

INTERIM STATEMENT

Accident and Incident Investigations Division

Accident
- Interim Statement -
AIID Ref No: CA18/2/3/10064



Figure 1: The Bell 206L helicopter, ZS-HDX, as it came to rest post-accident.

Description:

On 2 November 2021 at 0925Z, a pilot and a passenger on-board a Bell 206L helicopter with registration ZS-HDX were engaged in a repositioning flight operation from Rand Airport (FAGM) in Gauteng province to Buffels Mine near Klerksdorp in the North West province. Approximately 35 minutes into the flight during the cruise phase, the pilot noticed an engine out warning light. Thereafter, he noticed that the cockpit indicators were on zero for the oil pressure, torque and gas generator (Ng). The rotor revolutions per minute (RRPM) and transmission oil temperature (TOT) gauges indications were normal. Immediately thereafter, a loud bang was heard, followed by a low RRPM warning which got activated. The pilot then induced autorotation and turned the helicopter into wind in preparation for a forced landing. However, all pedal controls were lost but the pilot was able to execute a successful forced landing and, thereafter, shut down the helicopter engine. A post-landing fire erupted in the engine bay, which the pilot extinguished using the on-board portable fire extinguisher. The pilot and the passenger did not sustain any injuries. The helicopter sustained damages to the engine, cowling, fuselage, tail rotor drive shaft and one main rotor blade.

NOTE

All times given in this report are Co-ordinated Universal Time (UTC) and will be denoted by (Z). South African Standard Time is UTC plus 2 hours.

Purpose of the Investigation:

In terms of Regulation 12.03.1 of the Civil Aviation Regulations (CAR) 2011, this interim statement was compiled in the interest of the promotion of aviation safety and the reduction of the risk of aviation accidents or incidents and not to apportion blame or liability.

The interim statement gives a brief account of the progress of the investigation and should be read in conjunction with the preliminary report with reference number CA18/2/3/10064 that was published on 2 November 2021.

The interim statement is released in accordance with Standard 6.6 of the International Civil Aviation Organisation (ICAO) Annex 13 and CAR Part 12.05.1(7).

The final report may contain altered information if new evidence becomes available during the on-going investigation.

Any person who has information concerning this accident should contact the Accident and Incident Investigations Division (AIID) on AIIDinbox@caa.co.za

Investigations process:

The occurrence was categorised as an accident and the AIID has assigned an Accident Investigation File Number CA18/2/3/10064 to this investigation.

The AIID appointed the investigation team, led by the investigator-in-charge (IIC). South Africa is the State of the Operator, Registry and/or Design.

The AIID reports are made available to the public at:

<https://www.caa.co.za/industry-information/accidents-and-incidents/>

Disclaimer:

This interim statement is produced without prejudice to the rights of the SACAA, which are reserved.

Interim Statement

On 2 November 2021, a pilot and a passenger on-board a Bell 206L helicopter with registration ZS-HDX took off from Rand Airport (FAGM) on a repositioning flight, routing to Buffels Mine near Klerksdorp in the North West province.

The pilot reported that approximately 35 minutes into the flight whilst cruising at 650 feet (ft) above ground level (AGL), he noticed an engine out warning indication light. He then cross-checked the instrument indicators and noticed that the engine oil pressure, torque and gas generator (Ng) gauges all indicated zero. The rotor revolutions per minute (RRPM) indication was on green and the transmission oil temperature (TOT) displayed normal parameters, and all else was normal.

However, a few minutes later, the pilot stated that there was a loud bang, followed by a low RRPM warning light indication with audio. The pilot then induced autorotation and turned the helicopter into wind in preparation for a forced landing. All pedal controls were lost at this stage. The pilot then set the throttle to idle position and executed a successful forced landing on an open field in a private farm, 16 nautical miles (nm) south-west of Fochville.

After completing the emergency shutdown procedure and vacating the helicopter with the passenger unassisted, the pilot noticed smoke emanating from the engine bay. The source of the smoke was the fire that had erupted, which the pilot put out using the on-board fire extinguisher. The two occupants were not injured. The helicopter sustained damages to the turbine section, fuselage, tail rotor drive shaft and main rotor blade.

The investigator is currently analysing the findings of the technical report on the conclusion of the engine components which were sent to the manufacturer for testing to determine the causes and contributing factors that may have contributed to the engine failure and that may have led to this accident.

Additionally, the investigator has reviewed the maintenance records and the serviceability of the aircraft. At this stage of the investigation, no adverse findings were found in this regard.

The AIID investigators have collaborated with the National Transport Safety Board (NTSB), the South African Civil Aviation Authority (SACAA) and other organisations involved in areas of interest (including flight operations, human performance, maintenance procedures and aircraft systems) in this investigation, which is still on-going. The investigators will also look into other aspects of this occurrence which may or may not have safety implications.

This Report is issued by:

**Accident and Incident Investigations Division
South African Civil Aviation Authority
Republic of South Africa**