



AIRCRAFT SERIOUS INCIDENT REPORT

FINAL REPORT

ON THE SERIOUS INCIDENT INVOLVING EURO ATLANTIC AIRWAYS BOEING 767-300
AIRCRAFT REGISTRATION CS-TST WHICH OCCURRED AT SÃO TOMÉ INTERNATIONAL
AIRPORT ON 29th JULY 2023.

NATIONAL ACCIDENT INVESTIGATION COMMISSION

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GLOSSARY OF ABBREVIATION USED IN THIS REPORT

ACCID	Accident
ANAC	Civil Aviation Authority of Portugal
AOC	Air Operator Certificate
ASDA	Accelerate Stop Distance Available
ATC	Air Traffic Controller
ATPL	Airline Transport Pilot Licence
CNIPAIA	National Commission for Accident Investigation
CWY	Clearway
EASA	European Union Aviation Safety Agency
FDM	Flight Data Monitoring
FR	Flight Recorders
ICAO	International Civil Aviation Organization
INAC	Civil Aviation Authority of Sao Tome and Principe
INCID	Incident
FPLP	ICAO Code for Lisbon Airport
FPST	ICAO Code for São Tomé Airport
LDA	Landing Distance Available
N/A	Not Applicable
NOSIG	No significant change
RWY	Runway
STP	Sao Tome and Principe
TMS	IATA Code for São Tomé Airport
TODA	Take off Distance Available
TORA	Take off Run Available
UTC	Universal Time Coordinated

GENERAL INFORMATION

AIRCRAFT SERIOUS INCIDENT REPORT Nº: EA /29/07/2023/RF

TITLE: SERIOUS INCIDENT

MANUFACTURER: BOEING COMPANY, USA

TYPE AND MODEL: B 767-300

NATIONALITY AND REGISTRATION: CS-TST

NAME OF OWNER: NOVO BANCO, SA AVENIDA DA LIBERDADE, 195 LISBOA-PORTUGAL

OPERATOR: EURO ATLANTIC AIRWAYS (WET LEASE FOR STP AIRWAYS)

PLACE OF OCCURRENCE: SAO TOME INTERNATIONAL AIRPORT

DATE OF INCIDENT: JULY 29th, 2023.

TIME OF OCCURENCE: 07 hours and 23 minutes UTC.

CREW: 14

PASSENGERS: 266

EXPLANATORY NOTE

This report states the technical findings to the circumstances and causes of this occurrence, in accordance with Annex 13 to the Chicago Convention and the Law No. 3/ 2021, published in Diário da República (National Gazette) No. 7 I Série of January 28.

This report does not seek to apportion blame or establish accountability, but it is only the determination of causes and making recommendations aimed at preventing its recurrence. The sole purpose of this technical report is to draw lessons, which could prevent future occurrences.

SYNOPSIS

National Commission for Accident and Incident Investigation (CNIPAIA) was notified of the occurrence on the July 29th, 2023. Investigators were dispatched on the same day to carry out investigation on the occurrence and all stakeholders were notified accordingly.

After landing and when leaving taxiway, the aircraft started the parking manoeuvre as instructed by two Marshalls.

The first turn was made to the left and two successive turns to the right. Before last turn to parking, the wing left tip hit the lamp pole on the apron causing damage to the wing and lamp pole as well

No fire and no injury

1.0 FACTUAL INFORMATION

1.1 HISTORY OF FLIGHT

STP Airways fight 8F-507(operated by Euro Atlantic Airways) from LPPT to FPST with 280 persons on board (266 pax, 13 crew plus 1 jump seat), after 05:37 hours of flight duration, landed smoothly at Sao Tome International Airport.

When leaving taxiway, the aircraft started the parking manoeuvre as instructed by two marshals. The first turn was made to the left and next two successive ones were made to the right and the pilot steered towards a landmark beyond the apron before executing

what could be the fourth turn (last) to the final position, but unexpectedly after the third turn, the aircraft left wing tip hit the lamp pole causing serious damage to the wing tip assembly, affecting the anti-collision light and the left outboard aileron as well. There was also damage to the light pole without affecting its functionality.

As a result the aircraft was grounded waiting for the arrival of technical experts to make damages assessment, establish corrective actions and next line of action that could be temporary or final repairs.

1.2 INJURIES TO PERSONS

INJURIES	CREW	PASSENGERS	OTHERS
FATAL	NIL	NIL	NIL
SERIOUS	NIL	NIL	NIL
MINOR	NIL	NIL	NIL
NONE	14	266	NIL

1.3 DAMAGE TO AIRCRAFT: Left wing tip damaged

1.4 OTHER DAMAGE: Light pole damages (some scraps visible)

1.5 PERSONNEL INFORMATION

1.5.1 The Captain

Year of Birth: 12/02/1974

Nationality: Portuguese

Gender: Male.

