

INVESTIGATION REPORT ON INCIDENT TO
M/S. I.I.A.C. BOEING-747 AIRCRAFT REG.
AP-BAK WHICH OCCURRED ON 16-12-82
AT ISLAMABAD AIRPORT.

Authority : Director General of Civil Aviation

Memorandum No. CAA/1901/14/FS. (App. "A").

1. Aircraft Information.

- 1.1. Aircraft type and manufacturer Serial No. : Boeing-747-240B
Con. 21825.
- 1.2. Registration Marks. : AP-BAK.
- 1.3. Engine installation and manufacturer Serial No. : Four Wing mounted
CF6-50E engine.
- 1.4. Certificate of Registration : Valid.
- 1.5. Certificate of Airworthiness: Valid.
- 1.6. Date of construction. : 1978.

2. Crew Information.

2.1. Pilot-in-Command.

- 2.1.1. Name : Mr. Wajid Ali Khan
P.No. 8832.
- 2.1.2. Date of Birth : 10-09-1933.
- 2.1.3. Licence No. : A.L.T.P. No.157.
- 2.1.4. Type rating. : Boeing-707, 720-B,
DC-10, Boeing-747.
- 2.1.5. Type current. : Boeing-747.
- 2.1.6. Medical. : 04-09-1982 (Fit).

2.2. Flying Experience.

- 2.2.1. Grand total : 13101.25 on 11-09-1982.
- 2.2.2. Total in Command : 8800.05.
- 2.2.3. Total in Command : 638.15 Hours.
on the type inci-
dent occurred.

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3. History of Flight.

On the 16th December, 1982 M/s. P.I.A.C., Boeing-747 bearing Nationality and Registration Marks AP-BAK operated flight No. PK-300, Captain Wajid Ali Khan holder of ATP Licence No. 157 being the pilot-in-command. The aircraft made a normal landing after it had received landing clearance from Islamabad Air Traffic Control. The aircraft was cleared to taxi to the apron via the taxiway No. 1. It continued taxiing on taxiway No. 1 till it was parked on the parking bay. The pilot did not report any thing unusual.

Mr. Jamil Ahmed Qureshi holder of AME Licence No. 306, who was on duty attended the aircraft. During post flight inspection, he observed that the drain mast of No. 4 engine had sheared from base. Noting the above, he carried out detailed inspection and reported the incident.

4. Injury to persons.

4.1. No one was injured.

5. Damage to aircraft.

5.1. Drain mast on No. 4 engine (right side outer engine) was found sheared from base.

6. Other Damages.

6.1. There was no other damage.

7. Meteorological Conditions.

7.1. Weather was fair.

7.2. Weather was not a factor.

8. Aids to Navigation.

8.1. VOR, ILS and NDB were operating normal.

8.2. Aids to Navigation were not a factor.

9. Communication.

9.1. The aircraft is fitted with multi channel VHF/RT equipment. Cockpit crew was in communication with Islamabad tower. Information with regard to obstruction placed in vicinity of taxiway No. 1 was not passed to the aircraft.

9.2. Communication was not a factor.

10. Aerodrome and ground facilities.

10.1. Islamabad airport has a runway 30/12. Runway 30 has an ILS. There is a VOR and an NDB. The airline have never shown their satisfaction over the operating status of ILS and VOR.

10.2. Aerodrome and ground facilities were not a factor in this incident.

11. Flight Recorders.

11.1. The Boeing-747 aircraft is fitted with the Digital Flight data recorder and cockpit voice recorder.

11.2. Read out of flight recorders were not considered necessary for this incident.

12. Wreckage.

12.1. The damaged drain mast of this aircraft was examined and repaired by engineers of M/s. P.I.A.C., under supervision of the Senior Inspector of Aircraft Islamabad.

12.2. The Investigator-in-Charge could not physically see the damage, since the incident had occurred 32 days before his appointment as the Investigator. The damage was minor. Repairs were carried out and aircraft was restored to service in one hour's time.

