

27B ORIGINAL

1901/103/AIB



# AIRCRAFT ACCIDENT INVESTIGATION REPORT

M/S AIRCRAFT SALES & SERVICES (PVT) LTD.

PIPER SENECA-III REG. MKS. AP-BBU

AT TAJJAL AIRSTRIP

ON

8TH SEPTEMBER, 1989

C A A

INVESTIGATION REPORT ON THE ACCIDENT TO M/S.AIRCRAFT  
SALES & SERVICES (PVT) LTD AIRCRAFT PIPER  
SENECA III REG. MK. AP-BBU AT  
TAJJAL AIRSTRIP ON  
8TH SEP 1989

REPORT ON ACCIDENT TO M/S.AIRCRAFT SLAES & SERVICES  
(PVT) LTD. PIPER SENECA-III AIRCRAFT AP-BBU ON 8TH  
SEPTEMBER 1989 AT TAJJAL AIRFIELD WHILE LANDING  
CHARTER FLIGHT ON KARACHI - TAJJAL SECTOR

Authority: Director General Civil Aviation Authority  
Memorandum No.HQ.CAA/1901/103/AIB dt 9.9.89  
(Attached to this report as Appendix 'A' ).

1. AIRCRAFT INFORMATION

- |                                                                                      |   |                                                                                                      |
|--------------------------------------------------------------------------------------|---|------------------------------------------------------------------------------------------------------|
| 1.1. Registration Marking                                                            | : | AP-BBU                                                                                               |
| 1.2. A/c Type & Makers Sl.No.                                                        | : | Piper Seneca-III PA-34-220T<br>S.NO.34-8433032                                                       |
| 1.3. Engines Type, airframe Position<br>Maker's SR.No.                               | : | Continental attached to each<br>wing. Port S.No.315778<br>STBD - Sr.No. 314776                       |
| 1.4. Engines total hours since<br>installation.                                      | : | Port 1568-05 hrs<br>STBD 1409-40 hrs                                                                 |
| 1.5. Port and STBD Propellers fitted<br>with S.N and total hrs since<br>installation | : | port S.N. 830638<br>Hrs 933-15<br>STBD S.N. 870347<br>Hrs. 777-20                                    |
| 1.6. Certificate of Registration No.<br>and validity.                                | : | NO.569 valid till further<br>order.<br>(APP-B-attached to this report)                               |
| 1.7. Certificate of Airworthiness No.<br>and date of expiry                          | : | No.522 (Rev.-I) valid till<br>27.5.1990.<br>(APP - C attached to this<br>report).                    |
| 1.8. Certificate of Maintenance Date &<br>time issue and period of validity          | : | C of M No.402 issued on<br>3.9.89 and valid upto<br>3.10.89.<br>(APP. D attached to this<br>report). |
| 1.9. Date of construction of airframe                                                | : | 1984                                                                                                 |
| 1.10. Name and Address of Own                                                        | : | Aircraft Sales & Services (Pvt)Ltd<br>Kassem Building 1/29- Randal<br>Road Karachi                   |

/1.11. Gross weight

- 1.11. Gross weight maximum permitted by C of A for this flight at the time of accident. : 4750 Lbs weight is not a factor in this accident
- 1.12. Loading, Centre of gravity limits in C of A and centre of gravity position at the time of accident and commencement : Within limits Loading is not a factor in this accident (App. E attached to this report)
- 1.13. **Airframe History.**
- 1.13.1. Flying time since manufacture as on 8.9.89 : 3133.45 Hrs
- 1.13.2. Flying time when last C of A check IV carried out with date on airframe and engine : 2951.30 Hrs on 26.5.89. (App.F attached to this report)
- 1.13.3. Last check I inspection carried out at Hrs and date. : At 3121.30Hrs on 3.9.89
- 1.13.4. Status of Modification : All in operated during last C of A. No Mod was pending.
- 1.13.5. Technical defects logged or reported last 3 months. : No defect on flight control, or landing gear system or on engines reported for the last 3 months.
- 1.13.6. Major Port of aircraft components parts damaged in this accident. :  
 i. R.H.Main Landing gear broken  
 ii. R.H.Flap damaged  
 iii. R.H.Aileron damaged  
 iv. R.H.Wing tip damaged  
 v. R.H.Stabilizertip damaged  
 vi. R.H.Wing skin only trailing edge damaged.  
 vii. R.H.Propeller damaged  
 viii. Nose gear and Main gears strained.
- (App. G<sub>1</sub> - G<sub>6</sub> Photos attached to this report).

