

FINAL INVESTIGATION REPORT



SERIOUS INCIDENT OF TCAS – RA REPORTED BY M/S
PIAC, FLIGHT NO. PIA240, A-320, REG. AP-BLV
(KUWAIT - SIALKOT) ON 11TH MAY, 2017

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Synopsis

On 11th May, 2017 M/s PIAC flight no. PIA240 A320, Reg AP-BLV from Kuwait to Sialkot reported TCAS-RA while descending from FL370 to FL350 due to M/s Fly Dubai flight no. FDB338, B738, Reg.A6FGD from Sialkot to Dubai climbing to FL340.

The incident was reported in daily IOU Report for the period 110500LT to 120500LT May, 2017 (**Appendix 'A'**) and Mandatory Occurrence Report (MOR) by the operator (**Appendix 'B'**). Memorandum was issued vide letter No. HQCAA/1904/40/110/SIB/314 dated 16th May, 2017 (**Appendix 'C'**) and Notification was issued vide letter No. HQCAA/1904/40/110/SIB/315 dated 19th May, 2017 (**Appendix 'D'**). All available evidences were analyzed by Safety Investigation Board (SIB). Significant findings and recommendations of SIB are as under:-

1. FACTUAL INFORMATION

1.1 **History of Flights.** M/s Pakistan International Airline Flight PIA240 A320, Reg. No. AP-BLV operated from Kuwait to Sialkot was descending from FL370 to FL350 on route J112 / J220. M/s Fly Dubai flight FDB338, B738, Reg.A6FGD from Sialkot to Dubai was climbing to FL340 on route J220 / J112 to MOLTA.

1.2 **Injuries to person(s).** No injury was reported on board to any of the passengers.

1.3 **Damage to Aircraft.** No damage occurred due to this incident to any aircraft.

1.4 **Flight Crew Information.** Not applicable.

1.5 **Aircraft Information.**

1.5.1 **M/s Pakistan International Airline (PIA240)**

Aircraft Make	:	Airbus
Type of Aircraft	:	320
Aircraft Registration	:	AP-BLV
Sector	:	Kuwait to Sialkot
Flight Conditions	:	Descending
Altitude	:	FL350

1.5.2 **M/s Fly Dubai (FDB 338)**

Aircraft Make	:	Boeing
Type of Aircraft	:	738
Aircraft Registration	:	A6FGD
Sector	:	Sialkot to Dubai
Flight Conditions	:	Climbing
Altitude	:	FL340

1.6 **Meteorological Information.** No significant weather was reported at operating altitude at the time of occurrence. Conditions were IMC.

- 1.7 **ATC Tape Extracts.** Audio tape extracts of voice communications transcripts between Controller Pilot along with Video tracing based on Radar records of Lahore ACC (Appendix 'E' & 'F') were obtained for detailed analysis.
- 1.8 **Resumption of Navigation by Aircraft.** Post occurrence, both aircraft continued for their respective destination.
- 1.9 **Sequence of Events.**
- 1.9.1 0047:25 PIA240 came in contact Lahore East maintaining FL370 on course to Molta.
 - 1.9.2 0048:50 FDB338 came in contact Lahore East climbing FL240. Aircraft was given further climb to FL280.
 - 1.9.3 0057:32 PIA240 was 5NM right of track to avoid weather.
 - 1.9.4 0058:02 On request, FDB338 was cleared to FL340.
 - 1.9.5 0102:02 PIA240 requested descend and was given descend to FL350.
 - 1.9.6 0102:31 PIA240 requested direct Salna, which was approved.

As per the Radar Video Tracings, following vertical profiles of both the aircraft were observed:

Time	PIA240		FDB338	
	FL	ROD	FL	ROC
0104:04	FL 357 ↓	-2204	FL335 ↑	+1442
0104:13	FL353 ↓	-1816	FL 338 ↑	+1336
0104:31	FL351 ↓	-1224	FL340 ↑	+1240
0104:38	FL352 ↑	+666	FL337 ↓	-1547

- 1.9.7 0104:20 Both aircraft FDB338 and PIA240 reported TCAS RA.
- 1.9.8 0104:35 Radar East Controller informed PIA240 about traffic maintaining FL340 and 5NM on her right.
- 1.9.9 0105:00 FDB338 informed Radar East that she is clear of traffic and climbing FL340.
- 1.9.10 0105:56 FDB338 reported Rate of Climb 500ft per minute at the time of RA.
- 1.9.11 0106:20 PIA240 reported Rate of Descend 500ft to 700ft.

2. FINDINGS

- 2.1 ACC Radar East controller did not pass traffic information to pilots of FDB338 and PIA240 as he ensured 1000ft vertical separation between both the aircraft, which was never infringed.

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- 1.2 **Injuries to person(s).** No injury was reported on board to any of the passengers.
- 1.3 **Damage to Aircraft.** No damage occurred due to this incident to any aircraft.
- 1.4 **Flight Crew Information.** Not applicable.
- 1.5 **Aircraft Information.**
 - 1.5.1 **M/s Pakistan International Airline (PIA240)**

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Type of Aircraft	:	320
Aircraft Registration	:	AP-BLV
Sector	:	Kuwait to Sialkot
Flight Conditions	:	Descending
Altitude	:	FL350
 - 1.5.2 **M/s Fly Dubai (FDB 338)**

Aircraft Make	:	Boeing
Type of Aircraft	:	738
Aircraft Registration	:	A6FGD
Sector	:	Sialkot to Dubai
Flight Conditions	:	Climbing
Altitude	:	FL340
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2. FINDINGS

- 2.1 ACC Radar East controller did not pass traffic information to pilots of FDB338 and PIA240 as he ensured 1000ft vertical separation between both the aircraft, which was never infringed.
- 2.2 On R/T phraseology, PIA240 reported vertical speed 500 – 700ft per minute and FDB338 reported vertical speed 500ft per minute.
- 2.3 As per radar video tracing, PIA240 was maintaining Rate of Descend more than 2000ft per minute and FDB338 was maintaining Rate of Climb more than 1000ft per minute.
- 2.4 The high rate of vertical speed by both aircraft resulted in TCAS RA.
- 2.5 At the time of crossing both aircraft were vertically separated by more than 1000ft.
- 2.6 **Cause of Occurrence**
 - 2.6.1 Pilots of PIA240 and FDB338 did not comply with the rate of climb / descend procedures as given in PAN / OPS. Doc-8168 Aircraft Operations VOL – 1.

3. SAFETY RECOMMENDATIONS

- 3.1 Pilots of both aircraft maybe advised to strictly follow the laid down procedures as given in PAN / OPS Doc-8168 Aircraft Operations VOL – 1
- 3.2 DFS maybe requested to advise airlines to issue instructions to their pilots for adherence of the laid down procedures.