Licence: ATPL (A)

Licence Validity: In accordance with Medical Certificate validity

Medical Certificate: Class 1

Medical Certificate Validity: 06.12.2023

Total Flying Experience: 12.673 hours

Total Flying on Type: 1937hours

Last 90 days: 134:15 hours

Duty Last 24 hours: None

Rest Before Duty: 72:00 hours

1.5.2 The First Officer

Year of Birth: 07/08/1996

Nationality: Portuguese

Gender: Male.

Licence: CPL (A)

Licence Validity: In accordance with Medical Certificate validity

Medical Certificate: Class 1

Medical Certificate Validity: 29.05.2024

Total Flying Experience: 1534 hours

Total Flying on Type: 1202:10 hours

Last 90 days: 52:25 hours

Duty Last 24 hours: None

Rest Before Duty: 60 hours

1.5.3 Cabin Attendants

1.5.3.1

Year of birth: 25.08.1996

Nationality: Portuguese

Gender: Male

Licence: Not Available

Medical Validity: 15.11.2025

1.5.3.2

Year of birth: 16.11.2001

Nationality: Portuguese

Gender: Female

Licence: Not Available

Medical Validity: 26.07.2027

1.5.3.3

Year of birth: 08.08.1996

Nationality: Portuguese

Gender: Female

Licence: Not Available

Medical Validity: 12.08.2027

1.5.3.4

Year of birth: 05.07.2002

Nationality: Portuguese

Gender: Female

Licence: Not Available

Medical Validity: 06.12.2027

1.5.3.5

Year of birth: 01.04.1999

Nationality: Portuguese

Gender: Female

Licence: Not Available

Medical Validity: 27.02.2024

1.5.3.6

Year of birth: 13.10.1997

Nationality: Portuguese

Gender: Male

Licence: Not Available

Medical Validity: 07.03.2027

1.5.3.7

Year of birth: 21.05.1996

Nationality: Portuguese

Gender: Male

Licence: Not Available

Medical Validity: 17.03.2028

1.5.3.8

Year of birth: 27.05.1975

Nationality: Portuguese

Gender: Female

Licence: Not Available

Medical Validity: 07.05.2028

1.5.3.9

Year of birth: 14.07.2004

Nationality: Portuguese

Gender: Male

Licence: Not Available

Medical Validity: 25.08.2027

1.5.3.10

Year of birth: 29.09.2001

Nationality: Portuguese

Gender: Female

Licence: Not Available

Medical Validity: 02.11.2027

1.5.3.11

Year of birth: 02.02.2004

Nationality: Portuguese

Gender: Male

Licence: Not Available

Medical Validity: 10.10.2025

1.5.4 Marshal Team

1.5.4.1

Year of Birth: 18.09.1982

Nationality: Santomean

Gender: Male

1.5.4.2

Year of Birth: 26.06.1981

Nationality: Santomean

Gender: Male

1.6 AIRCRAFT INFORMATION

1.6.1 General Information

Type: B767-300

Manufacturer: Boeing Company

Serial Number: 33047

Year of Manufacturer: 2002

Max Take Off Mass: 184.612 kg

Total Aircraft Time: 63.104 hours

Total Aircraft Cycles: 19.313

Fuel Type Used: Jet A1

Fuel Quantity on Board: 9.800 kg

Airworthiness Review Certificate-ARC Reference PT-CAMO.017, First Extension issued on 18.05.2023 valid to 28.05.2024 in accordance with point M.A.901 of Annex I (part M) to Commission Regulation (EU) nº1321/2014 and certified by Portuguese Civil Aviation Authority (ANAC).

1.7 Meteorological Information

Time: 05:00 UTC

Wind: 150/06

Visibility: 10 km

Present Weather: Nil

Clouds: SCT 040

Temperature: 25° C

Dew Point: 21° C

QNH: 1015

Nosig

Time: 06:00 UTC

Wind: 250/06

Visibility: 10 km

Present Weather: Nil

Clouds: SCT 023

Temperature: 25° C

Dew Point: 21° C

QNH: 1015

Nosig

Time: 07:00 UTC

Wind: 170/10

Visibility: 10 km

Present Weather: Nil

Clouds: SCT 023

Temperature: 24° C

Dew Point: 21° C

QNH: 1015

Nosig

1.8 AIDS TO NAVIGATION

VOR/DME

1.9 COMMUNICATIONS

There was two-way communication between the crew and control tower during all phases of the flight.