## 2. CREW INFORMATION:

## 2.1. Pilot-in- Command

2.1.1. Name : Capt.Hidayat Ullah Khan  
 2.1.2. Position in the cockpit : Left Hand Seat  
 2.1.3. Date of Birth : 28.2.1955  
 2.1.4. Type of Lic and No : ALTP Lic No.535  
 2.1.5. Medical date with status : 14.05.1989 'Fit for renewal of  
 Airline Transport Pilot's Lic'.

## 2.1.6. Raging:

2.1.6.1. Type(s) held : Piper Seneca II/III  
 2.1.6.2. Type current : \_do\_  
 2.1.6.3. Assist/Flight Instructor Rating : Flt.Instructor Rating expired  
 on 15.12.86  
 2.1.6.4. Flight engineer Instructor Rating : N/A  
 2.1.6.5. Check Rating : N/A

## 2.1.7. Flying Experience:

2.1.7.1. Grand total : 7927.09 Hrs  
 2.1.7.2. Total in command : 7679.16 Hrs  
 2.1.7.3. Total in command/Co- Pilot/Flight Engineer : 946.50 Hrs on PA-34 (Calculated  
 on the type accident/ from log book)  
 incident occurred.

2.1.8. Where trained : F.A.A. Lic converted

2.1.9. Date of Joining the Organization 5.4.1987

### 3. SUMMARY

#### 3.1. Aircraft Piper Seneca -III Nationality and Registration Marks

AP-BBU belonging to Aircraft Sales and Services was on a Charter Flight booked by Lasno Petroleum. The aircraft took off from Karachi at 0210 UTC for destination Tajjal Airfield near Chund Ku village in Sanghar District.

3.2. The Pilot arrived overhead the airfield and after descend made a right hand circuit for Runway 28. On final approach, the Pilot selected 2 notch (25<sup>0</sup>) flaps and continued his descend. The Pilot in an attempt to touch down in the begining of the runway made a shallow dragging approach. He, however failed to judge the height and the aircraft's right landing gear hit a gate post 6 ft high and 250' ft from the begining of the runway.

3.3. The right landing gear due to impact with the post, bent inwards. Although the Pilot heard the impact noise, he continued with the approach and landed. The aircraft rolled for few hundred feet but the right landing gear could not take the load of the aircraft. It broke from the top joint and flipped over the right wing surface. The aircraft veered to the right, and left the runway and came to stop at approximately 10 feet on the right side of Runway 28.

3.4. The Passengers and the crew evacuated the aircraft unhurt.

3.5. There was no fire before or after the accident.

### 4. INJURY TO PERSON(S)

4.1. None

**5. DAMAGE TO AIRCRAFT**

5.1. As list in 1.13.6 and refer Photos App. 'G<sub>1</sub>-G<sub>6</sub>'.

**6. OTHER DAMAGE**

6.1. Airstrip gate wooden post.

**7. METEOROLOGICAL CONDITION**

7.1. The weather was fair.

7.2. Weather is not a factor in this accident.

**8. NAVIGATIONAL & LANDING AIDS**

8.1. It is unmanned airstrip.

8.2. One Supervisor is available to receive the flight.

**9. COMMUNICATION**

9.1. Communication at the airstrip not available.

9.2. Contact with Sukkur is available.

**10. AERODROME GROUND FACILITIES**

10.1. It is unmanned airstrip with ground supervisor available whenever there is charter flight.

10.2. These were not a factor in this accident.

**11. FLIGHT RECORDER/C.V.R.**

11.1. Not provided in this type of aircraft.

**12. WRECKAGE & IMPACT INFORMATION**

12.1. Received at 1100 LT.

12.2. Investigation team later left by other aircraft provided by the Operator.

13. FIRE

13.1. No fire occurred during or after the occurrence.

14. SURVIVAL ASPECTS

14.1. It was a survivable accident.

15. TEST & RESEARCH

15.1. The fractured right hand main landing gear was checked and confirmed fresh crack in outer cylinder due impact with the wooden post fixed at Tajjal airstrip gate during landing.

16. INVESTIGATION

16.1. The investigation team flew from Karachi to site of the accident. They reached Tajjal Airfield at 0907 UTC. After a quick general survey of the scene of accident, the statements of the Pilot and the Witnesses were recorded. Photographs of the aircraft were taken.

