



AIRCRAFT ACCIDENT PRELIMINARY REPORT

A 07/26

**Air Accident Investigation Bureau (AAIB)
Ministry of Transport Malaysia**

**Fixed-Wing Aircraft Diamond DA 40 D,
Registration 9M-HMJ at Kuah, Langkawi, Kedah
on 12 May 2026**



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PRELIMINARY REPORT A 07/26

AIR ACCIDENT INVESTIGATION BUREAU (AAIB) MALAYSIA

PRELIMINARY REPORT NO: A 07/26

OPERATOR	: HM AEROSPACE
AIRCRAFT TYPE	: DIAMOND DA 40 D
AIRCRAFT NATIONALITY	: MALAYSIA
REGISTRATION	: 9M-HMJ
PLACE OF OCCURRENCE	: KUAH, LANGKAWI, KEDAH
DATE AND TIME	: 12 MAY 2026 AT 1030 LT (0230 UTC)

This preliminary report contains statement of facts which have been determined up to the time of issue only. It must be regarded as tentative, and is subject to alteration or correction if additional evidence becomes available.

This investigation is carried out to determine the circumstances and causes of the accident with a view to the preservation of life and the avoidance of accident or incident in the future. It is not the purpose of this investigation to apportion blame or liability (Annex 13 to the Chicago Convention and Civil Aviation Regulations 2016).

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

INTRODUCTION

The Air Accident Investigation Bureau (AAIB) is the air accident and serious incident investigation authority in Malaysia and is responsible 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 these investigations in accordance with 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 investigations nor the reporting processes have been undertaken for that purpose.

In accordance with ICAO Annex 13 paragraph 4.1, notification of the accident was sent out on 13 May 2026 to the Federal Safety Investigation Authority of Austria (SUB) as the State of Manufacture, the Transportation Safety Board of Canada (TSB) as the State of Design, the Federal Bureau of Aircraft Accident Investigation of Germany (BFU) as the State of Manufacture of the aircraft's engine, the Civil Aviation Authority of Malaysia (CAAM) and the Aircraft Operator.

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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GLOSSARY OF ABBREVIATIONS

A

AAIB	Air Accident Investigation Bureau
AMO	Approved Maintenance Organization
ATC	Air Traffic Control
ATO	Approved Training Organization
ATS	Air Traffic Services

C

CAAM	Civil Aviation Authority of Malaysia
CAMO	Continuing Airworthiness Management Organisation
CB	Cumulonimbus
CoA	Certificate of Airworthiness
CoR	Certificate of Registration
CP	Cadet Pilot
CPL	Commercial Pilot Licence
CRS	Certificate of Release to Service
CVR	Cockpit Voice Recorder

E

ECU	Engine Control Unit
-----	---------------------

F

FADEC	Full Authority Digital Engine Control
FDR	Flight Data Recorder
FI	Flight Instructor
ft	Feet

I

ICAO	International Civil Aviation Organisation
IMC	Instrument Meteorological Conditions
IR	Instrument Rating

J

JBPM	Fire and Rescue Department
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K

kg	Kilogramme
kts	Knots

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L

LAE	Licensed Aircraft Engineers
LT	Local Time

M

METAR	Meteorological Aerodrome Report
MLG	Main Landing Gear
MOR	Mandatory Occurrence Report

P

PFL	Practice Forced Landing
PIC	Pilot in Command

Q

QA	Quality Assurance
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S

SLA	Service Level Agreement
SMS	Safety Management System
SPL	Student Pilot Licence

T

TSRA	Thunderstorm and Rain
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U

UTC	Coordinated Universal Time
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V

VMC	Visual Meteorological Conditions
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W

WMKL	Langkawi International Airport
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SYNOPSIS

On 12 May 2026, a Diamond DA40 aircraft, registration 9M-HMJ, was conducting a scheduled training flight with a Flight Instructor (FI) and Cadet Pilot (CP) on board. The aircraft departed from Langkawi International Airport (WMKL) en-route to the training area. Initially planned for Langgun or Datai sectors, the crew elected to conduct their maneuvers in the Kuah area due to low cloud covering the intended training area at or below 3,000 feet.

