CIVIL AVIATION ACCIDENT

REPORT NO 04/354.

FEDERAL REPUBLIC OF NIGERIA
MINISTRY OF AVIATION

REPORT ON THE ACCIDENT TO BOEING 737 AIRCRAFT REGISTERED 5N-AUA THAT CRASHED AT THE NEW KADUNA AIRPORT ON MONDAY THE 13TH NOVEMBER 1995.
CIVIL AVIATION ACCIDENT REPORT

Sir,

I have the honour to submit the report on the circumstances of the accident to the Boeing 737 Aircraft registered 5N - AUA that crashed at the new Kaduna Airport on Monday the 13th November 1995.

The Aircraft was operated by the Nigerian Airways Ltd.

K.K.O SAGOE
Head of the Accident Investigation Bureau.

## AIRCRAFT DATA

<table>
<thead>
<tr>
<th>Aircraft Type</th>
<th>Boeing 737-2179</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serial Number</td>
<td>22985</td>
</tr>
<tr>
<td>Nationality</td>
<td>Nigerian</td>
</tr>
<tr>
<td>Registration Marks</td>
<td>5N - AUA</td>
</tr>
<tr>
<td>Date of Construction</td>
<td>February 1983</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Boeing Commercial Airplane Co. Seattle, Washington, USA.</td>
</tr>
<tr>
<td>Crew</td>
<td>Capt. 1. B. Dambazau Pilot-in-Command Capt. C. A. Elom First Officer Chigbo Ndukwe Supernumerary Officer</td>
</tr>
<tr>
<td>Air Traffic Controller</td>
<td>ShuaibuAdamu Duty Officer</td>
</tr>
<tr>
<td>Place of Accident</td>
<td>End of Runway 23, Kaduna Airport</td>
</tr>
<tr>
<td><strong>Location</strong> of Accident</td>
<td>LAT. 104142N LONG. 0071910E</td>
</tr>
<tr>
<td>Date and Time</td>
<td>13th November 1995 at 0753 UTC</td>
</tr>
</tbody>
</table>
1.0 Factual Information
1.1 History of the Flight

The aircraft departed from Lagos on Sunday the 12th of November at 18:20 UTC for a flight to Yola with transit stops at Kaduna and Jos. The first and third sectors of the flight were flown by the Captain, while the first officer was on the controls for the second sector (KAD -JOS) of the flight. They both had problems with the flight controls in these sectors (aircraft veering to the left or right). The aircraft landed at Yola at 21:00 UTC for a night stop and the crew arrived at their hotel by 22:00 UTC.

On Monday the 13th, the departure from Yola was 06:00 UTC and the aircraft landed in Jos at 06:40 UTC. The fatal sector resumed from Jos at 07:30 UTC for Kaduna. The first contact with Kaduna Air Traffic Controller was flight level 140. The crew reported an Estimated Time of Arrival in Kaduna at 07:46 UTC, 138 souls on board including 14 crew members and a fuel endurance of 3 hours. The Captain stated that the official crew members were eight in number and the extra six persons were boarded at his discretion and that of the Station Manager.

Mr Shuaibu Adamu, the Air Traffic Controller in Kaduna gave the aircraft an inbound clearance with no delay for a locator approach unto runway 05 and passed on the 07:00 UTC weather report. Though, the initial landing clearance was for runway 05, the Captain requested to land on runway 23. He was reminded by the Air Traffic Controller that the wind was from 090 magnetic, but he still insisted on using the 23 approach. The Captain, therefore, accepted to land with a tailwind.

At 07:42 UTC, the aircraft commenced its initial descent at 48 miles on the ILS/DME to 4,500 ft.. At 07:49 UTC, it was cleared to 3,500 ft. at 10 miles out and was later descended to 500 ft.

Meanwhile, inside the cockpit, the testimonies of the Captain, the First Officer and the observer were that the aircraft turned left from the track 310 to align with the runway 23 and that the aircraft was still in the turn when the threshold was sighted just 1.5 miles to the left of the aircraft.

The First Officer asked the Captain "Can you make it to land from that position?". The observer also suggested going on the downwind; presumably to re-position the aircraft for landing on runway 05. There was no response at all from the Captain and the approach was continued for runway 23. The left turn was very steep and it took the aircraft to the left of the runway centreline and a right correction was applied. The observer had to shout a warning "Watch the wing" as the wings could have struck the ground on the final approach. By this time, the aircraft crossed the
with the flying pilot still struggling to maintain directional control for runway centreline alignment.

