



AIRCRAFT SERIOUS INCIDENT FINAL REPORT

SI 05/21

Air Accidents Investigation Bureau (AAIB)

Ministry of Transport

Serious Incident Involving a Bell 206B-3

Registration 9M-AWD

at Kota Marudu, Sabah, Malaysia

on the 23 November 2021



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Issued on 23 November 2022

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**AIR ACCIDENTS INVESTIGATION BUREAU (AAIB)
MALAYSIA**

SERIOUS INCIDENT REPORT NO. : SI 05/21

OWNER / OPERATOR : LAYANG-LAYANG AEROSPACE SDN BHD
AIRCRAFT TYPE : BELL 206B-3
NATIONALITY : MALAYSIA
REGISTRATION : 9M-AWD
PLACE OF OCCURRENCE: KOTA MARUDU, SABAH, MALAYSIA
DATE AND TIME : 23 NOVEMBER 2021 AT APPROX 1300LT

This investigation is carried out to determine the circumstances and causes of the accident with the sole objective for the preservation of life and the avoidance of accidents in the future. It is not for the purpose of apportioning blame or liability (ICAO's Annex 13 to the Chicago Convention).

All times in this report are Local Time (LT) unless stated otherwise. LT is UTC +8 hours.

INTRODUCTION

The Air Accidents Investigation Bureau Malaysia

The Air Accidents Investigation Bureau (AAIB) is the air accident and serious incident investigation authority in Malaysia and is accountable to the Minister of Transport. Its mission is to promote aviation safety through the conduct of independent and objective investigations into air accidents and serious incidents.

The AAIB conducts the investigations in accordance with ICAO's Annex 13 to the Chicago Convention, the Civil Aviation Act of Malaysia 1969 and the Civil Aviation Regulations of Malaysia 2016.

It is inappropriate that AAIB reports should be used to assign fault or blame or determine liability, since neither the investigation nor the reporting processes has been undertaken for that purpose.

In accordance with ICAO's Annex 13 paragraph 4.1, notification of the accident was sent out to the Civil Aviation Authority Malaysia (CAAM) as the State of Occurrence, Registration & Operator and also to the Transportation Safety Board of Canada as the State of Design and Manufacturer.

Unless otherwise indicated, recommendations in this report are addressed to the investigating or regulatory authorities of the State having responsibility for the matters with which the recommendations are concerned. It is for those authorities to decide what action is to be taken.

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ABBREVIATIONS

AAIB	Air Accidents Investigation Bureau
BKI	IATA Code for Kota Kinabalu International Airport
CAAM	Civil Aviation Authority of Malaysia
CPL	Commercial Pilot License
ICAO	International Civil Aviation Organisation
FOM	Flight Operations Manager
LT	Local Time
POB	Persons on Board
RT	Radio Telephony
SMK	National Secondary School
UTC	Coordinated Universal Time

SYNOPSIS

On 23 November 2021, a Bell 206B-3 bearing the registration 9M-AWD was involved in a serious incident at Kota Marudu, Sabah, Malaysia. The aircraft had 5 POB.

9M-AWD had just approached to a high hover and was about to land on a football field when it experienced a wire strike. The aircraft continued to go forward and down and landed safely.

The AAIB Chief Inspector was notified within the hour and an investigation team was dispatched.

1.0 FACTUAL INFORMATION

1.1 History of the Flight

On Tuesday, 23 November 2021, 9M-AWD was returning to BKI after completing a Flying Doctor Service tasking in the Kota Marudu area. There was one pilot and four medical officers on board.

While transiting overhead Kota Marudu at 3,000 ft, the pilot noticed that the left-hand aft passenger door was not properly secured. The pilot deemed this unsafe and posed a safety hazard to the passengers on board. An immediate landing was decided to be carried out to rectify the situation on ground.

During the descent all the necessary checks and considerations for a confined area landing was carried out. A football field situated in SMK Kota Marudu was chosen as the ideal landing point.

As the pilot was approaching to land, at about 20 ft, he noticed an electrical wire directly in front of the aircraft running across the centre of the football field. However due to the momentum of the aircraft and its close proximity to the ground, the pilot was unable to take evasive action and the aircraft hit the cable.