After successfully completing the planned air exercises, the crew held over Kuah town while requesting for an airspace to re-join via a Practice Forced Landing (PFL) overhead the aerodrome and was issued with the approach sequence. During this phase of flight, the aircraft experienced an uncommand drop in engine power to idle, rendering the engine entirely unresponsive to power lever inputs. This malfunction was accompanied by the illumination of both the 'ECU A' and 'ECU B' caution lights, along with a flashing Engine Control Unit (ECU) backup unsafe light.

The FI initiated a forced landing pattern toward a suitable open field adjacent to the Kuah Stadium and attempted to troubleshoot the issue using the ECU caution checklist. When attempting to reset the ECU failed to restore engine control, the FI declared a 'MAYDAY'. The crew subsequently executed an emergency landing in the selected field, located 7.62 Nm from Langkawi Airport. Due to the adverse surface conditions of the field, the aircraft's nose wheel collapsed at the conclusion of the ground roll. Both occupants evacuated safely without injury.

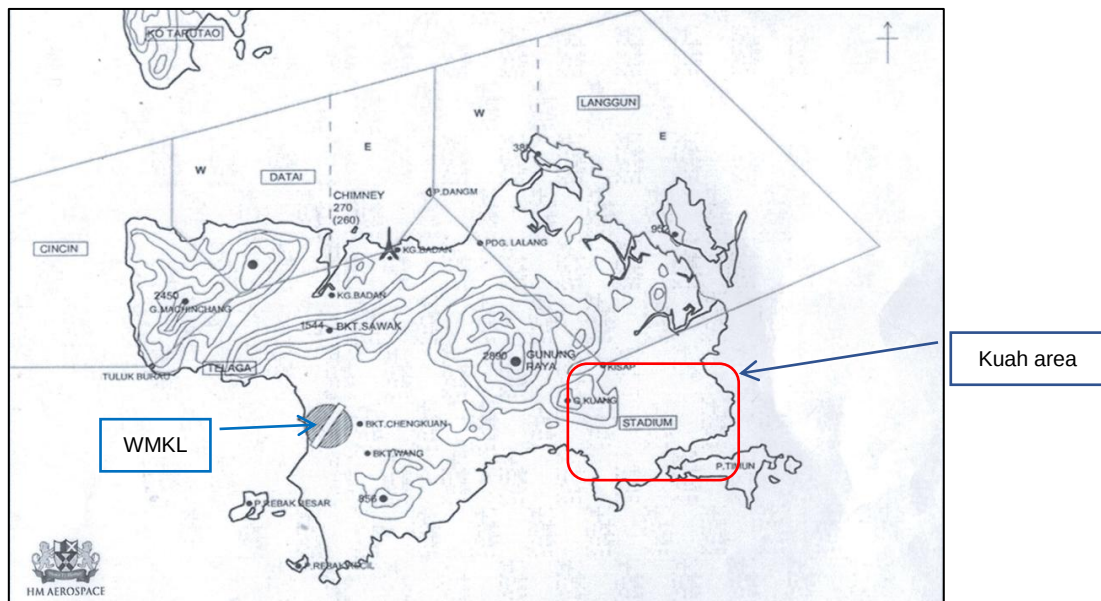
The Aircraft Operator submitted a Mandatory Occurrence Report (MOR) to the Civil Aviation Authority of Malaysia (CAAM), followed by a notification of the occurrence submission to the Air Accident Investigation Bureau, Malaysia (AAIB), and an investigation team was dispatched to the crash site on the same day.

1.0 FACTUAL INFORMATION

1.1 History of the Flight

On 12 May 2026, a Diamond DA40 aircraft, bearing registration 9M-HMJ and operating under the callsign MAHA04, was conducting a scheduled 'General Handling 6'¹ training flight. The flight crew consisted of a 40-year-old FI and a 20-year-old CP.

