ACCIDENT INVESTIGATION COMMISSION

OFFICE OF THE COMMISSIONER

AIC Head Office,
Level 1, NAQIA Haus, Potion 81, Moera Tobo Rd, 6 Mile
PO Box 1709, Boroko 111
National Capital District
Papua New Guinea

Telephone : (675) 323 2911
Facsimile : (675) 323 2139
Email : abouraga@aic.gov.pg

Our Ref: AIC 23-R01/21 1002

Safety recommendation: AIC 23-R01/21-1002

Addressed to: Hevilift (PNG) Aviation Limited

Date issued: 8 March 2023

Investigation link: AIC 21-1002

Action status: Issued

Introduction

At 12:14 local time (02:14 UTC) on 15 May 2021 the AIC was informed, via a phone call from Hevilift PNG Aviation Limited (HPAL) of an accident involving a Mil-8 helicopter, registered P2-MHM, owned by Captston Aviation PTE Limited and operated by HPAL. The AIC immediately commenced an investigation.

Occurrence

On 15 May 2021, at 11:14:21 local time (01:14:21 UTC[1]), a MIL Mil-8 MTV-1 (MI-8[2]) helicopter, registered P2-MHM (MHM), owned by Captston Aviation PTE LTD[3] and operated by Hevilift (PNG) Aviation Limited, impacted terrain following loss of control after take-off at Gobo, Jiwaka Province. The VFR[4] charter flight was carrying 75 bags of coffee to Mt. Hagen, Western Highlands Province, Papua New Guinea. Gobo is 30 NM (55.4 Km) from Mt. Hagen on a track of 073°M. The helicopter was destroyed by impact forces.

There were four persons onboard: two pilots, one flight engineer and one passenger. The flight crew sustained minor injuries and the passenger sustained serious injuries and was hospitalised for 54 days.

1 The 24-houl clock, in Coordinated Universal Time (UTC), is used in this report to describe the local time as specific events occurred. Local time in the area of the accident, Papua New Guinea Time (Pacific/Port Moresby Time) is UTC + 10 hours.

2 Abbreviation MI-8 used based on the PNG CofA details, unless quoting a reference from an official document.

3 Private Limited company.

4 Visual flight rules: as prescribed by national authority for visual flight, with corresponding relaxed requirements for flight instruments (Source: *The Cambridge Aerospace Dictionary*)

Safety deficiency description

The operator's *Standard Operating Procedures Manual, Section 1.3, Crew Resource Management* states:

> *Good flight crew resource management should be practiced in any aircraft, regardless of the level of technical sophistication. The term 'CRM' refers to using all available resources to achieve a safe and efficient flight operation. Close to the heart of CRM is the assertion that any pilot, however junior, will become increasingly assertive and will be heard, if a colleague begins to deviate from the Company's Standard Operating Procedures without due cause.*

According to the recorded data and the operator's internal investigation report, the Flight Engineer and the co-pilot were aware of the helicopter being very heavy and the abnormal RPM readings. Just after lift-off for departure, the co-pilot who was pilot flying (PF) had mentioned to the PIC who was pilot monitoring (PM) that the aircraft was very heavy, however, he instructed her to continue the flight.

The operator's *Standard Operating Procedures Manual (SOPM) Mil 8 MTV, Section 1.4.1 Crew Structure* states:

> *The Flight Engineer reports to the flight crew and ultimately the PIC of the aircraft. He is required to perform his duties as described in the HL Mil 8 MTV SOP, checklists, and AFM. The Flight Engineer is expected to inform the PIC immediately of any mechanical malfunction, parameter deviation from normal, as to maintain safe flight or, if required precautionary landing. He will also assist the flight crew with any emergency procedures when necessary. With the permission of the PIC he may leave his station to do a periodic inspection of relevant items in the cargo compartment. He will exit the aircraft during hot refuelling operations to supervise refuel.*

The recorded data revealed that the FE called out the decaying Main Rotor (MR) RPM values to the PIC and co-pilot.

Section 3.7 of the operator's *SOPM Mil 8 MTV, Flight Parameters* also states:

> *The PM and FE shall monitor the flight and ensure that the parameters specified in the aircraft flight manual are not exceeded. This includes bank angle, rate of turn, airspeed etc. They shall alert the PF of any abnormalities using standard flight deck phraseology . . . Anytime the PM or FE observes parameters exceeding these or judge that the flight envelope has the possibility of becoming unstable, they should call values and notate to the PF, who should verbally respond `noted` and carry out remedial action to stabilise the flight parameters.*

The investigation determined from the recorded data and operator's *Internal Investigation Report* that the co-pilot and FE were aware of the abnormal RPM of the main rotor and called out the decaying values.

Although not causal to the accident, the investigation also found from the evidence provided by the operator that the initial and recurrent *Crew Resource Management* and *Human Factors* training for the flight crew is done online instead of a classroom-based training with discussion and interaction between the trainer and the flight crew.

Recommendation number AIC 23-R01/21-1002 to Hevilift (PNG) Aviation Limited

The PNG Accident Investigation Commission recommends that Hevilift (PNG) Aviation Limited should ensure that flight crew who have not flown on an aircraft / helicopter type for more than 24 months complete *Crew Resource Management* and *Human Factors* classroom-based training with discussion and interaction between the trainer and the flight crew.

Action requested

The AIC requests that Hevilift (PNG) Aviation Limited note recommendation *AIC 23-R01/21-1002* and provide a response to the AIC within 90 days of the issue date and explain (including with evidence) how Hevilift (PNG) Aviation Limited has addressed the safety deficiency identified in the safety recommendation.

Captain Aria Bouraga, MBE
Acting Chief Commissioner

Hevilift (PNG) Aviation Limited response

On 25 April 2023, Hevilift (PNG) Aviation Limited (HL) provided evidence of their corrective action to address *Safety Recommendation AIC 23-R01/21-1002*, which included the amended page *3-25* of *HL Operations Manual Part D – Part 136, Section 3 Content of Training Syllabi*, which states:

> **3.20.1 Introduction**
>
> CRM and ADM training on Air Maestro, depicting helicopter situations, will be reviewed by all pilots both on initial hire and annually at the time of one of the Part 136 Competency Checks. Classroom based HF/CRM[5] training conducted by a CRMF will be provided by the Company. This will be carried out annually and will be tracked in the recency section of Air Maestro.
>
> **3.20.3 Frequency**
>
> FCMs will review the AM courses upon commencement with the Company and every 12 months thereafter in conjunction with Competency and/or Line Checks or during type simulator training. The classroom based initial or refresher training will be conducted by the CRMF[6] annually to biennially to suit HEVILIFT client's requirement.

HL also provided copies of the CRM, HF and Pilot Decision Making Training certificate of completion for the PIC, co-pilot and Flight Engineer (FE) of the accident flight.

PNG Accident Investigation Commission assessment of Hevilift (PNG) Aviation Limited response

The AIC reviewed the Hevilift (PNG) Aviation Limited (HL) corrective actions to address *Safety Recommendation AIC 23-R01/21-1002* and notes that the safety actions address the safety deficiencies identified in the safety recommendation.

The AIC assigned this response as *fully satisfactory* rating.

The AIC recorded the **Status of the AIC Recommendation: CLOSED**

Captain Aria Bouraga, MBE
Acting Chief Commissioner

1 May 2023

5 CRM/HF: Crew Resource Management/Human Factors

6 CRMF: Crew Resource Management Facilitator