

THE REPUBLIC OF KENYA
MINISTRY OF TRANSPORT, INFRASTRUCTURE, HOUSING,
URBAN DEVELOPMENT AND PUBLIC WORKS

STATE DEPARTMENT FOR TRANSPORT

AIRCRAFT ACCIDENT INVESTIGATION

PRELIMINARY REPORT TO
SILVERSTONE AIR SERVICES LIMITED
FOKKER 27 MK 050,
5Y-IZO
WILSON AIRPORT, KENYA
ON 11 OCTOBER, 2019

OPERATOR:	Silverstone Air Services Limited
AIRCRAFT TYPE/ MANUFACTURER:	Fokker F27 Mark 050/ Fokker Aircraft B.V.
YEAR OF MANUFACTURE:	1992
AIRCRAFT REGISTRATION:	5Y-IZO
AIRCRAFT SERIAL NUMBER:	20244
DATE OF REGISTRATION:	29 April 2014
TYPE OF ENGINE:	Two Pratt &Whitney PW 125B
DATE OF OCCURRENCE:	11 October 2019
TIME OF OCCURRENCE:	0902
LOCATION OF OCCURRENCE:	Wilson Airport, Nairobi, Kenya
TYPE OF FLIGHT:	Commercial
NUMBER OF PERSONS ON BOARD:	Crew - 5; Passengers - 50
INJURIES:	8 Injured
NATURE OF DAMAGE:	Substantial
CATEGORY OF OCCURRENCE:	Accident
PIC'S FLYING EXPERIENCE:	7492.3 hrs Total Time 262.8 hrs Pilot in Command on type

Except where discussing DFDR, CVR and ATC times, all times in this report are local East African time, which is Coordinated Universal Time (UTC) plus 3 hours.

OBJECTIVE

This report contains factual information which has been determined up to the time of publication. The information in this report is published to inform the aviation industry and the public of the general circumstances of the accident.

This investigation has been carried out in accordance with *The Kenya Civil Aviation (Aircraft Accident and Incident Investigation) Regulations, 2018 and Annex 13 to the International Civil Aviation Organization Convention on International Civil Aviation*.

The sole objective of the investigation of an accident or incident under these Regulations shall be the prevention of accidents and incidents. It shall not be the purpose of such an investigation to apportion blame or liability.

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ABBREVIATIONS

AAID	-	Aircraft Accident Investigation Department
ABM	-	Abeam
ACC	-	Area Control Centre
AD	-	Aerodrome
AMO	-	Aeronautical Maintenance Organization
AMSL	-	Above Mean Sea Level
ANS	-	Aeronautical Navigation Services
AOC	-	Air Operators Certificate
ATC	-	Air Traffic Services
ATPL	-	Airline Transport Pilot License
ATS	-	Air Traffic Services
COA	-	Certificate of Airworthiness
COR	-	Certificate of Registration
CVR	-	Cockpit Voice Recorder
ELT	-	Emergency Locator Transmitter
FDR	-	Flight Data Recorder
FMS	-	Flight Management System
HKNW	-	Wilson Airport
ICAO	-	International Civil Aviation Organization
KAA	-	Kenya Airports Authority
KCAA	-	Kenya Civil Aviation Authority
LG	-	Landing Gear
LT	-	Local Time
METAR	-	Meteorological Terminal Air Report
MHZ	-	Megahertz
MLG	-	Main Landing Gear
MSL	-	Mean Sea Level
NLG	-	Nose Leading Gear
NM	-	Nautical Mile
QNH	-	Altimeter setting related to sea level
TSB	-	Transport Safety Board
TSO	-	Technical Standard Order
USA	-	United States of America
UTC	-	Coordinated Universal Time
VFR	-	Visual Flight Rules
VHF	-	Very High Frequency
VOR	-	High Frequency Omnidirectional Range
WGS	-	World Geodetic System (1984)
ITT	-	Interstage Turbine Temperature
TODA	-	Take-off Distance Available
TGT	-	Turbine Gas Temperature
TORA	-	Take-Off Run Available
TBO	-	Time Between Overhaul

SYNOPSIS

On October 11, 2019 at about 0902 Kenya daylight time, a Silverstone Air Services Fokker 27 Mark 050 registration 5Y-IZO experienced runway excursion on takeoff runway 14 at Wilson Airport with 55 occupants onboard (5 crew and 50 passengers). The aircraft was performing a scheduled flight from Wilson airport to Mombasa when it overran the runway following an aborted takeoff. The aircraft started to deviate to the right of the runway axis when it left the paved surface of the runway, collided with airport perimeter fence, went through an embankment before coming to rest tilted to the right after the starboard wing made contact with a tree. The passengers were deplaned through the two left hand side front and rear exit doors.