The flight departed from WMKL at 0954 LT without any reported abnormalities. The sortie was initially planned to take place in the Langgun or Datai training areas. However, due to low cloud cover in those sectors, the crew elected to conduct the exercises at Kuah instead. Air Traffic Services (ATS) from the WMKL had approved the request, clearing the aircraft to operate in the Kuah area at an altitude of 3000 feet and below.



Source : HM Aerospace

Figure 1 : Training Area Map

¹ "General Handling 06" sortie utilizes a standard pre-flight brief and an airborne profile targeting fundamental maneuvers and emergency training. The standard flying syllabus requires the CP to execute a performance take-off, transit procedures to and from the training area, steep turns, all three stall configurations and standard circuit operations. Emergency preparedness is heavily integrated into the profile through a simulated engine fire in the training area alongside practice forced landings conducted both within the training area and overhead

The crew successfully completed their planned air exercises, which included steep turns, clean stalls, and approach configuration stalls. Upon completion of these maneuvers, while holding over Kuah town, the crew requested an airspace overhead the aerodrome for Practice Forced Landing (PFL) re-join from the east of the airfield.

During this phase of flight, the aircraft's engine power dropped to idle and became entirely unresponsive to movements of the power lever. Concurrently, the 'ECU A' and 'ECU B' caution lights illuminated, accompanied by a Engine Control Unit (ECU) backup unsafe light flashing. The FI subsequently initiated a forced landing pattern over a suitable open field adjacent to the Kuah Stadium.

While maintaining the pattern, the crew executed troubleshooting procedures in accordance with the ECU caution checklist, which included attempting to reset the ECU by holding the test button for more than 2 seconds. When these actions failed to restore engine control, the FI declared a 'MAYDAY' to local ATS at 1029 LT, reporting the engine malfunction and their intent to land at the nearest grass area at Kuah area as shown in Figure 2.



Figure 2 : Location of the Accident

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Air Traffic Control (ATC) observed the aircraft descending through 2500 feet on radar and attempted to establish radio contact, but received no response. The last radar detected on screen of the aircraft was at 400 ft with the aircraft speed recorded 77 kts. ATC subsequently cleared another company aircraft in the vicinity (MAHA02) which requested to track toward Kuah to observe the incident. The crew executed an emergency landing at the selected field, located approximately 7.3 NM east of Langkawi Airport. Due to the adverse surface conditions of the field, the aircraft's nose wheel collapsed at the conclusion of the ground roll.

Both the FI and the CP evacuated the aircraft safely. At 1032 LT, the FI contacted ATS to report that both occupants were in good condition. Local Fire and Rescue Department (JBPM) personnel received the information of the accident at 1050 LT and arrived at the scene three minutes later to secure the site and confirmed there was no post-crash fire and no injuries to either occupant.

1.2 Injuries to Persons

Injuries	Crew	Passengers	Others	Total
Fatal	NIL	NIL	NIL	NIL
Serious	NIL	NIL	NIL	NIL
Minor	NIL	NIL	NIL	NIL
None	2	NIL	NIL	2

Table 1: Injuries to Persons

There were no injuries to the aircraft occupants or to personnel on the ground.

1.3 Damage to Aircraft

Preliminary investigation indicates the aircraft sustained substantial damage resulting from the ground impact and the subsequent slide along the unpaved surface. The structural damage was primarily localized to the landing gear, propeller assembly, and the lower fuselage.

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- **Landing Gear:** Following a ground roll, the nose wheel became stuck in uneven, soft soil, resulting in the complete collapse of the nose landing gear. The forward strut suffered a structural fracture, severing the wheel assembly and lower fairing from the aircraft. The left and right main landing gear assemblies remained structurally intact and securely attached to the airframe. Both Main Landing Gear (MLG) tyres exhibited heavy mud accumulation and soil embedment consistent with the soft-field ground roll.



Figure 3 : Condition of Main Landing Gear

- **Propeller Assembly:** Two of the three composite propeller blades sustained damage, including splintering and aft-bending, while the third blade remained intact and undamaged. The absence of uniform chordwise scratching and the pristine condition of third blade indicate that the propeller was not rotating under power at the time of impact. The damage pattern is consistent with the stationary propeller striking the terrain subsequent to the collapse of the nose landing gear.



