

PRELIMINARY REPORT ON THE SERIOUS INCIDENT INVOLVING AN ATR 42 -320 AIRCRAFT WITH NATIONALITY AND REGISTRATION MARKS 5N-BRQ OPERATED BY OVERLAND AIRWAYS LIMITED WHICH OCCURRED AT SHORT FINAL, RUNWAY 18R, MURTALA MUHAMMED AIRPORT, LAGOS ON 15TH JUNE, 2022

Registered owner and operator:	Overland Airways Limited
Aircraft type and model:	ATR 42 - 320
Manufacturer:	Avions De Transport Regional, Toulouse, France
Year of manufacture:	1994
Nationality and registration marks:	5N-BRQ
Serial number:	351
Location:	Short Final, Runway 18R, Murtala Muhammed Airport
Date and time:	15 th June, 2022 at about 19:43 h

All times in this report are local time (UTC+1) unless otherwise stated

INTRODUCTION

Accident Investigation Bureau, Nigeria (AIB) was notified of the serious incident by the Nigerian Airspace Management Agency (NAMA) on the day of the occurrence. Investigators were dispatched same day to the International wing of Murtala Muhammed Airport, Taxiway A abeam Cargo Apron, where the aircraft was located. The aircraft was later towed to the Overland Airways hangar at the General Aviation Terminal. Post incident assessment commenced immediately under the provisions of Civil Aviation (Investigation of Air Accidents and Incidents) Regulations 2019 and Annex 13 to the Convention on International Civil Aviation.



The purpose of this preliminary report is to provide details of initial facts, discussions and findings surrounding the occurrence, it includes information gathered from witness accounts/statements, flight recorders, Air Traffic Control (ATC) recordings, weather reports and preliminary inspection of the aircraft.

The investigation is ongoing.



1.0 FACTUAL INFORMATION

1.1 History of the flight

On 15th June 2022, an ATR 42-320 with nationality and registration marks 5N-BRQ operated by Overland Airways Limited departed Ilorin airport (DNIL) on a scheduled passenger flight number OLA1188 to Murtala Muhammed Airport, Lagos (DNMM) on Instrument Flight Rules (IFR) flight plan. The incident flight was the eighth sector of the day operated by the same crew. Onboard were 37 persons, including two (2)-flight crew, a cabin crew and an engineer. The endurance was three hours. The Pilot was pilot monitoring (PM) while the Co-pilot was the pilot flying (PF).

At 18:54 h, OLA1188 was given STARTUP clearance by Ilorin Air Traffic Control (ATC).

At 19:07 h, OLA1188 was airborne and estimated Lagos at 19:44 h.

At 19:16 h, OLA1188 established two-way communication with Area Control Centre Lagos on 127.3 MHz and was instructed to continue with Lagos Approach.

At 19:40 h, OLA1188 contacted the Lagos Tower and was asked to continue approach; to report 4 miles.

At 19:44 h, OLA1188 was cleared to land runway 18R in calm wind.

The Pilot, during the post occurrence interview stated, "During the approach to Lagos, we [felt] the smell of something like an electrical short circuit and immediately after we've got the alarm of ENGINE 1 FIRE. I as the captain triggered the memory items and executed them with the coordination with the First Officer who was the Pilot Flying. We did the procedures and informed the cabin crew to stay at her station". The crew executed the ENG 1(2) FIRE OR SEVERE MECHANICAL DAMAGE IN FLIGHT Checklist during which the fire extinguishing bottles were discharged.

At 19:45h, the crew transmitted "MAYDAY MAYDAY MAYDAY OLA1188 SHORT FINAL ENGINE FIRE ON NUMBER 1" to Lagos Tower and it was acknowledged.

After landing, the Pilot took control of the aircraft from the Co-pilot.

At 19:46 h, the Tower asked the flight crew to confirm if able to exit A3 and hold short at intersection A3 for which the flight crew replied in the affirmative.

The flight crew continued taxiing beyond intersection A3 and the. Lagos Tower instructed them to hold abeam Cargo Apron, where the Airport Rescue and Fire Fighting Service (ARFFS) personnel would meet the aircraft.

The post occurrence interview of the flight crew revealed that the ARFFS responded swiftly and were able to extinguish the fire.

The flight crew executed the ON GROUND EMERGENCY EVACUATION Checklist and requested the passengers to follow the cabin attendant’s instruction to evacuate the aircraft, which was executed safely without any injury.

The incident occurred at night and Instrument Meteorological Conditions (IMC) prevailed.

1.2 Injuries to persons

Injuries	Crew	Passengers	Others	Total in the aircraft
Fatal	Nil	Nil	Nil	Nil
Serious	Nil	Nil	Nil	Nil
Minor	Nil	Nil	Nil	Nil
None	4	33	Nil	37
Total	4	33	Nil	37

1.3 Damage to aircraft

The aircraft was substantially damaged.

1.4 Other damage

Nil.

