



AIRCRAFT SERIOUS INCIDENT FINAL REPORT

SI 05/15P

Air Accident Investigation Bureau (AAIB)

Ministry of Transport Malaysia

**ATR72-600, Registration 9M-LMG
at Penang International Airport, Penang
on 28 May 2015**



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Issued On 10 June 2016

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

REPORT NO.: SI 05/15P

OPERATOR : MALINDO AIR
AIRCRAFT TYPE : ATR72-600
NATIONALITY OF AIRCRAFT : MALAYSIA
REGISTRATION : 9M-LMG
**PLACE OF OCCURRENCE : PENANG INTERNATIONAL AIRPORT,
PENANG**
DATE AND TIME : 28 MAY 2015 AT 1317 LT

The sole objective of the investigation is the prevention of accidents and incidents. In accordance with Annex 13 to the Convention on International Civil Aviation, it is not the purpose of this investigation to apportion blame or liability.

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

INTRODUCTION

The Air Accident Investigation Bureau of Malaysia

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 the investigation in accordance with Annex 13 to the Chicago Convention and 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 process has been undertaken for that purpose.

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 taken.

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SYNOPSIS

On 28 May 2015, an ATR72-212A aircraft operated by Malindo Air bearing registration 9M-LMG with flight number OD1165 departed out of Penang International Airport, Penang (PEN) en route to Sultan Abdul Aziz Shah International Airport, Subang (SZB).

After take-off from PEN, the aircraft suffered a No. 01 engine fire. Procedures were carried out by the operating crew and after the procedures were completed the aircraft returned to the airport and landed safely.

1.0 FACTUAL INFORMATION

1.1 History of the flight

On 28 May 2015 at approximately 1317hrs (LT), an ATR72-212A aircraft en route from PEN to SZB with registration number 9M-LMG bearing flight number OD1165 operated by Malindo Air suffered an in-flight external engine fire after take-off.

After flap retraction climbing passing approximately 800 feet, an engine fire warning came on EWD. The flight crew carried out all the required procedures, discharged both fire extinguishers, and requested for air turn back to PEN.

The aircraft safely landed at the airport. At landing, it was confirmed that there was no fire anymore. There were no passengers on board and the crew members disembarked safely with no injuries.

1.2 Injuries to persons

Injuries	Crew	Passenger	Others
Fatal	Nil	Nil	Nil
Serious	Nil	Nil	Nil
Minor	Nil	Nil	Nil
None	04	Nil	Nil

1.3 Damage to aircraft

Minor damage to the aircraft engine resulted from the fire.

1.4 Other damage

Nil.

1.5 Personal information

1.5.1 Captain

Status	Commander
Nationality	Malaysian

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Age	28 Years old
Gender	Male
Licence Type	CPL/ATPL 4202
Licence Validity	Valid until 29 February 2016
Medical Examination	February 2016
Aircraft Rating	ATR72-600
Certificate of Test	07 July 2015
Instructor Rating	Nil
Flying Hours	Total hours : 852:59hrs Total on type : 4148:45hrs

1.5.2 First Officer

Status	Second Officer
Nationality	Malaysian
Age	27 Years old
Gender	Male
Licence Type	CPL 4880
Licence Validity	Valid until 30 September 2015
Medical Examination	30 September 2015
Aircraft Rating	ATR72-600
Certificate of Test	02 August 2015
Instructor Rating	Nil
Flying Hours	Total hours : 457:53hrs Total on type : 257:53hrs

1.6 Aircraft information

Aircraft	ATR72-600
Owner	Malindo Air
Registration	9M-LMG
Serial No.	1089
Air Operator Cert. expiry	31 August 2015

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CofA No.	M.1573
CofA expiry	29 July 2015
CofR No.	M.1810
Year of manufacture	2013
Operations	Scheduled
Flight Hours	4865
Flight Cycles	5569
Engine type	PW127M
Engine Serial No.	ED0673
Engine Total Time	4865

1.7 Meteorological information

The meteorological station reported the wind at 1300hrs (LT) as 200/08kts. The weather was clear and the visibility was 7km at the time of occurrence.

1.8 Aid to navigation

Not applicable.

1.9 Communication

Nil.

1.10 Aerodrome information

Nil.

1.11 Flight recorders

The aircraft was fitted with L-3 COMM Flight Data Recorder (FDR) and Cockpit Voice Recorder (CVR).

1.12 Wreckage and impact Information

Nil.

1.13 Medical information

Nil.

1.14 Fire

The aircraft had an in-flight external fire and both fire extinguishers were discharged. On landing, it has been confirmed that the fire had been extinguished.

1.15 Survival aspects

Not applicable.

1.16 Test and research

Nil.

1.17 Organisational and management information

Nil.

1.18 Additional information

Nil.

1.19 Useful or effective investigation techniques

Not applicable.

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2.0 ANALYSIS

- 2.1 Aircraft operated out of SZB to PEN, and the flight was normal until it landed at PEN.
- 2.2 After landing in PEN, the Captain reported that the aircraft have radio failure that requires the aircraft to be grounded in PEN while waiting the rescue team to arrive and troubleshoot.
- 2.3 After troubleshooting, nil defect was found and the aircraft ready for reposition flight back to SZB.
- 2.4 Not long after take-off from PEN, no. 1 engine fire warning illuminated, the flight crew carried out all the necessary procedures and turn the aircraft back to PEN.
- 2.5 There was no injury to crew and passengers on board.

3.0 CONCLUSIONS

3.1 Findings

- 3.1.1 The flight crew members were properly licensed, medically fit, well experienced and adequately rested prior to the flight.
- 3.1.2 The aircraft was airworthy and within the validity of the AOC, CofA and CofR.
- 3.1.3 Several parts of the right hand engine have been found damaged by the fire event.

3.2 Probable Cause

The probable cause of the engine fire is due to the fuel leak from No. 3 fuel nozzle manifold 'B' nut.

4.0 SAFETY RECOMMENDATIONS

- 4.1 It is recommended that the manufacturer to remind customers of the importance to use the products recommended in the Engine Maintenance Manual (EMM).
- 4.2 It is recommended that the restoration of fuel nozzle for both engines on one aircraft shall not be performed at the same maintenance visit.
- 4.3 It is recommended that the engineer in-charge to perform a detailed inspection of the manifold hoses B-nut to ensure no early sign of corrosion is observed.
- 4.4 It is recommended that manifold with sign of corrosion shall be quarantined and reported to quality Assurance for further investigation.
- 4.5 It is recommended that the Licensed Engineer shall ensure that only approved solvent/materials listed in Maintenance Manual are to be used throughout the maintenance process.

INVESTIGATOR IN-CHARGE

Air Accident Investigation Bureau

Ministry of Transport