Figure 4 : Close-up View of Propeller Assembly

- **Lower Fuselage (Belly):** With the nose landing gear collapsed, the nose of aircraft rested entirely on its belly. The underside of the nose wheel fuselage sustained abrasion and mud packing consistent with sliding across the dirt and grass surface.



Figure 5 : Condition of Lower Fuselage (Nose Wheel Fuselage)

- **Wings and Empennage:** The left and right wings, including the wingtips, as well as the T-tail empennage assembly, remained attached to the primary structure and appeared fundamentally intact, though left wing tip coated in mud displaced during the sliding sequence. The canopy remained intact with no signs of shattering.



Figure 6 : Condition of Wings and Empennage

1.4 Other Damage

There was no evidence or report of damage to third-party structures, public infrastructure, or nearby buildings, and environmental impact was limited strictly to surface scarring of the soft open field, characterized by distinct grooves and tyre/skid marks created as the aircraft slid to its final resting position (red circle).



Figure 7 : View of Environmental Impact at the Site

1.5 Personnel Information**1.5.1 Flight Instructor (FI)**

Status	Pilot in Command (PIC)
Nationality	Malaysian
Age	40 years old
Gender	Male
License Type	CPL (A) FI
License Validity	Valid until 31 March 2027
Aircraft Rating	Diamond 40 (DA 40 TDI)
Instructor Rating	FI
Instructor Hours	1077:05 hrs
Total Hours on Type	971:40 hrs
Total Flying Hours	1751: 30 hrs
Rest Period Since Last Flight	16 hrs 10 minutes
Date of Medical Examination	30 March 2026

1.5.2 Cadet Pilot (CP)

Status	Cadet Pilot
Nationality	Malaysian
Age	20 years old
Gender	Female
License Type	SPL (A)
License Validity	Valid until 30 December 2026
Aircraft Rating	Diamond 40 (DA 40 TDI)
Instructor Rating	Nil
Total Hours on Type	26:10 hrs
Total Flying Hours	26:10 hrs
Rest Period Since Last Flight	96 hrs 40 minutes
Date of Medical Examination	9 December 2025

Both FI and CP were licensed, qualified, and approved to perform the flight in accordance with existing regulations. The Pilots were medically fit to operate the flight.

1.6 Aircraft Information

Aircraft Type	Diamond DA 40 D
Manufacturer	Austria
Year of Manufacturer	2005
Owner	HM Aerospace Sdn. Bhd.
Registration No.	9M-HMJ
Aircraft Serial No.	D4.173
C of A Expiry Date	9 April 2027
C of R Expiry Date	22 April 2028

The aircraft was airworthy when dispatched for the flight and has a valid Certificate of Registration (CoR) and also Certificate of Airworthiness (CoA).

Additional information will be included in the Final Report.

1.7 Meteorological Information

1.7.1 General Weather Conditions

The flight was conducted during **daylight hours** under Visual Meteorological Conditions (VMC) with some localized low cloud ceilings and convective activity at certain sector of the training area. Flight crew documentation indicated that the original flight plan to operate in the Langgun or Datai training areas was altered to the Kuah sector specifically to mitigate low cloud hazards. At the time of the emergency call at 1029 LT the sun was well above the horizon, providing ambient daytime lighting despite the few cloud layers reported in the training area.

1.7.2 Meteorological Forecasts and Observations

The official aeronautical meteorological data for WMKL, the nearest reporting station to the forced landing location, provided the following parameters for the period surrounding the occurrence:

- **Prevailing Terminal Aerodrome Forecast (TAF):** Issued at 2300 UTC on 11 May 2026 (valid from 1200 UTC on 12 May 2026 to 1300 UTC on 13 May 2026), indicating winds variable at 3 knots (VRB03KT), visibility 10 km or greater (9999) and few clouds at 2,000 feet (FEW020).
- **Temporary Weather Changes (TEMPO):** The TAF specified temporary fluctuations between 0000 UTC and 0400 UTC on 12 May 2026, predicting visibility dropping to 4,000 meters in thunderstorms and moderate rain (TSRA). Cloud cover during these temporary windows was forecast as few at 1,000 feet (FEW010), few cumulonimbus (CB) at 1,700 feet (FEW017CB), and scattered at 2,500 feet (SCT025).
- **Surface Observations (METAR):** The routine aerodrome report at 2300 UTC on 11 May 2026 observed winds variable at 3 knots, visibility 10 km or greater with few cumulonimbus clouds at 1,700 feet (FEW017CB).

