

AIRCRAFT ACCIDENT REPORT

FINAL REPORT ON THE ACCIDENT INVOLVING
AFRIJET ATR 72-212A AIRCRAFT, REGISTRATION TR-ABS
WHICH OCCURRED AT SÃO TOMÉ INTERNATIONAL AIRPORT
ON 21th MARCH, 2019.

NATIONAL ACCIDENT INVESTIGATION COMMISSION

TABLE OF CONTENTS

TABLE OF CONTENTS.....	2
GLOSSARY OF ABBREVIATION USED IN THIS REPORT.....	3
SYNOPSIS.....	4
1.0 FACTUAL INFORMATION.....	5
1.1 History of the flight.....	5
1.2 Injuries to Persons.....	5
1.3 Damage to Aircraft.....	5
1.4 Other Damage.....	7
1.5 Personnel Information.....	9
1.5.1 Captain.....	9
1.5.2 First Officer.....	9
1.6. Aircraft Information.....	10
1.6.1 General Information.....	10
1.7 Meteorological Information.....	10
1.8 Aids to Navigation.....	10
1.9 Communication.....	10
1.10 Aerodrome Information.....	11
1.11 Flight Recorders.....	11
1.12 Wreckage and Impact Information.....	11
1.13 Medical and Pathological Information.....	11
1.14 Fire.....	11
1.15 Survival Aspect.....	11
1.16 Test and Research.....	12
1.17 Organizational and Management Information.....	12
1.17.1 Operator.....	12
1.17.2 Civil Aviation Authority.....	12
1.17.3 Airport Operator.....	12
1.18 Additional Information.....	12
2.0 ANALYSIS.....	13
2.1 Ground occurrence.....	13
3.0 CONCLUSIONS.....	13
3.1 Findings.....	13
3.2 Causal Factors.....	14
3.3 Contributory Factors.....	14
4.0 SAFETY RECOMMENDATIONS.....	14
4.1 Safety Recommendation n°01/2019.....	14
4.2 Safety Recommendation n°02/2019.....	14
4.3 Safety Recommendation n°03/2019.....	14

GLOSSARY OF ABBREVIATION USED IN THIS REPORT

ACCID	Accident
ADR	Accident Data reporter
AOC	Air Operator Certificate
CB	Commulunibus
CNIPAIA	National Commission for Accident and Incident Investigation
CVR	Cockpit Voice Recoder
DOC	Document
FDR	Flight Data Recorder
FOOL	ICAO Code for Libreville Airport
FPST	ICAO Code for São Tomé Airport
FR	Final Report
ICAO	International Civil Aviation Organization
IDR	Incident Data Report
INAC	National Civil Aviation Authority
INCID	Incident
LBV	Libreville
SR	Safety Recommendation
STP	Sao Tome and Principe
TODA	Take Off Distance Available
TORA	Take Off Run Available
UTC	Universal Time Coordinated

AIRCRAFT ACCIDENT REPORT Nº: AJ/21/03/2019/RF

TITLE: Accident.

NAME OF OWNER: GIE ATR

OPERATOR: AFRIJET. BUSINESS SERVICE

MANUFACTURER: ATR GIE.

MODEL: ATR 72-212A.

NATIONALITY AND REGISTRATION MARK: TR-ABS.

PLACE OF OCCURRENCE: São Tomé International Airport.

DATE OF ACCIDENT: March 21, 2019.

TIME OF OCCURENCE: 18 hours and 17 minutes UTC.

CREW: 2 pilots + 2 crew members.

PASSENGERS: 24

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/ 2017, published in Diário da República (National Gazette) No. 29 of March 22 .

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 accidents.

SYNOPSIS

National Commission for Accident and Incident Investigation (CNIPAIA) was notified of the occurrence on the 21th March2019. Investigators were dispatched on the same day to carry out investigation on the occurrence and all stakeholders were notified accordingly.

At 18h10 UTC the aircraft ATR 72-212A, TR-ABS landed at Sao Tome International Airport (FPST) from Libreville (FOOL). After taxiing the aircraft came to complete stop at parking area as instructed by marshalling personnel.

Immediately the crew shut up engine nº1 and requested the connection of ground power to allow the procedure for disembarking of passengers.