1.10 AERODROME INFORMATION

São Tomé International Airport with ICAO location indicator FPST has a runway designation of 11/29.

The surface is coated with asphalt and has a dimension, 2160m/45m. The Aerodrome Reference Point is: 00°2'40" and 006° 42'47"E with an elevation of 10m (33 ft.). Other declared distances of RWY 11 /29 are as follows:

RWY length- 2.160m

RWY width – 45 m

TORA – 2.160m

TODA – 2.160m

ASDA-2.160m

LDA-2.160m

Strip – 2.240m*150m

CWY- 60m

Runway inspection is usually carried out by the airport fire service personnel before any takeoff and landing.

1.11 FLIGHT RECORDERS

The aircraft was equipped with the Flight Data Recorder and Cockpit Voice Recorder.

1.12 WRECKAGE AND IMPACT INFORMATION

The impact of left wing tip hitting the light pole:

- The wing tip assembly's structure was severely deformed with the skin misshapen and even broken
- The wing top panel flanked by both the aileron and the wing tip assembly was also warped
- The anti-collision light is almost completely missing

See the **APPENDIX** for the Figures showing the damages

1.13 MEDICAL AND PATHOLOGICAL INFORMATION

N/A

1.14 FIRE

There was no post-occurrence fire.

1.15 SURVIVAL ASPECT

Despite the damage to the aircraft, there was no need for any survival operation.

1.16 TEST AND RESEARCH

N/A

1.17 ORGANIZATIONAL AND MANAGEMENT

1.17.1 THE OPERATOR

STP Airways-Transportes Aéreos de São Tomé e Príncipe is national air Carrier Company registered and incorporated according to the Laws of Sao Tome and Principe and is holder of Air Operator Certificate nº 01/AOC/2016 issued on 26 June 2023 valid to 31 December 2023.

The company is authorized to perform commercial air operations as defined in the operations specifications, in accordance with Operations Manual and the Regulation STP CAR Part 119 and ICAO Annex 6.

Euro Atlantic Airways is the company operating on Wet Lease for STP Airways on flight routing Lisbon –São Tomé-Lisbon.

Euro Atlantic Airways, Ltd is a company registered and incorporated according to the Laws of Portugal and is holder of Air Operator Certificate nº COA- 01/99 issued on 20.01.2021.

This certificate certifies that Euro Atlantic Airways, Ltd is authorized to perform Commercial Air Operations, as defined in the operations specifications, in accordance with the Operations Manual, Annex V to Regulation (EU) 2018/1139 and its delegated and implementing acts.

1.17.2 CIVIL AVIATION AUTHORITY

Instituto Nacional de Aviação Civil (INAC) is the civil aviation regulatory authority of São Tomé e Príncipe. It is a Department under the Ministry of Infrastructures, Natural Resources and Environment. INAC is concerned with the following main competencies:

- Cooperation with International Civil Aviation Organization.
- Agreements on air transport and other Civil Aviation matters.
- Permission for overfly, entry, exit and transit of aircraft.
- Certification and supervision of Airport and Air Operators.
- Authorization and Supervision of flight operations.
- Registration and Certification of the Aircraft.
- Certification of Aircraft Maintenance Base.
- ATS Supervision.
- Licensing of air navigation facilities.
- Airspace regulation and supervision of navigation and air traffic services.
- Licensing of Aeronautical Personnel.

Agência Nacional de Aviação Civil (ANAC) is the civil aviation regulatory body of Portugal. It regulates all aspect of civil aviation in Portugal. The head office is located in Lisbon

1.17.3 AIPORT OPERATOR

Empresa Nacional de Aeroportos e Segurança Aérea (ENASA) is the Operator of the Sao Tomé International Airport. It is in charge of air navigation services, airport security and is also the provider of marshaling services.

1.18 ADDITIONAL INFORMATION

The disembarkation went normal and the wellbeing of the passengers was taken into consideration. In consequence of occurrence, which caused serious damages to the wing, the aircraft was grounded and there was a need to perform corrective actions and temporary repairs before the departure on 23 August 2023 to a maintenance base for permanent repair.

2.0 ANALYSIS

Sao Tomé international airport's apron has dimensions suitable for parking maneuver for category D aircraft as in this case B767 300.

It has been practice until the occurrence of the serious event on July 29th, the parking maneuver been executed and accompanied by two (2) marshals in well-defined places. The need to park at the specific point because of refueling, any aircraft of this category must circle

the apron at its limits executing four (4) turns before coming to stop; the maneuver's safety is paramount concern because of the lighting pole at the apron.