1.8 Aids to Navigation

All navigation aids fitted on the aircraft and installed at WMKL were operational at the time of the occurrence.

1.9 Communications

All communication frequencies were operating normally.

1.10 Aerodrome Information

The accident location is approximately 7.3 Nm from to the east of WMKL. HM Aerospace is based at WMKL, and its aircraft operate from there.

Airfield	Langkawi International Airport, Langkawi, Kedah
Runway	03 / 21
Length	3,813 m (12,510 ft)
Width	45 m (148 ft)
ICAO designator/ code	WMKL
IATA designator/ code	LGK
Elevation	7 m (23 ft)

Table 2: WMKL Aerodrome information

1.11 Flight Recorders

The aircraft was not equipped with a Flight Data Recorder (FDR) or a Cockpit Voice Recorder (CVR).

1.12 Wreckage and Impact Information

Figure 8 provides a general description of the accident site and the location of the aircraft wreckage. The approach direction for the aircraft's landing is indicated by a red arrow, while a broken yellow line circle illustrates the initial touchdown point. Following touchdown, the aircraft rolled for approximately 60 meters before its nose wheel became trapped in a soft, uneven surface. This entrapment caused the nose wheel to collapse, which subsequently forced the aircraft to swing to the right and come to a complete stop in its final resting position.



Figure 8 : Description View of the Accident Site and Wreckage Location

1.13 Medical and Pathological Information

Both FI and CP underwent a urine drug screening test, the results of which were negative for prohibited substances. A blood alcohol screening was also conducted, and the results were negative for the presence of alcohol.

1.14 Fire

There was no indication of fire inflight or after landing.

1.15 Survival Aspects

The FI and the CP get off the aircraft after the aircraft stop by opening the canopy.

1.16 Tests and Research

Immediately following the accident, a fuel sample recovered from the wreckage was subjected to an on-site water contamination test utilizing a chemical strip kit. This prompt field analysis was conducted to identify and mitigate any immediate systemic safety risks, as the same fuel source was actively supplying other aircraft operating at WMKL. The initial on-site testing indicated nil presence of water in the aircraft's fuel as shown in Figure 9.



Figure 9 : Fuel Water Contamination Test Results Using Strips Kit

To ensure comprehensive verification, representative samples of the aircraft's fuel were subsequently secured for detailed laboratory analysis. Furthermore, samples of the fuel filter, engine filter, gearbox filter, engine oil, and gearbox oil were extracted from the wreckage for specialized technical evaluation in the laboratory. The comprehensive findings and analytical results from these ongoing laboratory tests are currently pending and will be incorporated into the final investigation report.



Figure 10 : Filter Components Retrieved for Laboratory Examination

Although the aircraft was not equipped with a conventional Flight Recorder (FR), it is fitted with a Full Authority Digital Engine Control (FADEC) system which will be utilized for data extraction. The investigation will rely on the analysis of this FADEC data, corroborated by witness statements, to guide the ongoing testing and systems investigation into the engine, ignition, and fuel injection networks. Additionally, the research phase will encompass a thorough review of adherence to established flight operations and maintenance procedures.

1.17 Organisational and Management Information

1.17.1 Aircraft Operator

HM Aerospace Sdn Bhd is an established Flight Training Academy incorporated in Malaysia in 2005. It operates as a subsidiary under the umbrella of the Halim Mazmin Group. The organization's primary mandate is the provision of cadet pilot training, offering programs up to the Commercial Pilot License (CPL) with Instrument Rating (IR) and Frozen ATPL.

The organization operates under the regulatory oversight and endorsement by the CAAM. Its primary flight training and operational headquarters are situated at WMKL in Kedah, Malaysia.