The aircraft touched down at 2020 ft (615.85m) from the end of the paved runway 05 after consuming 7820 feet i.e. 79.5% of the runway total length. The Captain was reported to have used 1.8 and 1.6 EPR (Engine Power Ratio) on the reversers. When a runway overrun became inevitable, the Captain turned the aircraft to the left with the intention to take advantage of the last rapid exit intersection to avoid the runway end lights.

At this juncture, the aircraft entered an uncontrollable skid. The attendant turning moments inevitably forced the right wing to hit the ground, thus rupturing the fuel tanks and a huge fire erupted. The accident occurred on Latitude 104142N and Longitude 071910E at day time.

1.2 Injuries to Persons

<table>
<thead>
<tr>
<th></th>
<th>Crew</th>
<th>Passengers</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatal</td>
<td>Nil</td>
<td>11</td>
<td>Nil</td>
</tr>
<tr>
<td>Serious</td>
<td>Nil</td>
<td>14</td>
<td>Nil</td>
</tr>
<tr>
<td>Minor/None</td>
<td>8/6</td>
<td>52/47</td>
<td>Nil</td>
</tr>
</tbody>
</table>

Fire was the cause of the number of casualties and serious injuries as passengers were either burnt to death or sustained injuries in their attempt to escape from the inferno.

1.3 Damage to Aircraft

The aircraft was totally destroyed by fire.

1.4 Other Damage

There was no damage to any other property.

1.5 Personnel Information

1.5.1 The Pilot-In-Command is a 43 year old Nigerian male with a Nigerian issued Airline Transport Pilot Licence Number 2911 valid until May 1996. He had his command ratings on B-737, Cessna-150 and Piper Aztec. As at the time of the accident, the Commander had a total flying experience of over 6,000 hours of which over 4,000 hours were on type. The Commander was qualified to take the flight.

1.5.2 The First Officer is a 39 year old Nigerian male with a Nigerian issued Commercial Pilot Licence Number 2884 which was valid until midnight13th November 1995. His part 2 ratings were Boeing-737 and Boeing-727. The
First Officer had a total flying experience of over 5,000 hours out of which 3,000 hours were on type. He was found qualified to take the flight that day. There was a jump seat observer.

1.5.3 The supernumerary officer who was occupying the jump seat as an observer on the ill-fated flight is a young First Officer with a Nigerian issued ATPL number 3202 which had expired in June 1995. He was not rostered as a member of the official crew and was therefore riding as a private passenger in the cockpit.

1.5.4 The Air Traffic Controller on duty is a Nigerian issued with a Nigerian Licence Number 242 which was valid until April 1996. He had ratings on Aerodrome and Approach. He was, therefore, qualified to direct air traffic on the day of the accident.

Aircraft Information

Type - Boeing 738 - 2F9
Registration - 5N - AUA
Serial No - 22985
Manufacturer - Boeing Commercial Airplane Co.
              Seattle, Washington, U. S. A.
Owner - Nigeria Airways Limited
         Airways House
         Ikeja
Operator - Owner
Year of Manufacture - 11th February 1983
C of A - Valid until 12th February 1996
Airframe Time - 22,375.40 hours
Airframe Cycles - 27,567

1.6.2 Engines
Pratt and Whitney - JT8D -15
<table>
<thead>
<tr>
<th>Position</th>
<th>Serial No</th>
<th>Time Since Now TSN</th>
<th>Time Since Overhaul TSO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number 1</td>
<td>P709015</td>
<td>13,543:26 Hours 15,540 Cycles</td>
<td>1524 Hours 1873 Cycles</td>
</tr>
<tr>
<td>Number 2</td>
<td>P708901</td>
<td>13,745 Hours 17,328 Cycles</td>
<td>608 Hours</td>
</tr>
</tbody>
</table>

1.7 Meteorological Information
When the aircraft was in contact with Kaduna Approach, the 0700 hours UTC weather was passed on request as follows:

- **QAM** - 0700 UTC
- **Wind** - 090 @ 10 knots
- **Visibility** - 6 kilometres
- **Weather** - Broken at 9000 metres
- **QNY** - Slight Dust Haze
- **Temperature** - 20°C
- **QFE** - 944HPA
- **QNH** - 1018 HPA

A special weather report for Kaduna at 07:40 UTC before the accident was:

- **QAM** - 07:40
- **QAN** - 060 @12 knots
- **QBA** - 5000 metres
- **QBB** - Broken at 9000 metres
- **QNY** - Slight Dust Haze

Another special weather report at 07:57 UTC after the accident was as follows:

- **QAM** - 07:57 UTC
- **Wind** - 060 @ 15 knots
- **Visibility** - 2000 metres
- **Weather** - BKN 9000 metres
QNY - Dust Haze Temperature - 23°C
QFE - 944 HPA
QNH - 1019 HPA

1.8 Aids to Navigation

VOR/DME - Available at Kaduna Military Airport
Locator Beacon - 'KC' - Serviceable ILS/DME
- Serviceable Localiser - Unserviceable

Glide Slope - Unserviceable
Radar - Unserviceable for two years

1.9 Communications

The communication between the Control Tower and the aircraft was good but there was an undue interference with the flight by the dispatch Officers of the Nigeria Airways Ltd.

1.10 Aerodrome Information

Kaduna runway 05/23 is 3,000 metres long and 60 metres wide. The aerodrome elevation is 2073 ft. The condition of the navigational and landing aids at the time of the accident was deplorable. The ILS/DME equipment which was serviceable, had its Localiser and the glideslope unserviceable (only the DME equipment was serviceable). The second serviceable Navigation aid on the aerodrome at the time of the accident was the Locator Beacon 'KC'. Thus, the aircraft made the approach on the barest minimum navigation and landing facilities.

1.11 Flight Recorders

The aircraft was equipped with Sundstrand FDR and Cockpit Voice Recorder (CVR) and were retrieved from the wreckage in good conditions. The recorders were taken to the facilities of the National Transportation and Safety Board for read-out. While the CVR read-out was excellent, the FDR could not be read-out. The NTSB report stated that "the Sundstrand FDR part No. 1000550-3, serial No. 4750 is one of
the type of FDR whose use was ordered discontinued by ICAO effective 1 January, 1995. Therefore, the NTSB could not perform a read-out of this recorder”.

1.12 Wreckage and Impact Information
The aircraft which turned into the last intersection at a speed close to its minimum control speed on ground, entered an uncontrollable skid to the right. The turning moments arising from the skid forced the right wing to hit the ground thereby rupturing the fuel tanks. The right wing and the fuselage were completely burnt and melted. There were charred remains of the nose section, left wing and empennage. The wreckage was located at the beginning of runway 05.

1.13. Medical and Pathological Information
It was very difficult to identify the victims of this accident. In the first place, most of the survivors did not wait to be recognised before they went away from the scene of the accident. Many survivors with minor injuries managed to get themselves into private hospitals. Majority of the victims died of second and third degree burns. This made it difficult to preserve their bodies inspite of the gallons of formalin applied on them. A mass burial was therefore given to eight of the victims.

1.14. Fire
There was an outbreak of fire originating from the ruptured right wing fuel tanks. The fire fighting was ineffective for two reasons: Firstly, the volume of water and foam brought to the scene of the accident by the MAC 06 and Bedford trucks got finished in no time and secondly, the fire fighting technique employed by the firemen was wrong; rather than attacking the source of the fire, they were busy trying to curtail the spread of the fire.

1.15. Survival Aspects
Though, the fire services promptly arrived at the scene of the accident, the performances of the fire personnel left much to be desired, in that they were fighting the spread of fire rather than fighting the source of fire. The foam and the water got exhausted in no time while the fire raged on with passengers still trapped In the aircraft. The method of combating the fire and the gross inadequacy of equipment greatly decreased the survival aspect of this accident.

1.16. Tests and research
None
1.17. **Additional Information**

No additional Information.

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2.0 **ANALYSIS**

2.1 The Flight Cockpit Management was very pitiable in that only the Commander was treating the flight while the First Officer was only interested in acting as a mobile relay station on the company frequency passing information from the company’s ground station at Abuja to the ground station at Kaduna.

2.2 In the cockpit, there was another Pilot, a status of First Officer occupying the jump seat as an observer. There seemed to be a rift between the Commander of this aircraft and the jump seat F/O. The jump-seat pilot claimed himself to be a member of the Nigeria Airways management, and hence superior to the Captain. The jump seat pilot went as far as hassling for the hotel suite that was reserved for the Captain the previous night on arrival at the hotel, the bad blood was still very much on the minds of both of them that co-operation between them on the flight deck was rendered impossible. However it must noted that a jump-seat pilot has no responsibility for the flight and should not interfere with the conduct of the flight, but in this case he did comment and almost took over the approach briefings from the Captain.