16.2. Tajjal Airstrip is a small Kutcha Airstrip 3000' x 75' in dimension. Both ends have 233' ft of cemented surface and in between Kutcha surface of compacted uneven sand. There is a barbed wire fencing around the airstrip to keep local people and animals from straying on to the field. In the begining of R/W 28 a gate is installed on two wooden post 6'- 5" in height and 250' ft from the beginning of the runway.

/16.3. The aircraft

- 16.3. The aircraft made a shallow dragging approach to the airstrip for landing. The Pilot was in fact so low that his right main landing gear hit the right wooden gate post at a height of approximately 5' feet. The point to note here is that the aircraft had still exactly 250' travel before the beginning of the cemented surface where the pilot was planning to touch down.
- 16.4. The right main gear after impact with the post was bent inwards. The Pilot continued with the approach and touched down at 70.5' ft from the beginning of the runway on the cemented surface. The initial touch down was on the right gear. The aircraft bounced a little and the left tyre touched at a distance of 84.5 ft (App 'H') from the beginning of Runway.
- 16.5. The right landing gear took the initial weight of the aircraft and since it was already bent, it could not withstand the load. After rolling for about 800', the aircraft started to shake and judder. The right gear broke from the upper joint and flipped over the end of right wing surface. The right propeller touched the ground at low RPM as the Pilot had put both engines mixture lever to idle cut off position.
- 16.6. The aircraft veered to the right and went off the runway and came to a halt approximately 10' ft on the right side of runway 28.
- 16.7. During investigation, the aircraft right landing gear was found lying on top of the right wing surface and the flaps were retracted. All three right propeller blades were found bent at the tips. The right wing had bent and crumpling was found on the trailing edge of the right side wing. There were no traces of any kind of fire or fuel, hydraulic and oil leak.

16.8. All five occupants of the aircraft evacuated the aircraft without any injuries.

16.9. The aircraft was found lying at a position exactly 1323' ft from the beginning of the runway.

## 17. WITNESSES

17.1. Statement of the following witnesses are attached to this report.

|                                   |                                        |
|-----------------------------------|----------------------------------------|
| 17.1.1. Capt.Hidayat Ullah Khan   | App. 'J' <sub>1</sub> 'J' <sub>3</sub> |
| 17.1.2. Capt.Mazhar-uz-Zaman      | App. 'K'                               |
| 17.1.3. Mr.Micheal Smith          | App. 'L' <sub>1</sub> 'L' <sub>2</sub> |
| 17.1.4. Initial Occurrence Report | App. 'M'                               |

## 18. FINDINGS

18.1. The aircraft certificate of Registration, Certificate of Airworthiness and certificate of Maintenance were valid.

18.2. The Pilot had valid licence and was rated for the type of aircraft.

18.3. The Pilot did not have breakfast before departure. He had a cup of tea overhead Nawabshah which is twenty minutes from the destination. The low blood sugar severely affected the depth preception and reflexes of the Pilot before landing.

18.4. Although the wind was calm, the Pilot elected to make a partial flap extended landing (25° - 2 notch) which made him approach at a flat glide path and caused him to undershoot badly although 20" and above boost was maintained till flare out height.

/18.5.The Pilot

18.5. The Pilot did not make any effort to get back to the correct glide angle.

18.6. The Pilot used a wrong short field landing technique which is full flaps extended minimum power to maintain approach speed.

19. CAUSE

19.1. The cause of the accident was due improper landing technique used by the Pilot. In *calm* wind conditions and short runway available he elected to make a partial flap extended landing, shallow approach with lot of power. (20" and above boost.)

19.2. The contributory factor being that the Pilot did not have break fast before departure which affected both his reflexes and perception on the final approach.

20. RECOMMENDATIONS

20.1. It is recommended that Captain Hidayat Ullah Khan ALTP NO.535 be suspended for a period of 30 days for violation of rule 155 and rule 273 (i) (e) of Civil Aviation Rules 1978.

20.2. Before his licence is revalidated he must undergo, training in different types of landing techniques. His flight check should be conducted by a CAA designated flight check inspector.

/20.3. It

- 20.3. It should be re-emphasized to all General Aviation Pilots the importance of having proper meals before the flight through flight safety bulletin/circular and flight safety meetings.
- 20.4. Short field landing must be included in the flying syllabus for CPL/ALTP and should be included in the Flight test.
- 20.5. Streamers should be placed on the barbed wire fencing and the gate around Tajjal Airstrip so that it is visible to Pilot on approach for landing.

APP. G<sub>1</sub>"



20



APP. G<sub>2</sub>

APP "G<sub>3</sub>"



21

APP G<sub>4</sub>



APP. G. 5"



APP. G6