The organization's flight training operations are conducted using a mixed fleet of training aircraft. This includes single-engine Diamond DA 40 TDI and multi-engine Diamond DA 42 NG Twin Star aircraft. Flight simulation training is supported by ALSIM AL250-41 and AL42-M2-05 FNPT II simulators.

The Academy is managed by a structured hierarchy responsible for maintaining training standards, operational safety, and airworthiness. As part of its organizational matrix, the academy maintains safety management and maintenance protocols mandated by CAAM for Approved Training Organizations (ATO).

While HM Aerospace retains the ultimate responsibility for the continuing airworthiness of its fleet in accordance with CAAM regulations, the physical execution of scheduled and unscheduled maintenance, defect rectification, and component overhauls is outsourced. HMA also outsourced CAMO function to Sin-Kung Airways Sdn. Bhd. At the time of the occurrence, HM Aerospace held a formal Service Level Agreement (SLA) and maintenance contract with Sin-Kung Airways Sdn Bhd.

1.17.2 Maintenance Operator

Sin-Kung Airways Sdn Bhd is an aviation entity operating in Malaysia. In addition to its flight operations, the company holds an Approved Maintenance Organization (AMO) and Continuing Airworthiness Management Organisation (CAMO) certificate issued by CAAM. This approval authorizes the company to perform line and base maintenance, as well as defect rectification, on specified aircraft types.

Under its AMO approval, Sin-Kung Airways is authorized to service the aircraft types operated by HM Aerospace (including the Diamond DA40/DA42 series). The maintenance operations and managing continuing airworthiness of HMA aircraft fleet provided for HM Aerospace are carried out at designated hangar facilities, with a dedicated team of Licensed Aircraft Engineers (LAEs), technicians and CAMO department assigned to the training fleet.

As a certified AMO and CAMO, Sin-Kung Airways is required to maintain its own independent Safety Management System (SMS) and Quality Assurance (QA)

program. This includes internal audits, tool calibration tracking, and fatigue risk management for maintenance personnel working on the contracted HM Aerospace fleet.

1.17.3 Organizational Interface (HM Aerospace & Sin-Kung Airways)

The operational interface between the two entities is governed by a documented procedure. When a FI or CP from HM Aerospace identifies an aircraft defect (e.g., during a pre-flight inspection or in-flight), it is recorded in the aircraft's Technical Logbook. The aircraft is then grounded and handed over to Sin-Kung Airways maintenance personnel.

Following the rectification of a defect or the completion of scheduled maintenance, a Sin-Kung Airways LAE must issue a Certificate of Release to Service (CRS) before the aircraft can be returned to HM Aerospace's active flight line.

1.18 Additional Information

To be included in Final Report.

1.19 Useful or Effective Investigation Techniques

To be included in the Final Report.

2.0 ANALYSIS

To be included in the Final Report.

3.0 CONCLUSION

3.1 Findings

The preliminary findings of the investigation are as follows:

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- 3.1.1 The FI and CP were properly licensed and qualified for the flight.
- 3.1.2 Both FI and CP were medically fit before flight.
- 3.1.3 Both FI and CP blood and urine specimens returned negative results for alcohol and screened substances, indicating no evidence of substance abuse.
- 3.1.4 The aircraft had valid airworthiness certification.
- 3.1.5 An initial on-site water contamination test of the fuel recovered from the wreckage, conducted using a chemical strip kit, indicated no presence of water.
- 3.1.6 Additional findings shall be included in the Final Report.

3.2 Causes/Contributing Factors

The safety investigation is ongoing, and the factual data established thus far remain at a preliminary stage. Continuous fact-finding regarding flight operations, standard operating practices, and aircraft maintenance history will provide the necessary evidence to validate system defences and evaluate any latent conditions. A comprehensive analysis of these facts, along with the finalized findings, causes, and contributing factors, will be fully detailed in the Final Report.

4.0 SAFETY RECCOMENDATION

To be included in Final Report.

INVESTIGATOR IN-CHARGE

Air Accident Investigation Bureau
Ministry of Transport Malaysia