The Accident Investigation Bureau must conclude that the attitude of the jump seat First Officer adversely affected the professional conduct of the flight.

2.3 Evidence from the Cockpit Voice Recorder, indicated that no landing checks were carried out. The right seat scheduled first Officer was just too busy assisting in relaying messages between the ground dispatchers.

An NDB approach was flown into Kaduna and reports from eye witnesses and the evidence given from the cockpit indicated that the approach was not stabilised. The alignment of the aircraft was not achieved until the aircraft was far beyond the threshold of the runway.
2.4 The prominent contributory factor to the number of fatalities was the outbreak of fire. The aircraft touched-down at 7820 feet from the threshold of runway 23 leaving only a distance of 2020 feet as a breaking distance. At the time the aircraft was at the high speed intersection the speed was 76 knots. It was then that the Captain made the fatal mistake of attempting to turn into the high speed intersection when he noticed that a runway overrun was inevitable. Turning off at the speed of 76 knots created a situation in which the centripetal Force created enough turning moment about the right main gear as to roll the aircraft such that the starboard wing hit the ground. The centre tank ruptured close to the wing root and with sparks from the crumbling metal in the vicinity of aviation fuel a gigantic Inferno soon erupted.

The aircraft went into a right yaw and soon came to a stop. Most of the passengers managed to jump out and the fatalities were those who were overwhelmed by the toxic fumes and heat.

3. Conclusions.

(a) Findings

(1) The Crew of the aircraft were properly licensed and they possessed sufficient experience for the flight.

(2) The aircraft had a valid Certificate of Airworthiness and had been maintained in accordance with an approved maintenance schedule.

(3) The aircraft’s weight and centre of gravity were within the prescribed limits.

(4) The weather conditions had no bearing on this accident.

(5) The aircraft had adequate communications with the control tower.

(6) The cockpit voice recorder was very useful in gaining an insight into the events in the cockpit prior to the accident.

(7) The Flight Data Recorder (FDR) installed on this aircraft had already been advised by the ICAO to be discontinued effective from the 1st January 1995, yet the operator did not heed this advice. So the FDR could not be read-out by the NTSB experts thereby rendering it useless for this investigation.

(8) Cockpit management broke down completely on this flight because the scheduled first officer prioritised his assistance of the ground dispatchers over his flight duties. Whereas the
inclusion of the jump-seat pilot also constituted a nuisance to the captain. However, the captain-in-command failed completely to stamp his authority on the cockpit.

(9) The captain of the aircraft complained about the sluggishness of the aircraft in roll but the AIB overrules the excuse as it was his responsibility to ensure the safety of the flight before its commencement.

(10) The final approach phase of this flight was so unstable that a missed approach should have been decided upon by the captain in consonance with the advise that his first officer had given.

(11) The touch down point of 7820 ft from the threshold of runway 23 left only 2020 ft as a braking distance. The overrun was therefore, inevitable.

The decision of the commander of the aircraft to turn into the high speed intersection at 76 knots climaxed the accident.

(12) Eight persons died immediately from their injuries at the site of the accident and three others died a couple of days later in the hospital.

(13) The fire services promptly arrived at the scene of the accident but their initial haulage of water and foam did not extinguish the fire. Still it must be observed that the fire fighting technique mostly concentrated on cooling down the heat rather than attacking the source of the fire.

(14) Nigeria Airways Limited failed to match the compatibility of crew members in the rostering for this flight.

(15) Records indicate that the attitude of the commander of this aircraft towards other members of staff of the airline leaves a lot to be desired.

3b Probable cause of the Accident

(1) The probable cause of the accident is the continuation of a highly unstabilized approach when the option of a missed approach

(in The contributing factor was the turn off at 76 knots into the high speed intersection when an overrun into the extended runway end should have been maintained.
4. Safety Recommendations

4.1 Extended runway ends are normally designed to accommodate runway over-runs because all materials on the extended centre-line are frangible. The decision of the pilot-in-command to turn into the high speed intersection of the runway actually caused the fire which resulted in the fire outbreak. The captain should have heeded the advice of the other cockpit occupants to hold the aircraft on the centreline.

4.2 The Company's flight Operation department must think about compatibility when matching the flight crew members for harmonious and safe operation.

4.3 Airline operators may wish to constantly advise and encourage their pilots to carry out a missed approach at the earliest hint of doubt or difference of opinion within the cockpit area.