Immediately the event occurred, ATS Wilson airport issued a crash alert and Wilson Airport Fire Service (AFS) responded without delay, found the passengers already evacuated from the aircraft and applied foam to the sections of the aircraft with leaking fuel. Runway 14/32 was closed and all inbound and departure traffic made use of the remaining runway.

The Aircraft Accident Investigation Department (AAID) responded to the accident after receiving information from the Wilson Airport Air Traffic Services for coordination and control of the accident site, initial onsite investigation, secured Cockpit Voice Recorder, Flight Data Recorder and aircraft documentation. The wreckage was later removed to a secure site located at remote aircraft parking within Wilson Airport for safe custody awaiting further research and examination.

As per the international requirements, Kenya being both the State of operation and occurrence is obligated to notify both the States of manufacture of the aircraft, power plant and the International Civil Aviation Organization (ICAO). AAID therefore notified the Transportation Safety Board (TSB) of the Netherlands, the State of manufacture of the Fokker 27 aircraft, the Transportation Safety Board (TSB) of Canada, the State of manufacturer of the power plant, and the International Civil Aviation Organization. The United Kingdom UK being the State of design and manufacture of the Dowty Rotol type of propellers installed on 5Y-IZO were also notified. The notified States appointed the accredited representatives.

Preliminary investigation by AAID established that while on ground roll for takeoff, the left engines ITT fluctuated and prompted the crew to abort the takeoff. The aircraft was unable to stop on the paved surface, subsequently overran the runway and came to halt on grass surface.

1. FACTUAL INFORMATION

1.1 History of the flight

On October 11, 2019 at about 0902 Kenya daylight time, a Silverstone Air Services Fokker 27 Mark 050 registration 5Y-IZO experienced runway excursion on takeoff runway 14 at Wilson Airport with 55 occupants onboard (5 crew and 50 passengers). The aircraft was performing a scheduled flight from Wilson airport to Mombasa, Lamu and back to Wilson airport. The aircraft was fuelled then the passengers boarded the plane before the normal pre take off procedures which were reported as uneventful as collaborated by the information from the FDR.

The Right Hand engine preceded the Left Hand engine in startup as depicted by the parameters from the recorders. From engine startup, taxi, lineup runway 14, power up and including the initial stages of ground roll were uneventful. At 06.02.50 GMT, while still on ground roll take off, the LH engine ITT began to fluctuate, dropped from 707.8 to 175.8. The RH ITT remained stable. The other parameters of both engines were stable.

Subsequent power down ensued at 06.03.01, IAS dropped from 110.2Knots and the aircraft magnetic heading increased gradually to 144 consistent with the deviation of the aircraft to the right of the runway axis when it left the paved surface of the runway, before colliding with the airport perimeter fence, went through an embankment before coming to rest tilted to the right after the starboard wing made contact with a tree. The passengers were deplaned through the two left hand side front and rear exit doors.

Immediately the event occurred, ATS Wilson airport issued a crash alert and Wilson Airport Fire Service (AFS) responded without delay, found the passengers already evacuated from the aircraft and applied foam to the sections of the aircraft with leaking fuel. Runway 14/32 was closed and all inbound and departure traffic made use of the remaining runway.

Preliminary information retrieved from the Flight Data Recorder Radar regarding the engine ITT seems to correlate with the flight crew statements regarding the observed fluctuations on the LHS engine ITT.



Figure 1: 5Y-IZO at the accident location Wilson airport

1.1.1 Previous flight

The flight prior to the accident was performed on the 8th October, 2019 from Abu Dhabi to Galgayo, Wajir and finally to Wilson airport uneventfully.