13. Fire.

13.1. No fire occurred during or after the incident.

14. Survival Aspect.

14.1. The passengers and crew disembarked in the normal way.

15. Test and Research.

15.1. Not required.

16. Observation.

16.1. The area allocated for parking of the T.G.S. equipment is on the western side of taxiway No.1. For each movement the equipment is required to be taken to

cross the taxiway every time an aircraft arrives. Some of the equipment was seen parked on soft ground. In addition to being hazard to the moving aircraft on manoeuvring area and apron, it brings with its tyres mud, pebbles and stones. This material is source of "Foreign object Damage" to the jet engines. The matter has been reported many a times in the Flight Safety meeting held at Islamabad. A strong need is felt to provide suitable place for the TGS equipment east of the parking bays.

17. Investigation.

17.1. This job was assigned to the investigator on the 16th January, 1983 when he was at Islamabad on another duty. Physical evidence of the occurrence was not available. It was therefore considered necessary to establish contact with those who were involved at the early stage of investigation.

17.2. The following were contacted:-

17.2.1. Mr. A.M. Akhtar, Airport Manager Islamabad.

17.2.2. Wing Commander (Retd) N.A. Siddiqui,
Flight Safety Officer (T&G),
M/s. P.I.A.C., Islamabad.

17.2.3. Mr. Taj Muhammad, Senior Inspector of
Aircraft Islamabad.

17.2.4. Mr. Abdul Qayum, Officer T.G.S.
M/s. P.I.A.C., Islamabad.

17.2.5. Mr. Zaman, Station Traffic Manager,
M/s. P.I.A.C., Islamabad.

17.3. The Airport Manager Islamabad was requested to accompany the investigator-in-charge of this incident to the scene of incident and point out the location of the incident so that measurement are taken for preparation of site diagram and to take photographs.

17.4. After receiving briefing from the Airport Manager site diagram was prepared (Appendix "B"). Photographs were taken and only those considered necessary form part of the investigation report (Appendix "C").

18. Witnesses.

18.1. Statement of Mr. Abdul Qayum, Officer T.G.S. M/s. P.I.A.C., was recorded. He has stated that there is adequate staff deployed by the traffic Department for such equipment. Mr. Abdul Qayum duties are to look after the mobile vehicle.

18.2. Statement of Mr. Nawab Din, Head Operator could not be recorded as he was on leave, who had been informed by Mr. Abdul Qayum.

19. Discussion and Analysis.

19.1. Mr. Ata Muhammad Akhtar, the Airport Manager on the morning of the date of occurrence was on a visit to the operational area. During the course of inspection he observed a passenger pallet lying close to the taxiway No.1 towards its western side. He met Mr. Abdul Qayum, Officer T.G.S. of M/s. P.I.A.C., Islamabad. The Airport Manager pointed out to him the passenger pallet which in his opinion was rather close to the taxiway. He asked Mr. Abdul Qayum to remove this passenger baggage pallet, which may cause damage to the taxing aircraft. The Airport Manager however did not ascertain from Mr. Abdul Qayum his job employment. After this brief conversation the Airport Manager got busy in his other routine work.

19.2. In accordance with Rule 98 sub rule 1 (a) of the Civil Aviation Rules 1978 it is the function of the Air Traffic Control to prevent collision between aircraft and on the manoeuvring area, between the aircraft and the obstruction. In this case also the responsibility rested with the Air Traffic Control. However this Airport has a peculiarity that certain areas on the manoeuvring area are obscured from view of the controller from his position in the control tower due to tall trees. The area which is not visible from the control tower ~~it~~ includes first 2000 feet of runway 30 (Appendix "C"), part of runway 12 and certain portions of the taxiway No.1 and taxiway No.2 (Appendix "C"). Due to this very reason a near collision took place between an F-6 aircraft (on take-off roll) and an F-27 which entered the runway from taxiway one and was back tracking on the runway. This would have resulted in a collision between two aircraft but for the vigilance on part of ~~pilot~~ pilot of F-6, who took timely action. Although the responsibility to ensure that the manoeuvring area remain clear from any obstruction falls within the purview of the aerodrome controller, blame not be apportioned to him. It is opinion of the investigator that a controller may not be blamed for the logical reason that his view is obscured due to the tall trees in this area.