4.4 The Fire personnel need more training in the act of modern fire fighting. The fire services need to be better equipped with fire fighting facilities.
1. Brake Marks showing the attempted turn.

2. Left Marks - Left landing gear marks, 2 middle marks - Nose wheel marks.

3. Aircraft tail assembly after the crash.

4. The aircraft position after the crash

5. Nose wheel and left wing after the crash.

6. Remnants of the aircraft nose left wing and empennage.
GOOD MORNING

FROM JOS TO KADUNA MAINTAINING FLIGHT LEVEL 140, AIRBORNE 0730; ESTIMATING TMA AT 39; KC DESTINATION AT 46; 8737, REGISTRATION 5N-AUA, WE HAVE ON BOARD 138 SOULS, CREW 14; ENDURANCE 03:00, GO AHEAD.

TOWER NIGERIA 357 CLEARED TO KC LOCATOR APPROACH, FL 140, EXPECT NO DELAY FOR A LOCATOR APPROACH RUNWAY 05, TIME NOW 39.

TOWER THAT IS CORRECT

TOWER ARE YOU IN TOUCH WITH JEDDAH?

A/C WILL GO ON WITH KADUNA SIR, WE ARE 140 MAINTAINING
17

>0738:47 (16:08)
JOS CONTINUE, GOOD MORNING.

>0738:48 (16:09)
F/O GOOD MORNING

>0738:58 (16:19)
F/O KADUNA DISPATCH 357

>0739:01 (16:22)
DISPATCH 357, JOS GO AHEAD

>0739:03 (16:24)
F/O KADUNA DISPATCH NIGERIA 357

>0739:11 (16:32)
DISPATCH 357, GOOD MORNING

>0739:13 (16:34)
F/O WE ARE EXPECTING TO BE ON Chokes AT TIME OF 55 AIRCRAFT IS UA,
CAPTAIN DAMBAZAU CREW OF 3/5 TAKE OFF WEIGHT FOR LAGOS WILL BE
52 TONNES FUEL WILL BE 94 AND OUR BURN OFF TO LAGOS WILL BE
STANDARD AND TRANSIT TO LAGOS 125 PASSENGERS WITH A BAGGAGE
OF, TRANSIT OF 300 KG IN HOLD ONE AND THE OTHER BAGGAGE OF 205 IN
HOLD TWO TIME EXPECTED ON GROUND 55, WE ARE GOING TO KEEP NO.
ONE ENGINE RUNNING, SO WE WILL BE REQUESTING A QUICK TURN
AROUND.

>0740:00 * (17:21)
DISPATCH OK 357 KADUNA.

>0740:04 (17:25) SNY GO AHEAD

>0740:05 (17:26)
DISPATCH YEAH WE HAVE SERIOUS PROBLEM HERE WE HAVE ALMOST 30
WE HAVE 30 ON OUR MANIFEST FOR THIS FLIGHT AND THE FLIGHT IS
FULL WE ARE CONTACTING LAGOS AND ABUJA IF THEY CAN SEND
US AIRBUS TO THIS STATION TO ENABLE US CARRY OUR
PASSENGERS. CAN YOU HELP US RAISE LAGOS AND WE ARE STILL
STANDING BY ON THE RADIO IF THEY.CAN GRANT OUR REQUEST?

>0740:32 (17:53)
SNY ABUJA REQUESTING

>0740:35 (17:56)
F/O ABUJA CANNOT GIVE THEM LAGOS WILL NOT RE-ROUTE THAT FLIGHT

>0740:39 (18:00)
CAPT LET'S TALK LIKE THIS, ........

>0740:45 (18:06)
F/O HAS IT NOT LANDED?

>0740:48 (18:09)
F/O ABUJA DISPATCH 357
DISPATCH NIGERIA 357 GO AHEAD

F/O DO YOU HAVE CONTACT WITH NIGERIA 471?

DISPATCH AFFIRMATIVE, HE IS WITH YOLA 127.9

F/O OK THANK YOU

A/C 471 ESTIMATING WA 50...WE 07-FLIGHT LEVEL 170 OUT OF 225

SNY HE IS GOING TO BE THERE IN 30 MINUTES

F/O YES, BUT EH ...... IS 471 NOT ALREADY AIRBORNE FOR

A/C THEY WILL NOT RELEASE THAT FLIGHT, LAGOS WILL NOT.