STP Airways flight 8F-507(operated by Euro Atlantic Airways) from LPPT to FPST with 280 persons on board (266 pax ,13 crew members plus 1 jump seat), after 05:37 hours of flight duration, landed smoothly at Sao Tome International Airport.

When leaving taxiway, the aircraft started the parking maneuver as instructed by two marshals. The first turn was made to the left and the second was made to the right and the both were executed without difficulty. Making the next turn (third) to the right the pilot did not complete the necessary 90° and caused him to become disoriented regarding the correct position of the aircraft on that leg of the taxiing and not realizing he was out of safety margin and not having perception that the aircraft left wing was going to hit the lighting pole.

That could be avoided if he had a marshal facing and instructing him. In this regard the pilot should have stopped and ask for the aid before continuing taxiing. On the contrary the pilot decided to proceed and steered the aircraft towards an unfamiliar and not accurate landmark beyond the apron before executing what could be the fourth (last) turn to the final position, but unexpectedly the aircraft left wing tip hit the lamp pole. As matter of fact the crew did not notice that the aircraft had hit the lighting pole, as the pilot thought that supposedly the wheel went into a pothole in the apron and consequently he gave more power to engine to move the aircraft and as a result it caused more and serious damage to the wing tip assembly. (See **APPENDIX** for the analysis of the FDM giving an understanding the timeline of events)

The aircraft was grounded until arrival of technical experts that made damage assessment, established corrective actions and prepared next line of action that included temporary repairs and ferry flight to authorized maintenance base for final repair.

After disassembly of the wing tip, the following damage were identified:

Wing Tip

- Wing Tip Assembly completely destroyed, internal structure and skin with damage practically through its entirely

Outboard Aileron

- Outboard Aileron with areas in-between the outboard edge and the trailing edge with composite (honeycomb) destroyed and delaminated (this section of aileron has split open). Aileron End Cap completely destroyed

Wing Rib

- Rib with damages (missing section) in the trailing edge area. Wing Tip to Rib attachments and all drilled holes to connect the After Wing Tip are torn

Inferior Wing Panel

- Access Panel wing components (aileron, power supply and others) with fracture at the transversal panel tip in its entirety

Superior Wing Panel

- Panel with multiple fractures and bulging/deformed in the area next to the tip. This panel is completely affixed to the wing with rivets and hi-locks, making its replacement complex

Wing Tip Attached Brims

- Attachment Brims that make the connection between the Rib and the Wing Tip Assembly exhibit several deformations, fractures and a missing section

The maintenance actions on the aircraft were performed namely temporary repairs and corrective actions duly approved by Boeing Company

A Permit to Fly was issued by ANAC and EASA for the ferry flight to position the aircraft to an authorized maintenance center for final repair.

3. CONCLUSIONS

3.1 FINDINGS

The Investigation revealed the following:

- (1) The aircraft had a valid Certificate of Airworthiness;
- (2) The state of registration and operator is Portugal (on Wet Lease for STP Airways)
- (3) There were 2 flight crew, 11 cabin crew plus 1 jump seat;
- (4) There were 266 passengers on board;
- (5) The companies had valid Air Operator Certificate;
- (6) The pilots were certified and qualified to conduct the flight
- (7) Two marshals on duty were certified and qualified to conduct the parking's manoeuvre
- (8) Short of marshal (need one more) for good marshaling
- (9) During taxing the pilot became disoriented and aimed to a not accurate land mark

3.2 CAUSAL FACTORS

- The pilot did not complete 90° as part of procedure and went out of safety margin
- Lack of marshal in front of the aircraft

3.3 CONTRIBUTORY FACTORS

- Pilot 's disorientation

- Pilot steering the aircraft towards an unfamiliar and not accurate landmark beyond the apron

4. SAFETY RECOMMENDATIONS

4.1 SAFETY RECOMMENDATION nº 1

When the pilot is not sure of the aircraft's correct position during taxiing, he should stop immediately waiting for further instructions

4.2 SAFETY RECOMMENDATION nº 2

The Pilot during taxiing should never follow a landmark that is unknown or unfamiliar to him

4.3 SAFETY RECOMMENDATION nº 3

Taking in consideration the apron dimensions and the current position of the refueling, the parking maneuver for the category D aircraft should be directed by a team of 3 marshals.

4.4 SAFETY RECOMMENDATION nº 4

The aviation authorities and fuel supply company should work out and find a solution for new refueling position

APPENDIX

Left wing tip damaged



Wing Tip assembly completely destroyed, internal structure and skin with damage practically throughout its entirety.



FDM parameters giving an understanding the timeline of events

