

63

**INVESTIGATION REPORT ON AIRCRAFT PIPER APACHE
AP-ALS FORCED LANDED AT OKARA AIR-FIELD ON 5-1-1983.**

Authority to investigate the flying incident.

D.G.C.A.A Memorandum No. CAA/1909/9/FS
dated 6th January, 1983.

1. FLYING INCIDENT DETAILS.

- | | |
|---|---|
| a) Date and time. | 5th January, 1983 at about 1655 local time. |
| b) Type of flying. | Chartered flight. |
| c) Object of flying. | To carry passenger from Multan Airport to Walton air-field. |
| d) Date and time of receipt of notice. | 5th January, 1983 at about 1900 hours local time. |
| e) Date and time of arrival of investigator at scene of incident. | 6th January, 1983 at 1330 hours local time. |

2. AIRCRAFT INFORMATION.

- | | |
|--|--|
| 1. Aircraft type & Manufacturers. | : Piper Apache PA-23-160 |
| serial No & year of manufacture. | : 23-1877-1960. |
| 2. Registration Marking. | : AP-ALS |
| 3. Engine type and serial No. | : Lycoming O-320 B3B. Port L-2968-39 |
| | : Starboard L-2844-39. |
| 4. Certificate of Registration No. | : 271/5 |
| 5. C of R date issued. | : 18th November, 1960. |
| 6. Certificate of airworthiness No. | : 239/2 |
| 7. Certificate of airworthiness and date of last renewal and validity. | : 29-5-82 to 28-5-83 |
| 8. Owner of the aircraft. | : Mr. S. Muzammil Hussain, 6/B, S.M.C.H. Society Ltd, Karachi. |
| 9. Aircraft operator. | : M/S Lahore Flying Club, Lahore. |
| 10. Weight permitted by C of A weight schedule date last weight and C of G position at the time of incident. | : Gross weight. 3800 lbs
: 1-6-1982
: C.G within limits. |

11. History of Aircraft.

- | | |
|---------------------------------------|---------------------|
| 11-1. Hours since new | : 1510-35 hours |
| 11-2. Hours since last C of A Renewal | : 172-15 hours |
| 11-3. Modification status | : Modified to date. |

12. History of Engines.

- | | |
|---|---------------------|
| Port engine, hours since new | : 1365-45 hours |
| Port engine, hours since O/E | : 1078-50 hours |
| Port engine, hours since last C of A Renewal. | : 172-15 hours |
| Modifications. | : Modified to date. |
| Starboard engine, hours since new | : 1517-15 hours |
| Starboard engine, hours since O/E | : 1452-55 hours |
| Starboard engine, since last C of A Renewal. | : 172-15 hours |

13. Accessory History.

: All accessories within life.

14. Defects.

Aircraft made precautionary landing at Okara, suspecting fuel leakage on the starboard engine.

Cont. - ii -

3. CREW INFORMATION.

Pilot in command.
 Fathers' Name.
 ALTP No.
 Ratings.
 Validity.
 Total Hours.
 Hours in last thirty days.
 Last medical before the incident.

Mr. Abdul Alim Aziz.
 Late Mian Abdul Aziz.
 89.
 Cessna 337, 340, 185 Piper PA-23.
 13-7-1983.
 20,000 hours.
 71.55 hours.
 11-1-1983.

Second Pilot.
 Fathers' Name.
 CPL No.
 Ratings.
 Validity.
 Total Hours.
 Hours in last thirty days.
 Last medical before the incident.

Mr. Anwar Karim Mirza.
 Mr. Mirza Abdul Karim.
 977.
 Cessna 150, 152, 337 Piper PA-23.
 8-6-1983.
 2000 hours.
 59.55 hours.
 11-11-1982.

4. FLIGHT INTRODUCTION.

The aircraft AP-ALS piper Apache was engaged on 5-1-1983 for a chartered flight, Walton/Sukker/Sibbi/Multan/Walton. The aircraft took off from Walton air-field at 0715 with captain Alim Aziz ALTP No. 89 in command and Mr. Anwar Karim Mirza CPL No. 977 as a second pilot. The aircraft flight was safe and normal up to Multan. The aircraft was refuelled at Multan to full tanks and operated a flight to Walton at 1605 hours local time. At Sahiwal the crew noted the fuel consumption higher on the right engine than to the left, he suspected fuel leakage on the right engine and force landed the aircraft at Okara air-field, near to him. The aircraft sustained no damages and none was hurt.

5. WEATHER.

Not a factor.

6. MEMBERS INJURED AND DAMAGES.

None.

7. NAVIGATION AIDS.

Not involved.

8. COMMUNICATIONS.

The P.I.A aircraft operating PK 656 received the message and passed on to A.T.C Lahore Airport.

Cont. - i i i -

9. FIRE FIGHTING EQUIPMENTS.

No fire prior to or after the force landing.

10. TECHNICAL INVESTIGATIONS.

GENERAL OBSERVATIONS.

The aircraft made a suitable and perfect landing at Okara Cantt air-field and there were no damages to the aircraft. The aircraft was examined in details, found the fuel traces on the right wing flap section which indicated to the investigator that the fuel did leak from the right engine fuel system.