1.2 Injuries to Persons

Injuries	Crew	Passenger	Total in the aircraft	Others
Fatal	0	0	0	0
Serious	0	1	1	0
Minor/none	5	49	54	0
Total	5	50	55	0

Table 1: Injury chart

1.3. Damage to Aircraft

Aircraft damage consisted of severe disruption of the fuselage, damage to the powerplant, landing gears, engine nacelle, propellers, landing gear doors, and starboard wing, NLG and the right Main Landing Gear (MLG) and wheel well. The cockpit and the empennage, did not display visible damage.

The nose section, including the NLG, its cover and door were damaged and partially buried on ground.



Figure 2: The detached and loosely hanging LH engine



Figure 3: The RH MLG

The



Figure 4: The NLG



Figure 5: The ruptured skin of the Fuselage



Figure 6: Passenger cabin and the overhead storage

1.4 Other Damage



Figure 7: Part of the damaged Perimeter fence

1.5 Personnel information

1.5.1 Pilot in Command

Records indicate that the pilot in command was born in 1975 and held an Airline Transport Pilot License; issued on 11 August 2016 with an expiry of 28 February, 2020. The endorsements under group `A` on the License are Cessna 172, Cessna 208 and Fokker 27 Mark 050. The instrument rating renewal check out was done on 1 May, 2019. The pilot had accumulated about 7492.3 flight hours.

1.5.2 The Copilot

The first officer was born in 1988 and held an Airline Transport Pilot License issued on 14 May, 2019 and expires on 3 May, 2020. The endorsements under group one on the License comprised of Cessna 208 and under group two is Fokker 27 Mark 050 type of aircraft. Medical class one was conducted on 3 May, 2019 and the instrument rating practical test was conducted and endorsed on

the license on 10 May, 2019. The pilot had logged a total of 4156 flight hours at the time of the accident.

1.6 Aircraft Information

1.6.1. General

Aircraft weights

Manufacturer: Fokker

Type: F27 Mark 050

Aircraft Serial No: 20244

Year of manufacture: 1992

Certificate of Registration: 5Y-IZO Number 2802, issued on 20 March, 2018

Certificate of Airworthiness: Valid until 4 May, 2020

Engines: Two Pratt &Whitney PW 125B turboprop engines

Maximum Take off weight 20,820 kg

Actual Take off weight 20,378 kg

Maximum Landing Weight 19,730 kg

Propeller type is Dowty Rotol R410 model 6-123-F/1 is six bladed with reverse thrust capability for braking and ground maneuvering

1.7 Meteorological Information

1.7.1 METAR

The METAR, information for HKNW timed at 0900 hours, was:

Surface wind 009°/12 kt

Visibility more than 10 kilometers

Cloud level at 2000 feet above ground level

Temperature/Dew point +18°C / +16°C

QNH 1022.5

1.8. Aids to Navigation

Not applicable

1.9 Communication

At the time of the accident the aircraft was in contact with the Wilson Tower controller on frequency 118.10 MHz.

1.10 Aerodrome Information

1.10.1 Wilson Airport



Figure 8: Wilson airport runways

The runway in use was 14. Its physical characteristics are:

Coordinates: $S1^{\circ}19.15'$ / $E36^{\circ}48.72'$

Elevation: 5517'

Magnetic Heading 136°

Dimensions 5118 x 76 feet / 1560 x 23 meters

Surface Asphalt

Displaced Threshold: 246 Feet

1.11. Flight Recorders

1.11.1 Cockpit Voice Recorder (CVR)

The aircraft was equipped with a Fairchild Model FA2100



Figure 9: The Fairchild Model FA2100 CVR

1.11.2 Flight Data Recorder (FDR)

The aircraft was equipped with a Fairchild Model FA2100 Flight Data Recorder.