1.5 Personnel information

1.5.1 Pilot

Nationality:	Italian
Age:	64 years
Licence type:	Airline Transport Pilot Licence (Aeroplane)
Licence:	Valid till 31 st August, 2022
Aircraft ratings:	Avion de Transport Regional ATR 42/72
Medical certificate:	Valid till 31 st July, 2022
Instrument rating:	Valid till 31 st August, 2022
Proficiency check:	Valid till 4 th August, 2022
Total flying time:	28,889:05h
Total on type:	19,000h
Last 90 days:	-
Last 28 days:	-
Last 7 days:	-
Last 24 hours:	9:00h

1.5.2 Co-pilot

Nationality:	Nigerian
Age:	28 years
Licence type:	Commercial Pilot Licence (Aeroplane)
Licence:	Valid till 29 th April, 2023
Aircraft ratings:	Avion de Transport Regional ATR 42/72
Medical certificate:	Valid till 30 th December, 2022
Instrument rating:	Valid till 12 th April, 2023
Proficiency check:	Valid till 12 th April, 2023
Total flying time:	2,500h
Total on type:	2,500h
Last90days:	-
Last28 days:	-
Last7 days:	-
Last24 hours:	9:00 h



1.6 Aircraft information

1.6.1 General information

Type:	ATR 42-320
Manufacturer:	Avions De Transport Regional, Toulouse, France
Year of manufacture:	1994
Serial number:	351
Registered owner/operator:	Overland Airways Limited
Nationality and registration marks:	5N-BRQ
Certificate of airworthiness:	Valid till 16 th February, 2023
Certificate of insurance:	Valid till 2 nd September, 2022
Certificate of registration:	16 th February, 2015
Noise certificate:	16 th March, 2015
Airframe time:	37,144:44h
Cycles Since New (CSN):	37,250



5N-BRQ parked at the Overland Airways Limited Hangar after the occurrence

1.6.2 Powerplant

	No.1	No.2
Engine type	PW – 121	PW – 121
Manufacturer	Pratt & Whitney, Canada	Pratt & Whitney, Canada
Serial number	121188	121057
Time Since New (TSN)	31,055.57h	25,239:18 h
Cycles Since New (CSN)	35,827	30,685
Year of manufacture	1992	1991

The No.1 (incident) engine was installed on 5N-BRQ on 8th October, 2020 at a TSN 29,775:10 h and CSN 34,321.

Fuel type used: Jet A-1

1.7 Meteorological information

DNMM

Time	1700z	1800z	1900z
Wind	190°/05kt	190°/06kt	200°/05kt
Visibility	10km	10km	10km
Weather	Nil	Nil	Nil
Cloud	FEW420m	FEW390m	FEW 390m
Temperature/ Dew point	32/26°C	30/26°C	30/26°C
QNH	1011hPa	1011hPa	1012hPa
Trend	NOSIG	NOSIG	NOSIG

1.8 Aids to navigation

Status of navigational aids at Murtala Muhammed International Airport Lagos on the day of the occurrence were as follows:

VHF 113.7 MHz 'LAG' DVOR/DME	-	'Serviceable'
VHF 110.3 MHz 'ILA' ILS/DME RWY 18L	-	'Serviceable'
VHF 108.1 MHz 'ILB' ILS/DME RWY 18R	-	'Serviceable'

1.9 Communications

There was effective communication between the flight crew and Air Traffic Control units.



1.10 Aerodrome information

1.10.1 Murtala Muhammed International Airport (DNMM)

The aerodrome has two parallel runways 18L/36R and 18R/36L and an elevation is 135 ft. The length of runway 18L/36R is 9,006 ft (2,745 m) while 18R/36L is 12,795 ft (3,900 m).

The airport is rated CAT 9 in fire coverage capabilities.

1.11 Flight recorders

The aircraft is fitted with Flight Data Recorder (FDR) and Cockpit Voice Recorder (CVR).

1.11 .1 Cockpit Voice Recorder (CVR)

Model	FA2100
Part Number	2100-1020-02
Serial Number	000694681
Manufacturer	L-3 Aviation Recorders, Sarasota, Florida, USA.

1.11.2 Flight Data Recorder(FDR)

Model	FA2100
Part Number	2100-4043-00

Serial Number	000568784
Manufacturer	L3 Communications Sarasota, Florida, USA

Both recorders were retrieved and transported to the Bureau's Flight Safety Laboratory

The data contained in the recorders have been successfully downloaded.

1.12 Wreckage and impact information

Photos showing severe fire damage to the left engine





Photos showing severe fire damage to the left engine

1.13 Medical and pathological information

Nil.

1.14 Fire

There was fire on engine number 1 prior to landing.

1.15 Survival Aspects

Not Applicable.



INITIAL FINDINGS

1. The flight crew was properly licensed and medically fit to conduct the flight.
2. The flight crew exceeded their duty time as per paragraphs 8.12.1.4(a) & (b) of the Nigeria Civil Aviation Regulations (Nig. CARs) and 7.4.1 of the Overland Airways Limited Flight Operations Manual Part A).
3. The aircraft had a valid Certificate of Airworthiness at the time of occurrence.
4. The Co-pilot was the Pilot Flying while the Pilot was the Pilot Monitoring.
5. The incident flight was the eighth sector of the day and all the eight sectors were operated by the same crew.
6. At short final, during the approach to Lagos Runway 18R, the crew reported perceiving the smell of an electrical burn and immediately heard the number 1 engine fire warning alarm.
7. The crew carried out memory items checklist and then declared 'MAYDAY' to the ATC.
8. On landing, the pilot took control of the aircraft from the co-pilot.
9. The aircraft finally stopped on Taxiway Alpha abeam Cargo Apron.
10. The Airport Rescue and Fire Fighting Services (ARFFS) personnel put out the engine fire.
11. The flight crew executed the ON GROUND EMERGENCY EVACUATION Checklist before the passengers were disembarked from the aircraft.
12. The aircraft was thereafter towed and parked at the Overland Airways Limited Hangar at the General Aviation Terminal.



Further investigation activities

1. Teardown of Engine No1
2. Compilation of the final report.