CAPT KADUNA NIGERIA 357 REQUESTING DESCENT

TOWER NIGERIA 357 DESCEND TO .......4500 FT.

F/O 3500 FT CONFIRM?

F/O UNDERSTAND 4500 FT. WE HAVE 48 ON THE ILS

TOWER CONFIRM LEAVING 140

F/O WE ARE NOW LEAVING 140 NOW FOR 4500 FT AS CLEARED.
>0742:27 {19:48}
TOWER ROGER

>0743:31 {20:52}
VOICE NA HERE BE KADUNA

>0743:36 {20:57}
VOICES I DID NOT KNOW WHEN THEY DID THAT......

>0743:40 {21:01}
Sny ONE STANDARD ACCIDENT YOU GET INVOLVED IN ANOTHER CRISIS ALTOGETHER

>0743:44 {21:05}
CAPT I DID NOT KNOW

>0743:45 {21:06}
Sny ONE DID NOT EXPECT IT AT ALL

>0743:57 {21:18}
PURSER LADIES AND GENTLEMEN WE ARE NOW COMMENCING OUR DESCENT INTO KADUNA .........

>0743:59 {21:20}
DISPATCH NIGERIA 357 KADUNA

>0744:01 {21:22} F/O
GO AHEAD

>0744:03 {21:24}
DISPATCH OK FROM YOUR COMPANY HERE IN KADUNA, THEY SAY IF YOU CAN RAISE NIGERIA 471 FROM ABLIIA TO LAGOS YOU CAN SAY THAT REQUEST HAS BEEN GRANTED FROM LAGOS THAT HE CAN COME TO KADUNA AND CARRY PASSENGER

>0744:15 {21:36} F/O
OK THEN

>0744:20 {21:41}
F/O ABUJA DISPATCH, GOOD MORNING NIGERIA 357

>0744:27 {21:48}
F/O NIGERIA 471 THIS IS NIGERIA 357

>0744:31 {21:52} A/C
GO AHEAD

>0744:32 {21:53}
F/O OK, LAGOS REQUESTS THAT YOU ROUTE THROUGH KADUNA

>0744:38 {21:59}
A/C LAGOS REQUESTS THAT WE ROUTE THROUGH KADUNA?

>0744:40 {22:01}
F/O AFFIRMATIVE, TO PICK UP PASSENGERS BECAUSE WE HAVE FULL
>0744:46 (22:07)
A/C OK THANK YOU VERY MUCH.
>0744:49 (22:10) F/O ANY TIME

>0744:51 (22:12)
A/C ABUJA NIGERIA 3., CORRECTION 471
>0744:56 (22:17) DISPATCH 471, GO

>0744:57 (22:18)
A/C WE JUST RECEIVED INFORMATION FROM COMPANY BACK HOME TO ROUTE TO KA.......
>0745:02 (22:23)
F/O 35 MILES PASSING 145
>0745:07 (22:28)
TOWER AT WHAT LEVEL WOULD YOU LIKE...
>0745:10 (22:31)
A/C LEVEL, THE ONE EH 50
>0745:15 (22:36)
TOWER ROGER TURN RIGHT
>0745:28 (22:49)
VOICE OK DANJUMA MAY I HAVE THE CAPTAIN’S NAME AND REGISTRATION
>0745:32 (22:53)
F/O THIS IS CAPTAIN OGBOGU AND REGISTRATION YOU HAVE TO STAND

>0745:36 (22:57)
VOICE OK THANK YOU VERY MUCH
>0745:38 (22:59)
F/O 471 COMPANY
>0745:44 (23:05)
F/O NIGERIA 471 COMPANY PLEASE
>0745:46 (23:07)
A/C OK

>0745:53 (23:14)
F/O THAT IS SURPRISING O, LAGOS NO DEY GREE, HE NO DEY GREE
>0745:59 (23:20)
VOICE.....

>0745:58 (23:19) F/O YOU SAY?
>0745:59  (23:20) VOICE GOOD....... 