At this exact time the crew felt a strong noisy shock at the right side of the aircraft frontal part of fuselage which was finding out to be the cause of serious rupture on the right side of the aircraft frontal part of fuselage.

1.0 FACTUAL INFORMATION

1.1 HISTORY OF FLIGHT

Afrijet Flight nº J7 342 from FOOL to FPST landed 18h10 UTC at Sao Tome International Airport. The crew taxied the aircraft to a parking position at ramp as instructed by marshaling personnel.

Fifteen seconds after shutting the engine number one, the crew asked for GPU connection in order to proceed with offloading of the passengers.

After connecting the ground power unit (GPU) to the aircraft by the auto-mechanic, the ramp assistant removed tractor from the GPU, switched it on and drove out; turning left he saw the said mechanic standing close to the nose of the aircraft and being unable to stop the tractor he hit him, lost the control of the tractor, turning again to the left and hitting at this time the right side of the aircraft frontal part of fuselage near the socket causing serious rupture.

At this exact time surprisingly the crew noticed that something had struck loudly the aircraft frontal part of fuselage and without delay they shut up the engine nº2 and as safety measures they switched off all systems in the aircraft.

In fact it was the ramp assistant that after removing the tractor from GPU and when driving it out, hit the auto-mechanic , lost the control and ultimately hit the aircraft causing damage and serious rupture to the right side frontal part of the fuselage.

1.2 INJURIES TO PERSONS

INJURIES	CREW	PASSENGERS	OTHERS
FATAL	NIL	NIL	NIL
SERIOUS	NIL	NIL	NIL
MINOR	NIL	NIL	1
NONE	4	24	

1.3 DAMAGE TO AIRCRAFT:

The aircraft partially damaged.





1.4 OTHER DAMAGE:

Tractor partially damaged.



1.5 PERSONNEL INFORMATION

1.5.1 The Captain

Year of Birth: 1973

Nationality: Gabonese

Gender: Male.

Licence: ATPL (A)

Licence Validity: 08/08/2022

Medical Certificate: Class 1

Medical Certificate Validity: 30/05/2019

1.5.2 The First Officer

Year of Birth: 1988
Nationality: Gabonese
Gender: Male.
Licence: CPL (A)
Licence Validity: 12/02/2022
Medical Certificate: Class 1
Medical Certificate Validity: 30/09/2019

1.5.3 Auto Mechanic

Year of Birth: 1964
Nationality: Santomean
Gender: Male
Driving Licence Validity: 02/02/2024

1.5.4 Ramp Assistant

Year of Birth: 1983
Nationality: Santomean
Gender: Male
Driving Licence Validity: 30/08/2019

1.6 AIRCRAFT INFORMATION

1.6.1 General Information

Type: ATR 72-212A
Manufacturer: ATR GIE
Serial Number: MSN 829

1.7 METEOROLOGICAL INFORMATION

TIME: 18:00 UTC

Wind: 200/04kts

Visibility: +10kms

Present Weather: Nil

Clouds: Few CBs 020, BKN033

Temperature: 31° C

Dew Point: 25°C

QNH: 1008

TIME: 19:00 UTC

Wind: 180/06kts

Visibility: +10kms

Present Weather: Nil

Clouds: Few CBs 020, SCT010

Temperature: 30° C

Dew Point: 25°C

QNH: 1008

1.8 AIDS to NAVIGATION

Not Applicable

1.9 COMMUNICATIONS

There was two-way communication between the crew and the Control Tower throughout the flight and during the taxiing.

1.10 AERODROME INFORMATION

Sao Tome 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- 2160m

RWY width – 45 m

TORA – 2160m

TODA – 2160m

ASDA-2160m

LDA-2160m

Strip – 2240m*150m

CWY- 60m

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

1.11 FLIGHT RECORDERS

N/A

1.12 WRECKAGE and IMPACT INFORMATION

The impact of the tractor that hit the right front side of fuselage caused structural damages.

1.13 MEDICAL and PATHOLOGICAL INFORMATION

Nil

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 and only the auto-mechanic was immediately taken to hospital for medical attention.