Figure 10: The Fairchild Model FA2100 FDR

Phase	Air Gnd Switch 1-End	GMT Hours	GMT Minute	GMT Second	Mag Heading Degree	AIRSPD IAS Knots	Eng Torq Left %RPM	Eng Torq Right %RPM	Eng NP Left %RPM	Eng NP Right %RPM	Prop Low Pitch LH 0-Low	Prop Low Pitch RH 0-Low	Eng ITT Left DegC	Eng ITT Right DegC	Eng NH Left %	Eng NH Right %	Eng NL Left %	Eng NL Right %	Eng FF Left PPH	Eng FF Right PPH	Remarks
TAKE OFF ROLL	Gnd	6	2	25	135.2	21.9	56.3	54.1	100.2	100.9	.	.	596.5	631.6	93.6	95.2	93.4	91.2	628.1	679.7	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	26	136.0	22.9	60.1	58.0	100.2	100.5	.	.	614.1	648.0	94.3	95.9	94.5	92.0	684.4	692.6	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	27	137.7	24.7	66.3	62.0	100.0	100.2	.	.	628.1	660.9	95.2	96.4	96.1	93.3	702.0	735.9	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	28	135.3	27.4	75.9	70.3	100.1	100.4	.	.	648.0	678.5	96.3	97.5	98.4	96.0	764.1	825.0	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	29	134.7	27.4	81.3	79.6	100.0	100.2	.	.	675.0	710.2	97.7	99.3	98.9	96.9	852.0	871.9	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	30	133.3	29.7	79.6	80.4	99.0	99.0	.	.	685.5	728.9	97.9	99.5	98.8	96.9	856.6	848.4	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	31	133.0	32.2	78.4	78.2	99.1	98.8	.	.	687.9	734.8	97.7	99.3	98.7	96.8	837.9	835.5	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	32	133.2	32.8	78.3	77.6	99.7	99.4	.	.	690.2	735.9	97.5	99.0	98.7	96.6	828.5	830.9	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	33	132.7	35.9	78.3	77.1	99.8	99.8	.	.	693.6	737.1	97.5	98.9	98.7	96.4	823.8	825.0	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	34	132.8	37.4	78.5	77.0	100.0	100.1	.	.	693.8	738.3	97.5	98.9	98.7	96.4	823.8	821.5	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	35	133.2	40.9	78.4	76.5	100.0	100.1	.	.	694.9	738.3	97.5	98.9	98.7	96.4	819.1	815.6	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	36	132.8	43.6	78.4	77.3	100.0	100.1	.	.	696.1	738.3	97.6	98.9	98.6	96.4	819.1	816.8	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	37	133.6	43.4	79.0	77.1	99.8	100.0	.	.	697.3	738.3	97.6	98.8	98.7	96.3	819.1	812.1	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	38	132.7	46.0	78.4	76.6	99.7	99.7	.	.	698.4	738.3	97.6	98.9	98.6	96.3	819.1	812.1	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	39	133.0	52.2	78.9	77.2	99.7	99.7	.	.	698.4	739.5	97.6	98.9	98.7	96.3	814.5	807.4	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	40	133.9	56.5	79.0	77.3	99.7	100.0	.	.	698.4	739.5	97.6	98.9	98.6	96.2	814.5	812.1	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	41	133.8	56.1	78.5	77.6	99.7	100.0	.	.	698.4	739.5	97.6	98.9	98.4	96.1	815.6	807.4	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	42	133.3	59.8	78.5	77.2	99.8	99.8	.	.	698.4	739.5	97.6	98.9	98.4	96.1	810.9	807.4	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	43	133.2	64.8	78.9	77.2	99.8	99.8	.	.	698.4	739.5	97.6	98.9	98.4	96.1	810.9	807.4	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	44	133.3	69.0	79.1	77.6	99.8	100.0	.	.	702.0	739.5	97.6	98.9	98.7	96.1	810.9	812.1	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	45	132.8	71.2	79.2	77.6	99.8	100.0	.	.	704.3	739.5	97.6	98.9	98.4	96.1	815.6	812.1	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	46	133.0	67.3	79.1	77.3	99.8	100.0	.	.	705.5	739.5	97.7	99.0	98.4	96.0	810.9	807.4	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	47	133.4	74.3	79.1	77.6	99.8	100.0	.	.	707.1	739.5	97.9	99.0	98.4	96.0	810.9	807.4	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	48	133.2	74.9	79.1	77.6	99.8	100.0	.	.	704.3	740.6	97.7	99.0	98.6	96.1	815.6	807.4	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	49	133.7	75.8	79.6	77.6	99.8	100.0	.	.	707.8	740.6	97.7	99.0	98.6	96.0	810.9	807.4	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	50	133.9	76.7	79.5	77.3	99.8	99.8	.	.	707.8	740.6	97.9	99.0	98.4	96.1	815.6	807.4	TAKE OFF ROLL / LHITT DISCP