19.3. The P.A.F. has a system where by mobile controls are provided at the operative end of runway. The mobile officer has a good view of the manoeuvring area and is required to advise the controller of any impending unsafe conditions. No such facility was available at the time of the incident.

19.4. The Civil Aviation Department, the predecessor of the Civil Aviation Authority, has placed at the disposal of the Air Traffic Control at Islamabad a vehicle to enable the controller to carry out inspections of the manoeuvring area. The vehicle must be used for inspection on regular intervals specially before movement of a large aeroplane. The investigator is of the opinion that there is no guarantee that no obstruction will be placed on the manoeuvring during the period between the successive inspections.

19.5. In this case, although it did not fall within directory of duties of the Airport Manager, having observed the obstruction on the taxiway, he took action to inform a representative of the airline to remove the passenger baggage pallet. However once it came to his knowledge he should have ensured that the obstruction, which in his opinion was a hazard to the taxiing aircraft, ~~it~~ was removed or alternately ensured that the aircraft was warned through the Air Traffic Control or by any other means.

19.6. It is the opinion of the investigator that no action, be initiated against the Airport Manager for his failure, except in form of an advise, as in future no person will take any action in such matters if it does not fall within his sphere of duties. This therefore would serve as an example for others and may prove expensive in not taking any action in future in such case.

19.7. Mr. Abdul Qayum has stated that he conveyed the message to Mr. Nawab Din, employed by M/s. P.I.A.C., as Head Operator, who was directly responsible for this operation. Mr. Nawab Din failed to remove the passenger baggage pallet thus causing an obstruction which caused damage to the taxiing Boeing-747 aircraft.

19.8. Pilot-in-Command of an aircraft is defined "as the pilot responsible for the operation and safety of aircraft during the flight time". The flight time is defined as "the total time from the moment the aircraft first moves under its own power for the purpose of taking-off untill it comes to rest at the end of the flight". (Annex-1 definitions).

19.9. What ever has been stated above the Pilot-in-Command of this Boeing-747 type of aircraft operating flight No. PK-300 on 16th December, 1982 should have been vigilant to make note of the fact that a obstruction close to his path existed and he should have exercised due caution while approaching/passing the obstruction.

19.10. The Pilot-in-Command has stated that although he noticed certain pallets lying close to the taxiway, he thought it would pose no collision threat to the aircraft. On the other hand he concentrated to his left to receive signal from a British Airways Employee to avoid collision with a parked aircraft. He also noticed the marshaller, who in accordance to the Pilot's perception, was giving signal to proceed.

19.11. Duty of the marshallers is to guide an aircraft during his manoeuvring phase when on the apron. The aircraft hit the pallet when it was on the taxiway. It therefore can not be construed that the pilot was following the apron marshaller.

19.11. As required under Rule 331 of Civil Aviation Rules 78 an opportunity was provided to Captain Wajid Ali Khan holder of A.L.T.P. Licence No. 157 vide letter No. CAA/1901/14/FS dated 1st February, 1983 (App. "D") to make any statement or give any evidence and call any witness on his behalf.

