Fig. 2. Helicopter wreckage



Fig. 3. Part of the tail boom with final drive and tail rotor

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 helicopter damage was caused by its collision with the terrain. There was no other visible damage (including visible engine and drive train damage), which could have occurred earlier. The damage is shown in figures 4, 5 and 6.



Fig. 4. Visibly damaged lower part of the fuselage



Fig. 5. Deformed right side of the helicopter cabin



Fig. 6. Deformed left side of the helicopter cabin

4. Other relevant information

On 1 August 2024, weather conditions were stable over most area of Poland in the afternoon. It was a sunny, cloudless day with slight and moderate cloudiness.

The weather had no effect on the occurrence.

5. Activities undertaken by the SCAAI Investigation Team

The helicopter wreckage was inspected. The engine is planned to be dismantled and further examined.

6. Safety recommendation

None.
