



AIRCRAFT ACCIDENT FINAL REPORT
A 07/17
Air Accidents Investigation Bureau (AAIB)
Ministry of Transport

Accident Involving a Cessna C-152
Registration 9M-FBS
at Sultan Abdul Aziz Shah Airport (WMSA), Selangor, Malaysia
on the 8 July 2017



FINAL REPORT A 07/17

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

ACCIDENT REPORT NO. : A 07/17

OWNER : ALARIS AEROSPACE SYSTEMS SDN BHD
OPERATOR : FAS UDARA FLYING CLUB
AIRCRAFT TYPE : CESSNA C-152
NATIONALITY : MALAYSIA
REGISTRATION : 9M-FBS
**PLACE OF OCCURRENCE: SULTAN ABDUL AZIZ SHAH AIRPORT,
SELANGOR, MALAYSIA**
DATE AND TIME : 8 JULY 2017 AT 0925LT

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, a 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 National Transportation Safety Board (NTSB), United States as the State of Design and Manufacturer (**APPENDIX A**).

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.

FINAL REPORT A 07/17

TABLE OF CONTENTS

CHAPTER	PARA	TITLE	PAGE
		TITLE PAGE	i
		INTRODUCTION	iii
		TABLE OF CONTENTS	iv
		APPENDICES	v
		ABBREVIATIONS	vi
		SYNOPSIS	1
1.0		FACTUAL INFORMATION	
	1.1	History of the Flight	1
	1.2	Injuries to Persons	2
	1.3	Damage to Aircraft	
	1.4	Other Damages	
	1.5	Personal Information	
	1.6	Aircraft Information	3
	1.7	Meteorological Information	4
	1.8	Aids to Navigation	
	1.9	Communications	
	1.10	Aerodrome Information	
	1.11	Flight Recorders	
	1.12	Wreckage and Impact Information	
	1.13	Medical and Pathological Information	
	1.14	Fire	5
	1.15	Survival Aspects	
	1.16	Tests and Research	
	1.17	Organisational and Management Information	
	1.18	Additional Information	
	1.19	Useful or Effective Investigation Techniques	
2.0		ANALYSIS	6
3.0		CONCLUSIONS	6
4.0		SAFETY RECOMMENDATIONS	7

FINAL REPORT A 07/17

APPENDICES

APPENDIX	TITLE	PAGE
A	NOTIFICATION	A-1 to 2
B	DAMAGE ASSESSMENT IMAGES	B-1 to 2

ABBREVIATIONS

AAIB	Air Accidents Investigation Bureau
CAAM	Civil Aviation Authority of Malaysia
FEW025	1 to 2 Oktas Cloud Cover at 2,500 ft
ICAO	International Civil Aviation Organisation
LT	Local Time
METAR	Meteorological Aerodrome Reports
PAX	Passengers
POB	Persons on Board
RT	Radio Telephony
SPL	Student Pilot License
TAF	Terminal Area Forecast
UTC	Coordinated Universal Time
WMSA	ICAO Code for Sultan Abdul Aziz Shah Airport, Subang

SYNOPSIS

On 8 July 2017, a Cessna C-152 bearing the registration 9M-FBS was involved in an accident at Sultan Abdul Aziz Shah Airport, Subang, Selangor, Malaysia. The aircraft had 1 POB.

9M-FBS was carrying out a student pilot's first solo for circuit and landing. Unfortunately during the landing the aircraft bounced twice before experiencing a hard landing.

The AAIB Chief Inspector was notified immediately and an investigation team was dispatched.

1.0 FACTUAL INFORMATION

1.1 History of the Flight

On Saturday, 8 July 2017, 9M-FBS was taken up by a student pilot for her first solo circuit and landing sortie. The student pilot was the sole person onboard at the time.

The take-off was uneventful but once the student pilot was established on downwind the control tower positioned her as No 2 behind an aircraft on long finals. In order for the student pilot to keep her spacing with No 1 she decided to do a left-hand orbit downwind before she was cleared by the tower for finals Runway 15 WMSA.

On finals during the landing, the aircraft bounced and ballooned twice on the main gears before finally landing hard nose-wheel first. The nose-wheel assembly collapsed in the process and the propeller hit the runway before the aircraft came to a complete stop

After securing the aircraft and informing the control tower of her predicament, the student pilot egressed from the aircraft with her belongings to await assistance.

FINAL REPORT A 07/17

1.2 Injuries to Persons

The student pilot was not injured in the accident.

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

1.3 Damage to Aircraft

An assessment of damage to the aircraft revealed that the nose-wheel gear assembly had been substantially damaged along with damages to the propeller and engine cowling.

For images of damage to the aircraft after being recovered to its hangar, please refer to **APPENDIX B**.

1.4 Other Damages

No other damages were observed other than scuff marks on the runway.

1.5 Personnel Information

The student pilot held a valid SPL and was properly qualified for her first solo circuit and landing sortie.

FINAL REPORT A 07/17

Nationality	Malaysia
Age	37
Gender	Female
License Type	SPL No 12873
License Validity	30 June 2018
Medical Certificate Validity	30 June 2018
Flying Hours	Total: 36 Hrs Type: 36 Hrs

1.6 Aircraft Information

The aircraft in question is operated by FAS Udara Flying Club, a professional flight training centre based in Sultan Abdul Aziz Shah Airport, Subang.

Aircraft	Cessna C-152
Manufacturer	Cessna Aircraft Corporation
C of A Issue	8 January 2017
C of A Expiry	7 November 2017
C of R Issue	7 November 2016
C of R Expiry	6 November 2019

Registration	9M-FBS
Serial No.	15282300
Owner	Alaris Aerospace Sys Sdn Bhd
Airframe Flight Hours	9,000+ Hours
Fuel used	AvGas

1.7 Meteorological Information

The weather on the day of the accident based on the METAR-TAF of Sultan Abdul Aziz Shah Airport, Subang indicated that the wind was calm with visibility at 8km. Clouds were FEW025.