19.12. There is nothing in his reply dated 6th February, 1983 to change the outcome of the investigation (App. "E").

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20. Findings:

20.1. From the foregoing is concluded that:-

- 20.1.1. The flight was properly authorised.
- 20.1.2. Mr. Wajid Ali Khan was holding a valid A.L.T.P. Licence No: 157.
- 20.1.3. The aircraft held valid C of A, C of R and C of M.
- 20.1.4. The incident occurred due to negligence of M/s. P.I.A.C. ground staff.
- 20.1.5. The Pilot-in-Command did not exercise due care when he observed that pallet was lying close to the taxiway.
- 20.1.6. The Air Traffic Control failed to carry out inspection of the manoeuvring area prior to the aircraft movement.
- 20.1.7. There are tall trees near the manoeuvring area which mars view of the Air Traffic Control officer to the extent that the aircraft is not visible to him during a significant portion of the ground movement of aircraft.
- 20.1.8. The Airport Manager did not ensure that the pallet was removed after his observing it close to the taxiway.

21. Cause:

- 21.1. The drain mast of the right hand outer engine collided with the passenger baggage pallet which was lying unattended close to the taxiway and was not removed due to the negligence of an employee of M/s. P.I.A.C.
- 21.2. Failure by the Pilot-in-Command to be vigilant is a contributory factor.

22. Recommendations.

- 22.1. M/s. P.I.A.C. be advised to take action against Mr. Abdul Qayum and Mr. Nawab Din, who failed to remove the passenger pallet, under intimation to Civil Aviation Authority.
- 22.2. The Pilot-in-Command be cautioned to be more vigilant in future.

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- 22.3. Immediate action be taken to ensure that movement of the aircraft on the manoeuvring areas is monitored at all times.
- 22.4. The Airport Manager, Islamabad be advised of his failure in that, he having noticed the hazard and requested its removal, failed to ensure that it had been removed.
- 22.5. Till such time Control Tower is re-located, the manoeuvring area and apron be inspected by A.T.C. personnel before every movement.
- 22.6. Suitable place be allotted to M/s. P.I.A.C. at Islamabad Airport to park their ground equipment, when not in use, to avoid crossing of taxiway.



(CAPTAIN FARMANUDDIN)
INVESTIGATOR-IN-CHARGE

Dated: 16th May, 1983.

APP. C¹



ARROW INDICATES THE LOCATION OF PASSENGER PALLET WITH WHICH THE DRAIN MAST COLLIDED. NOTE THAT THE CONTROL TOWER IS HIDDEN BEHIND THE TREES.



APP. C²

HARDSTAND FOR M/S. P.I.A.C. GROUND EQUIPMENT. THIS IS WEST OF THE TAXIWAY AND RESULTS IN GROUND EQUIPMENT CROSSING THE TAXIWAY TO PROCEED TO AND FROM THE APRON. THIS IS UNDESIRABLE SINCE IT CAN BE A CAUSE OF FOREIGN OBJECTS ON THE TAXIWAY/APRON.

APP. C3



3
TAXIWAY NO. 1 INTER SECTION WITH RUNWAY.
THIS VIEW SHOWS THE OFF SET CENTRE LINE
AS SEEN FROM APRON.

APP. C4



4
VIEW OF APRON FROM TAXIWAY NO.1. THE PASSENGER
PALLET WAS LYING FEW FEET RIGHT OF THE VEHICLE.

APP. "C5"



5
VIEW OF CONTROL TOWER FROM TAXIWAY ONE.
NOTE ONLY TOP OF THE A.T.C. BUILDING CAN
BE SEEN.

APP. "C6"



6
VIEW OF MANOEUVRING AREA FROM THE CONTROL TOWER.

APP. C⁷



VIEW OF TAXIWAY NO.1, 2 AND APRON FROM THE
CONTROL TOWER. NOTE THE RUNWAY IS NOT VISIBLE.
NOR CAN THE TAXIWAYS BE COMPLETELY MONITORED.

APP. C⁸



VIEW OF A PORTION OF TAXIWAY NO.1 AND APRON.
FROM THE CONTROL TOWER. NOTE TAXIWAY NO. 1
OBSCURED BY TREES.

APP-C'9'



VIEW OF 1ST 2000 FEET OF RUNWAY 30 TAXIWAY
NO.1 AND 2. FROM THE CONTROL TOWER.