TAKE OFF ROLL	Gnd	6	2	51	133.2	82.9	79.8	77.9	99.8	100.0	.	.	709.0	740.6	97.9	99.0	98.6	96.2	820.3	810.9	TAKE OFF ROLL
TAKE OFF ROLL	Gnd	6	2	52	133.6	85.4	79.7	77.7	99.8	100.0	.	.	711.3	740.6	98.0	99.0	98.6	96.2	815.6	806.3	TAKE OFF ROLL / LHITT DISCP
TAKE OFF ROLL	Gnd	6	2	53	133.8	84.9	79.8	77.9	100.0	100.0	.	.	687.9	740.6	97.9	99.0	98.4	96.2	820.3	806.3	TAKE OFF ROLL / LHITT DISCP
TAKE OFF ROLL	Gnd	6	2	54	133.5	90.6	79.3	77.9	100.0	100.0	.	.	718.4	741.8	97.9	99.1	98.4	96.1	810.9	806.3	TAKE OFF ROLL / LHITT DISCP
TAKE OFF ROLL	Gnd	6	2	55	133.7	91.8	79.0	77.7	99.8	100.0	.	.	699.6	741.8	97.9	99.1	98.4	96.1	815.6	810.9	TAKE OFF ROLL / LHITT DISCP
TAKE OFF ROLL	Gnd	6	2	56	133.2	93.1	79.5	77.8	99.8	100.0	.	.	721.9	741.8	97.9	99.1	98.4	96.1	810.9	806.3	TAKE OFF ROLL / LHITT DISCP
TAKE OFF ROLL	Gnd	6	2	57	133.3	98.0	79.5	77.6	100.0	100.0	.	.	732.8	741.8	97.9	99.1	98.4	96.0	810.9	806.3	TAKE OFF ROLL / LHITT DISCP
TAKE OFF ROLL	Gnd	6	2	58	132.9	104.9	79.3	77.6	100.1	100.0	.	.	702.0	741.8	97.9	99.1	98.4	96.0	815.6	806.3	TAKE OFF ROLL / LHITT DISCP
TAKE OFF ROLL	Gnd	6	2	59	132.7	108.5	79.5	77.7	100.0	99.8	.	.	175.8	741.8	97.9	99.0	98.4	96.1	810.9	806.3	TAKE OFF ROLL / LHITT DISCP
TAKE OFF ROLL	Gnd	6	3	0	132.5	110.2	79.7	77.7	100.0	99.4	.	.	726.6	741.8	97.9	99.0	94.0	91.2	815.6	632.8	TAKE OFF ROLL / LHITT DISCP
TAKE OFF ROLL	Gnd	6	3	1	131.9	106.0	71.1	16.9	100.4	95.9	Low	Low	472.3	685.5	91.1	90.4	81.3	78.6	725.4	214.5	POWER DOWN
TAKE OFF ROLL	Gnd	6	3	2	129.9	96.8	7.7	3.5	100.8	96.7	Low	Low	562.5	589.5	83.2	83.4	72.8	71.3	210.9	153.5	POWER DOWN
TAKE OFF ROLL	Gnd	6	3	3	131.1	90.5	5.9	2.2	91.4	94.2	Low	Low	503.7	532.0	78.9	80.2	66.6	66.1	135.9	134.8	POWER DOWN
TAKE OFF ROLL	Gnd	6	3	4	135.0	78.6	5.2	2.8	81.8	88.5	Low	Low	465.2	495.7	76.3	77.9	62.0	62.0	112.5	125.4	POWER DOWN
TAKE OFF ROLL	Gnd	6	3	5	137.9	70.8	5.2	1.6	73.7	82.0	Low	Low	446.5	472.3	74.5	76.2	59.8	58.6	112.5	116.0	POWER DOWN
TAKE OFF ROLL	Gnd	6	3	6	138.3	68.3	5.5	0.8	68.2	76.9	Low	Low	451.2	455.9	75.1	74.5	59.4	55.8	141.8	111.3	POWER DOWN
TAKE OFF ROLL	Gnd	6	3	7	137.9	61.4	6.6	2.1	65.0	72.1	Low	Low	461.7	446.5	76.3	73.2	60.4	53.7	150.0	111.3	POWER DOWN
TAKE OFF ROLL	Gnd	6	3	8	136.8	58.2	7.3	0.0	63.6	67.4	Low	Low	1.2	440.6	77.5	72.3	61.3	51.8	168.8	106.6	POWER DOWN
TAKE OFF ROLL	Gnd	6	3	9	138.2	50.4	7.7	1.4	63.2	63.3	Low	Low	474.6	437.1	78.0	71.6	62.0	51.3	173.4	139.5	POWER DOWN
TAKE OFF ROLL	Gnd	6	3	10	141.8	48.9	7.4	3.0	63.0	60.8	Low	Low	472.3	453.5	78.0	73.2	62.3	53.2	173.4	175.8	POWER DOWN
TAKE OFF ROLL	Gnd	6	3	11	144.0	47.6	10.5	4.6	62.7	60.1	Low	Low	467.6	482.8	78.0	76.2	62.1	57.1	175.8	223.8	POWER DOWN
TAKE OFF ROLL	Gnd	6	3	12	143.5	39.4	11.0	7.9	59.1	62.1	Low	Low	478.1	525.0	79.2	80.5	65.4	62.0	179.3	236.7	POWER DOWN
TAKE OFF ROLL	Gnd	6	3	13	139.8	44.1	16.3	9.0	60.7	64.3	.	.	519.1	530.9	82.6	81.8	62.3	63.8	254.3	208.6	POWER DOWN
TAKE OFF ROLL	Gnd	6	3	14	136.2	25.4	19.2	29.8	63.5	58.1	.	.	528.5	515.6	83.9	81.6	72.1	65.5	278.9	236.7	POWER DOWN