1.8 Aids to Navigation

Not applicable.

1.9 Communications

Information about the accident was relayed by RT to the control tower by the pilot.

1.10 Aerodrome Information

Not applicable.

1.11 Flight Recorders

The Cessna C-152 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

The wreckage was secured and brought back to the operator's hangar. Scuff marks on the runway was consistent with a hard landing and nosewheel collapse.

1.13 Medical and Pathological Information

As was stated earlier the student pilot was not injured.

1.14 Fire

There was no post-impact fire although the student pilot did detect a fuel leak during her egress from the aircraft.

1.15 Survival Aspects

The student pilot egressed from the aircraft unhampered and unaided.

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 student pilot she was satisfied with her initial approach which was on height, on heading and at the correct speed. However she admitted that the first bounced landing may have been because her flare was not enough to decrease the rate of descent of the aircraft sufficiently.

2.2 After the first bounce she stated that she increased power slightly to gain control of the aircraft in an attempt to make good the landing. However the aircraft bounced for the second time and she then decided to go around. Unfortunately before she could apply full power the aircraft contacted the runway in a nose down position leading to the accident.

2.3 A look at the training material available to the student and also the methods of instruction by her instructor himself did not reveal anything out of the ordinary.

3.0 CONCLUSION

The student pilot in this case most likely contributed to the accident by applying insufficient flare during the initial touch-down. Trying to make good the bounced landing instead of immediately going around as what had been taught to her led to the second bounced landing.

Attempting to go around now, she may have inadvertently put the aircraft into a nose down attitude before she could apply full power thus leading to the accident.

This accident is classified as an Abnormal Runway Contact (ARC).

4.0 SAFETY RECOMMENDATIONS


The operator is to ensure that the correct techniques for good landings including the proper corrective actions to overcome bad ones are continuously impressed upon their instructors and students to overcome this training hazard.

INVESTIGATOR-IN-CHARGE

Air Accidents Investigation Bureau

Ministry of Transport

8 July 2018

		AAIB (Malaysia) Notification Form		Ref No A07/2017 MOT/BSKU(S)600
Ministry of Transport Malaysia (Air Accidents Investigation Bureau) 26 Jalan Tun Hussein, Precinct 4 62100 PUTRAJAYA Malaysia		Telephone : +60 3 8892 1071 Facsimile : +60 3 8888 0163 Website : www.mot.gov.my Email : yahaya@mot.gov.my		
A. Classification Accident / Incident (Serious) / Incident (Minor)	<u>ACCID</u>	<u>INCID (Serious)</u>	<u>INCID (Minor)</u>	
B. Detail of Aircraft / Flight	Manufacturer : Cessna Model : C-152 Nationality : Malaysia Registration : 9M-FBS Flight Number : Falcon 103 Sierra Serial Number : 15282300			
C. Detail of Owner / Operator / Lessee (If applicable)	Owner : Alaris Aerospace Systems Sdn Bhd Lessee (If Applicable) : FAS Udara Flying Club Operator : FAS Udara Flying Club			
D. Date and Time (Local / UTC) of the event i.e. accident or serious incident	Date : 8 July 2017 Time : 0925 LT			
E. Last point of departure and point of intended landing of the aircraft	Last point of departure : Subang Airport, Selangor, Malaysia Point of intended landing : Subang Airport, Selangor, Malaysia			
F. Last known position	Latitude : 3° 08' 33.44" N Longitude : 101° 32' 32.54" E			
	<u>Narrative</u> A student pilot on her first solo experienced a hard landing which caused the nosewheel to collapse and the propeller to strike the ground.			
G. No of crew and passengers; aboard, killed and seriously injured	Total occupants on board: <ul style="list-style-type: none"> • Crew : 1 (Uninjured) • Passengers : Nil 			

	Notes Pilot egressed unaided.				
H. Qualification of the pilot in command and nationality of the crew and passengers	Pilot in Command qualification : SPL Pilot in Command nationality : Malaysia First Officer nationality : N/A Passengers nationality : N/A				
I. Description of the accident or serious incident and the extent of damage to the aircraft so far as is known	<ul style="list-style-type: none"> • Collapsed nose landing gear • Bent propeller • Engine damage 				
J. An indication to what extent the investigation will be conducted or is proposed to be delegated by the State of Occurrence	The Air Accident Investigation Bureau (Malaysia) has classified this as an Accident and is conducting an investigation in accordance with the provisions of Annex 13 to the Convention on International Civil Aviation.				
K. Presence and description of dangerous goods on board the aircraft	<u>No</u>	Yes (Please describe)		Unknown	
L. Operation Type	<u>Commercial Aviation</u> <u>General Aviation</u> <u>Others</u>		<u>Scheduled</u> <u>Non Scheduled</u>		Passenger Cargo <u>Others</u>
M. Level of damage to aircraft (If information is available)	Destroyed	Substantial	Minor	None	Unknown
<p>The State of Occurrence shall forward a notification of an accident or serious incident with a minimum of delay and by the most suitable and quickest means available to:</p> <p>a. the State of Registry, b. the State of the Operator, c. the State of Design, d. the State of Manufacture, and e. the International Civil Aviation Organisation, when the aircraft involved is of a maximum mass of over 2250kg.</p>					

BSKU/Notification Form/Issue 1 Rev Initial

DAMAGE ASSESSMENT IMAGES

9M-FBS



9M-FBS (Cont...)