CHECKS AND INSPECTIONS ON THE AIRCRAFT.

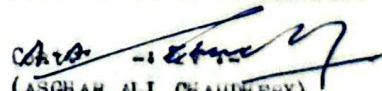
Checked the right engine fuel system visually for any damages which could cause the fuel leakage, there was none. The aircraft right engine prepared for a ground run. Operated the fuel gauges and checked the quantity, found the right engine gauge with quarter and the left with three quarter mark and this indicated the higher consumption by the right engine. The right engine was given a run and found the fuel flowing out from the engine driven fuel pump out flow drain. The engine was shut down immediately. The fuel pump was stripped and found the diaphragm punctured. The pump with double diaphragm (replaced the installed single diaphragm pump) was installed and the engine was given a ground run. No leakage was observed and the engine performance found satisfactory. The aircraft was released for a flight to Walton. The aircraft landed at Walton air-field and reported snag nil.

11. CONCLUSIONS.

From foregoing investigations, it is confirmed that the fuel leaked due to the failure of engine driven pump, it is a basic failure of the component. This single diaphragm pump has been superseded by a double diaphragm pump. The investigator holds the opinion that the flight may have been continued by isolating the right engine fuel system and with applying an alternate device available on the aircraft, a cross-feed system. The saying of pilot in command Mr. Abdul Alim Aziz that he decided to make the landing at Okara Cantt air-field due to loss of day light is not understandable to the investigator.

12. RECOMMENDATIONS.

- i) The factor "light availability" for the continuation/discontinuation of flight may please be investigated by the chief pilot investigator.
- ii) The operator should be advised to replace the single diaphragm engine driven pump with the double diaphragm pump on the left engine also.
- iii) The General Manager inspection may reduce the life of single diaphragm engine to 1500 hours or 4 years calendar life whichever is earlier.


(ASGHAR ALI CHAUDHERY)
INVESTIGATOR-IN-CHARGE.

(6/6)

Statement of Mr. Anwar Karim Mirza, CPL No. 977 regarding landing of Piper Apache PA-23 AP ALS at Okara on 5th January 1983

I solemnly declare that On Jan 5th 1983 I with Captain Alim Aziz was returning back on a Charter Flight from Sibi on AP ALS Piper PA-23 aircraft. After landing at Multan for refuelling we took-off from Multan at 1605 hours LT for Walton. We climbed to FL 055. Everything was normal on the flight. We checked SAVAL and found the main right tank fuel gauge creeping towards the empty position which was above the normal rate with which it should indicate. We observed it and the needle was near quarter mark about 3 minutes short of Okara. At this the Captain of the aircraft Captain Alim Aziz decided to land at Okara airfield. We landed at Okara at 1655 LT. After landing Captain Alim Aziz contacted Pk 656 and got the message of landing relayed to Lahore Approach. We taxied the aircraft and returned back to Walton and informed the Chief Flying Instructor.


Anwar Karim Mirza
CPL No. 977

58

Details from Captain A. A. Aziz, ALTP No. 89 regarding landing aircraft Piper Apache PA-23 APALS at Okara on 5th Jan 1983 are as follows:-

I solemnly declare

that On Jan 5th 1983 AP ALS Piper PA 23 aircraft was on a flight from Sibi-Multan-Walton. Above mentioned aircraft took-off from Multan after re-fuelling at 1605 LT. The aircraft took-off for Walton and climbed to F/L 5.5. During climb all performance were normal. While checking at SAVAL it was noticed that right main tank fuel gauge dropping towards empty position which was not normal but the rate was noticed above the normal indicated as compared with fuel gauge of left main. Observing this abnormality (left main gauge showing nearly quarter mark and the right main gauge was 3 quarter). Keeping the circumstances as indicated in the cockpit I decided to conduct a normal landing at Okara airfield and landed at 1655 LT. After landing Pk 656 was contacted, message of this landing was relayed to Lahore. After parking the aircraft it was noticed traces of fuel leak over the right flap. Which necessiated for me not to continue the flight to Walton due to safety reasons, aircraft was properly lashed, I alongwith my crew returned to Walton and informed the Chief Flying Instructor Lahore Flying Club. This snag was noted in the Tech Log.



Captain A. A. Aziz,
ALTP No. 89

- Q-1. What was your action when you found the fuel needle of right-engine travelling towards the empty mark?.
- A. The drop was so fast as compared with the left engine fuel quantity gauge, I suspected fuel leakage, the fuel leakage is a fire hazard I therefore made the precationary landing immediately.
- Q-2 Why you did not isolate the right side fuel system and continued the flight to destination?.
- A. The sun was setting and there was not much day-light available to me to take any chance, therefore I decided to make landing on a nearest Airfield available to me.



OBSERVATIONS OF THE DIRECTOR GENERAL

I have gone through the investigation report and I agree with the findings and recommendations of the investigating officer.

2. In view of the conditions prevailing at the time of the incident the decision to carry out precautionary landing carried out by the pilot-in-command is considered appropriate.

3. Recommendations at para 12(ii) and (iii) are to be implemented.



(A.V.M. KHURSHID ANWAR MIRZA)
DIRECTOR GENERAL CIVIL AVIATION AUTHORITY.