06-03:14Z END OF RECORDING

STOP

Table 2: An Extract of the FDR Readout

1.12. Wreckage and Impact Information

1.12.1. Aircraft trajectory marks

The aircraft ground wheel marks were visible on the runway and grass surface.



Figure 11: Aircraft ground marks

1.12.2. Wreckage layout

The aircraft came to a stop after it impacted the perimeter fence of the airport and an embankment 315 metres beyond the paved runway. The NLG was broken, bent rearwards, and the tires still inflated. The LH MLG leg was extended and locked down. Both tires still inflated, with no appreciable damage. The RH MLG severed off and tires deflated. The fuselage suffered substantial damage with ruptured belly. The RH engine was still attached to the wing, but all the blades of the propellers detached. The LH engine detached although still hanging precariously on the wing with five propeller blades still attached to it. The RH wing tip hit the ground and bent where contact was made with the tree. Fuel spillage occurred from the LH engine and RH wing. No other liquid spillage marks were noticed. Major damage to the passenger cabin was noticed, especially the front row seat near the exit and the cabin luggage compartment at the overhead bins, which was detached completely. The two doors on the RH could not be opened because they were partly resting against the ground. No fuel was unloaded from the aircraft because of the spillage.

The aircraft rested on its nose, the left main landing gears, the fuselage underside and the right wing tip. The nose and the right main landing gears collapsed, broken and partially into its well.

1.12.3. Status of the controls and indicators of the aircraft

When the cockpit was inspected after the accident, the following information relevant to the accident could be obtained:



Figure 12: Cockpit instrument panel after the accident

Landing gear selector down

Power selector-idle

Fuel selector-shut

Flap selector-25

Control wheel-neutral

1.13 Medical and pathological information

Toxicological tests conducted on the crew indicated no evidence that physiological factors or incapacitation affected the performance of flight crew members.

1.14 Fire

There was no evidence of fire.