>0746:01  (23:22) 
VOICE  SO FAR SPEAK ENGLISH 
>0746:02  (23:23) VOICE  I WANT A 

>0746:04  (23:25) 
VOICE  12 KILOMETERS HORN 
>0746:06  (23:27) SNY  ONE TO GO 

>0746:11  (23:32) 
F/O  NIGERIA 471 APPROACHING 4500 FT, 20 MILES 
>0746:15  (23:36) 
TOWER  CONFIRM NIGERIA 357 
>0746:17  (23:38) 
F/O  THIS IS NIGERIA 471, I MEAN NIGERIA 357 SORRY 
>0746:20  (23:41) TOWER OK 

>0746:23  (23:44) 
TOWER  PREPARE FOR THE LOCATOR APPROACH RUNWAY 05, REPORT AGAIN ESTABLISHED 
>0746:28  (23:49) 
F/O  WE ARE PASSING RUNWAY 23 SIR 
>0746:30  (23:51) TOWER SAY AGAIN 

>0746:31  (23:52) 
F/O  WE ARE PASSING RUNWAY 23 
>0746:34  (23:55) 
CAPT  THE OLD CLEARANCE WAS RUNWAY 05, YES? 
>0746:36  (23:57) 
F/O  AFFIRMATIVE SIR WE ARE PASSING 23 
>0746:38  (23:59) 
TOWER  ROGER, CLEARED FOR A STRAIGHT IN LOCATOR APPROACH RUNWAY 23, REPORT ESTABLISHED 
>0746:44  (24:05) A/C 357, 471.
SNY HE IS CALLING YOU
F/O OK, CONFIRM YOU ARE ON YOUR WAY NOW
A/C AFFIRMATIVE
F/O OK AIRCRAFT CONFIRM NOVEMBER YANKEE?
TOWER ARE YOU ABLE TO CONTACT 671?
A/C ACTUALLY WE ARE 19.... AT THE MOMENT
SNY 19
F/O OK CONFIRM YANKEE
A/C YANKEE AFFIRMATIVE
F/O OK THEN
A/C OK THANK YOU
F/O EH IDOFO, 357
DISPATCH GO AHEAD SIR, MY BROTHER
F/O NOVEMBER YANKEE DE SEE YOU ON GROUND
DISPATCH OK NO PROBLEM YOU ARE WELCOME
SNY I WONDER
F/O AND THAT THEY HAVE 19 PASSENGERS
DISPATCH SAY AGAIN
F/O THEY HAVE 19 PASSENGERS
>0747:23 (24:44)
DISPATCH YEAH I COPY THEM
>0747:31 (24:52)
F/O KADUNA NIGERIA 357
>0747:34 (24:55) TOWER 357 GO

>0747:35 (24:56)
F/O WHAT WAS YOUR LAST TRANSMISSION SIR?
>0747:37 (24:58)
TOWER WERE YOU ABLE TO CALL 471?
>0747:39 (25:00)
F/O AFFIRMATIVE, THEY ARE ON THEIR WAY TO KADUNA
>0725:06 (02:27) TOWER ROGER

>0747:43 (25:04)
F/O THANK-YOU
>0747:44 (25:05) TOWER PLEASURE

>0747:51 (25:12)
A/C KADUNA NIGERIA 471
>0747:54 (25:15)
TOWER CONFIRM THATS 471
>0747:55 (25:16)
A/C AFFIRMATIVE, GOOD MORNING
>0747:57 (25:18)
TOWER GOOD MORNING, GO AHEAD
>0747:59 (25:20)
A/C OK WE ARE COMING TO KADUNA, WE DEPARTED ABUJA AT 40, ESTIMATING KADUNA AT 0807, 0807, 47 ON BOARD AND
>0748:15 (25:36)
CAPT MAKE THEM CARRY ALL THE PASSENGERS NOW
>0748:19 125:40)
TOWER AGAIN ENDURANCE
>0748:20 (25:41) A/C 02:30

>0748:21 (25:42)
TOWER WHAT ABOUT FLIGHT LEVEL
>0748:23 (25:44)
A/C 150

>0748:25 (25:46)
TOWER CLEARED TO KC LOCATOR FLIGHT LEVEL 150 EXPECT NO DELAY FOR THE LOCATOR APPROACH RUNWAY 05 TIME IS 49 GO AHEAD

>0748:36 (25:57)
A/C ROGER KC LOCATOR 05 LEVEL 150 NIGERIA 471

>0748:41 (26:02)
TOWER WEATHER, 090 10 KNOTS 6 KILOMETERS CLEARED OF HAZE BROKEN 19 MIST NH 1019 TEMPERATURE 20

>0748:52 (26:13)
A/C ITS OK WILL CALL YOU LATER

>0748:54 (26:15)
TOWER WHAT ABOUR TMA?