1.16 TEST and RESEARCH

N/A

1.17 ORGANIZATIONAL and MANAGEMENT

1.17.1 The Operator

AfriJet Business Service is a company registered and incorporated according to the Laws of Gabonese Republic and based in Libreville.

The company is holder of Air Operator Certificate n° TR -002 issued on 24th July 2017 valid to 23st July 2019.

The company is holder of Operation Licence n° TR'002-MT-ANAC'DG-DE issued on 24th july 2017 and is authorized to operate commercial air transportation in accordance with the relevant Air Operator Certificate (AOC).

1.17.2 Civil Aviation Authority

National Civil Aviation Authority (INAC) is the civil aviation regulatory authority of Sao Tome and Principe. 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.
- 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.

1.17.3 AIRPORT OPERATOR

National Airports and Safety Corporation (ENASA) is the Operator of the Sao Tomé International Airport. It is also in charge of air navigation services.

1.17.4 HANDLING OPERATOR

STP AIRWAYS, the national air carrier is the only authorized company to carry out the ground handling services at Sao Tomé International Airport

1.18 ADDITIONAL INFORMATION

On the same day of the ground occurrence, the Ramp Assistant was taken to the General Hospital for blood sample collection. CNIPAIA urged the authorities to make all necessary arrangements to allow quick analysis of the specimen to obtaining the respective result; However that could not be carried out due to constraints faced by health authority at that time; In fact at that time local health authority did not have the reagent for the specific analysis requested and they contacted a foreign homologous authority that unfortunately took long time to fulfill the request and in wake of this the blood validity time for the test expired.

2.0 ANALYSIS

2.1 GROUND OCCURRENCE

Before arrival of any flight the ground handling operator organize itself to receive the aircraft rendering appropriate handling services that include but not limited to guiding the aircraft to parking position, to connect ground power as requested by the crew, offloading the passengers and any other assistance required during turning around.

On the day of occurrence, Afrijet Flight n° J7 342 from FOOL to FPST went smoothly and landed 18h10 UTC at Sao Tome International Airport. The crew taxied the aircraft to a parking position at ramp as guided by marshaling personnel.

With the aircraft parked and ground power connected, the next step should be offloading the passengers as a normal routine but at the precise moment the tractor used to tow the ground power hit the right side of the aircraft frontal part of fuselage near the socket causing serious rupture.

In fact it was the ramp assistant that after removing the tractor from GPU and when driving it out, hit the auto-mechanic that was standing in front of the aircraft, lost control and ultimately hit the aircraft causing damage and serious rupture to the right side frontal part of the fuselage.

No one could establish the reason that made the driver to be in a hurry and speeding up the vehicle during the night operation when he knew that the tractor steering wheel and braking system were not operating in perfect condition.

3.0 CONCLUSIONS

3.1 FINDINGS

The Investigation revealed the following:

3.1.1 The state of registration and operator is Gabon;

3.1.2 The aircraft had a valid Certificate of Airworthiness;

3.1.3 The aircraft had a Certificate of Registration;

3.1.4 The company had a valid Air Operator Certificate;

3.1.5 The company had a valid Operation License;

3.1.6 There were 4 crew + 24 passengers on board the aircraft;

3.1.7 The pilots were certified and qualified to conduct the flight;

3.1.8 The ramp assistant was qualified for ground ramp operation.

3.1.9 Rush and speed led the Ramp Assistant to lose control and hit the auto-mechanic and the aircraft.

3.2 CAUSAL FACTORS

3.2.1 In a hurry and speeding while driving the tractor led the ramp assistant to lose control and consequently having caused the accident.

3.3 CONTRIBUTORY FACTORS

3.3.1 Steering wheel and braking system faulty.

3.3.2 Improper maintenance which led to faulty tractor steering wheel and braking system.

4.0 SAFETY RECOMMENDATION

4.1 RECOMMENDATION Nº 1

Civil Aviation Authority of Sao Tomé and Príncipe should improve the certification of handling services and intensify its surveillance and monitoring on maintenance of ground equipment.

4.2 RECOMMENDATION Nº 2

STP Airways as handling operator should improve the maintenance work in order to maintain the ground equipment in perfect condition.

4.3 RECOMMENDATION Nº 3

STP Airways should provide recurrent training for ground equipment operators.