1.15 Survival aspects

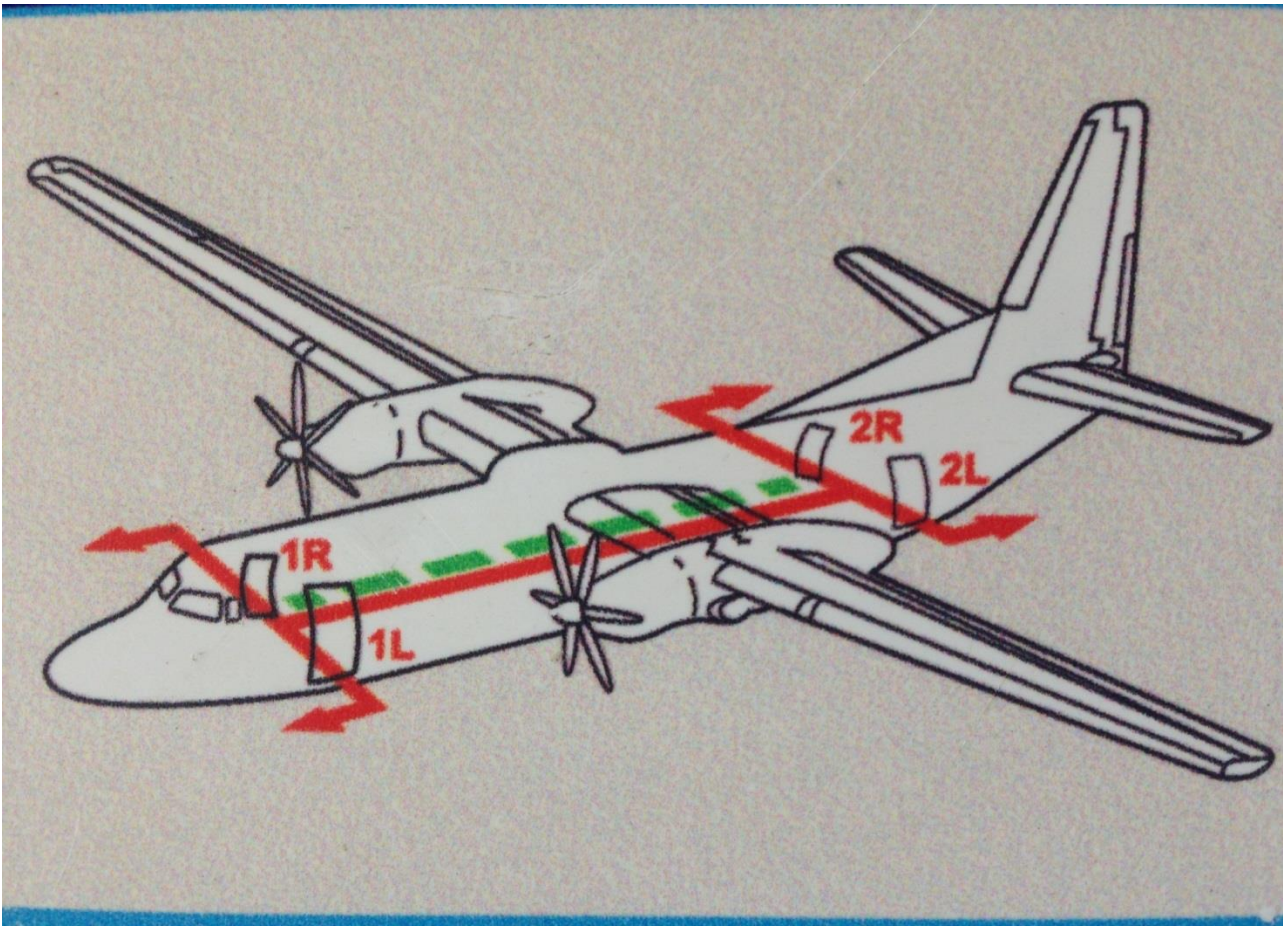


Figure 13: 5Y-IZO Exit doors

Emergency procedures are some of the eventualities that crews are trained for and regularly examined upon. As such they would be expected to carry out the appropriate procedures correctly. This was the case with 5Y-IZO. There was no pre or post impact fire despite the fact that the aircraft had 2100kgs of jet fuel. After impact, the two exit doors, 1R and 2R on the starboard side were inoperative and therefore they were not effective during evacuation. The two port exit doors, 1L and 2L were opened and used to evacuate the passengers.

Emergency evacuation was performed and all the passengers were deplaned without any fatality. The accident was survivable.

Martyn Lunani

CHIEF INVESTIGATOR OF ACCIDENTS

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