>0748:56 (26:17)
A/C TMA TIME WAS 55

>0749:03 (26:24)
F/O 357 LEAVING 4500 FOR 3500 FEET 10 MILES

>0749:08 (26:29)
TOWER REPORT AGAIN FIELD IN SIGHT

>0749:10 (26:31)
F/O 357

>0749:19 (26:40)
TOWER 471 NUMBER OF CREW ON BOARD?

>0749:25 (26:46)
TOWER NIGERIA 471, NUMBER OF CREW ON BOARD

>0749:27 (26:48)
A/C 08

>0749:25 (26:46)
F/O LAGOS SHOULD MAKE UP THEIR MIND

>0749:35 (26:56)
F/O 3500

>0749:37 (26:58)
CAPT EM

>0749:43 (27:04)
F/O WANT TO GO DOWN SOME MORE?

>0749:45 (27:06)

SNY DEM JUST SAY......
>0749:52 {27:13}

Flo  I GIVE YOU 2500
>0749:56 {27:17}

CAPT    THAT BE 1000 FT ABOVE GROUND
>0750:12 {27:33}

VOICE   AIRCRAFT KANO
>0750:13 {27:34}

Flo    WHAT DO YOU SAY?
>0750:15 {27:36}

SNY AIRCRAFT......
>0750:16 {27:37}

C    SOUND OF MORE WIND
>0750:23 {27:44}

C CLICKING OF TRIMS OR FLAP LEVERS
>0750:26 {27:47}

ENGINE NOISE INCREASES SLOWLY
>0750:24 {27:45}

CAPT    FLAPS 25
>0750:27 {27:48}

Flo    START SWITCHES
>0750:28 {27:49}

CAPT ON
>0750:29 {27:50}

Flo    SPEED BUG
>0750:30 {27:51}

CAPT SET
>0750:30 {27:51}

Flo    SPEED BRAKE LEVER
>0750:31 {27:52}

CAPT ON
>0750:32 {27:53}

F/O    LANDING GEAR
>0750:33 {27:54}

CAPT DOWN
>0750:34 {27:55}

Flo FLAPS
>0750:34 {27:55}

CAPT .....
PURSER: IN A SHORT WHILE WE SHALL BE LANDING AT KADUNA.

A/C: EH, KADUNA WILL BE 140. BE IN CONTACT WITH KANO.

A/C: DO YOU HAVE ANY TRAFFIC TO COMMENCE OUT DESCENT?

TOWER: NEGATIVE.

A/C: OKIDDO SEE YOU ON OUR WAY BACK.

TOWER: ROGER.

CAPT: LET'S GO TO 550.

F/O: SNY YEAH.

F/O: ON RADIO ALTIMETER.

SNY: YE E AH!

F/O: THINK YOU CAN START TURNING IN NOW?

CAPT: THE STEERING HAND SAYS 239 NOW.

F/O: EH.

F/O: OK.

SNY: YOU HAVE ANY FIELD THERE NOW?
F/O NO NOT YET
CAPT THATS THE FIELD
F/O OK
SNY THEY SAY IT IS 14 MILES TO KC .......
CAPT FOLLOW ME WITH RUDDER FOLLOW ME TO LEVEL UP
SNY .....9
F/O YOU ARE 500
CAPT YES LETS GO DOWN
C INCREASED ENGINE NOISE
F/O SAY AGAIN
F/O BUILDING INSIGHT
SNY OK THATS THE KABO, THATS THE AIRCRAFT WHICH CRASHED TWO LEFT, 14 LEFT
F/O NIGERIA 357 FIELD IN SIGHT SHORT FINALS
TOWER WIND IS 090 AT 15 KNOTS
F/O WE ARE GOING TO LAND 357
C AURAL WARNING! AURAL WARNING!
C WOOPH WOOPH PULL UP
>0752:4  [30:05]  
4 C  
| AURAL WARNING  
>0752:49  [30:10]  
F/O  
| YOU CAN GO DOWN O!  
>0752:5  [30:12]  
F/O  
| REDUCE POWER 160  
>0752:59  [30:20]  
F/O ???????  
>0753:0  [30:24]  
3 SNY  
| MAX REVERSERS, MAX REVERSERS MAX REVERSERS, MAX  
>0753:17  [30:38]  
SNY  
| NO NO NO NO NO NO NO NO NO NO NO NO NO NO NO NO NO  
>0753:19  [30:41]  
F/O EASY  
>0753:2  [30:43]  
F/O NO  
>0753:2  [30:44]  
3 C  
| SOUND OF CRASHING METAL  
>0000:00 ( )  
VOICE 130