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Some vibration was felt as the cable snapped with the pilot managing to continue and safely land the aircraft. After all movement had ceased and it was confirmed that none of the passengers had suffered any injuries, all occupants of the aircraft disembarked without any further incident.

Post-flight inspection revealed some damage to the rotor hub due to the wire strike. The pilot then informed his FOM of the serious incident and requested a recovery aircraft.

1.2 Injuries to Persons

All five occupants of the aircraft did not experience any injury.

<i>Injuries</i>	9M-AWD	
	Crew	Pax
Fatal	-	-
Serious	-	-
Minor / None	1	4

1.3 Damage to Aircraft

For images of damage to the aircraft on-site please refer to **APPENDIX A**.

1.4 Other Damages

The other damages were to the single wire across the football field which snapped on being struck by the aircraft. Additionally, one of its supporting poles was found to be leaning slightly due to forces of the impact.

1.5 Personnel Information

The pilot of the helicopter held a CPL and was properly qualified for the tasking being carried out.

1.6 Aircraft Information

The helicopter in question is owned and operated by Layang-Layang Aerospace Sdn Bhd, a regional charter airline based in Sabah, Malaysia.

Aircraft Type	Bell 206B-3
Manufacturer	Bell Helicopter
Registration	9M-AWD
Serial No.	2351

1.7 Meteorological Information

The weather on that fateful day was clear with some scattered clouds and light and variable wind conditions.

1.8 Aids to Navigation

Not applicable.

1.9 Communications

No distress calls were made that day over the RT. Information about the serious incident was relayed by phone to the operator's FOM by the pilot.

1.10 **Aerodrome Information**

Not applicable.

1.11 **Flight Recorders**

The Bell 206B-3 is not equipped with flight recorders (FDR and/or CVR) nor is it mandated by law to do so.

1.12 **Wreckage and Impact Information**

A visual assessment of the aircraft at the crash site revealed that 9M-AWD had experienced some damage to its main rotor hub due to the wire strike. See **APPENDIX A**.

The single wire across the football field which snapped on impact with the aircraft also had one of its supporting poles left leaning slightly at the edge of the field.

1.13 **Medical and Pathological Information**

As stated earlier there were no injuries to the occupants of the aircraft.

1.14 **Fire**

There was no post-impact fire.

1.15 Survival Aspects

All persons on board the aircraft egressed as per normal without any difficulty.

1.16 Tests and Research

Not applicable.

1.17 Organisational and Management Information

All organisational and management aspects of the operator were found to be in order throughout the investigation.

1.18 Additional Information

Nil.

1.19 Useful or Effective Investigation Techniques

Nil.

2.0 ANALYSIS

2.1 According to the pilot, all the checks and considerations for a confined area operation had been carried out diligently during the descent from 3,000 ft. Unfortunately he did not detect the wire across the centre of the football field until it was too late.

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2.2 An inspection of the LP discovered that an electrical wire slightly less than a centimeter in diameter was strung across the breadth of the football field between two poles at about 20 ft along the centreline. Admittedly, it is quite difficult for any pilot to pick out the wire from even 500 ft in a moving aircraft. Nonetheless the ultimate responsibility for the incident will have to be shouldered by the pilot himself.

2.3 There is also the fact that the whole incident was precipitated by the improperly secured left-hand aft door. As the pilot was the only aircrew for the whole flight, the responsibility for ensuring the security of all doors before the flight would also fall on his shoulders.

3.0 CONCLUSION

There is always an inherent risk to landing at unprepared LPs. No matter the amount of precautions taken incidents like this will continue to happen. The best outcome from this incident would be for it to serve as a reminder to never let your guard down when it comes to safety in such situations.

This accident is classified as an Collision with an Obstacle during Take-Off or Landing (CTOL).

4.0 SAFETY RECOMMENDATIONS

The helicopter operator is to remind all of its helicopter pilots of the dangers of landing at unprepared LPs.

INVESTIGATOR-IN-CHARGE

Air Accidents Investigation Bureau

Ministry of Transport

23 November 2022