Uncontained engine failure, Boeing 747-200, April 2, 2000

Micro-summary: This Boeing 747-200 experienced an uncontained failure of the #1 engine during takeoff.

Event Date: 2000-04-02 at 0230 EDT

Investigative Body: National Transportation Safety Board (NTSB), USA

Investigative Body's Web Site: http://www.ntsb.gov/

Cautions:

- 1. Accident reports can be and sometimes are revised. Be sure to consult the investigative agency for the latest version before basing anything significant on content (e.g., thesis, research, etc).
- 2. Readers are advised that each report is a glimpse of events at specific points in time. While broad themes permeate the causal events leading up to crashes, and we can learn from those, the specific regulatory and technological environments can and do change. Your company's flight operations manual is the final authority as to the safe operation of your aircraft!
- 3. Reports may or may not represent reality. Many many non-scientific factors go into an investigation, including the magnitude of the event, the experience of the investigator, the political climate, relationship with the regulatory authority, technological and recovery capabilities, etc. It is recommended that the reader review all reports analytically. Even a "bad" report can be a very useful launching point for learning.
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www.fss.aero

National Transportation Safety Board NTSB ID: DCA00RA036 Aircraft Registration Number: N534MC FACTUAL REPORT Occurrence Date: 04/02/2000 Most Critical Injury: None Occurrence Type: Accident Investigated By: ETYBOP Location/Time Nearest City/Place State Zip Code Local Time Time Zone 0000 Guayaquil Distance From Landing Facility: Direction From Airport: Airport Proximity:

Boeing 747-200F

Type of Aircraft

Airplane

Sightseeing Flight: No

Aircraft Information Summary

Aircraft Manufacturer

Air Medical Transport Flight: No

Narrative

Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:

On April 2, 2000, at approximately 0230 EDT, an Atlas Air B-747-200 freighter experienced an uncontained failure of the No. 1 engine after takeoff from Guayaquil, Ecuador. The flightcrew observed fire emanating from the No. 1 engine, and fire bottles were discharged. The airplane returned to Guayaquil without further incident.

Model/Series

Examination of the airplane revealed that most of the turbine section of the No. 1 engine had separated. Collateral puncture damage was observed to various portions of the wing, fuselage, and the No. 1 engine pylon. The airplane was equipped with General Electric CF6-50 engines. The government of Ecuador is responsible for the investigation.

National Transportation Safety Board FACTUAL REPORT AVIATION

NTSB ID: DCA00RA036

Occurrence Date: 04/02/2000

ÁVIATIQN		Occurrence Type: Accident											
VETY BOK			recurrence Type. Accident										
Landing Facility/Approach Information Airport Name Airport ID: Airport Elevation Runway Used Runway Length I										Duny	vay Width		
Airport Name Airp			Airport ID:	A		Ft. MSL 0				Runway Length			vay vvidiri
					——————————————————————————————————————	VISL							
Runway Surface Type:													
Runway Surface Condition:													
Type Instrument Approach:													
VED Approach / Londings													
VFR Approach/Landing:													
Aircraft Information													
Aircraft Manufacturer			Mode	el/Ser	ies					Serial	Number		
Boeing			747-	-2001	F								
Airworthiness Certificate(s):			•							•			
Landing Gear Type:													
Homebuilt Aircraft? No	aft? No Number of Seats:					Certified Max Gross Wt.					er of Er	ngines	:
Engine Type: En Turbo Fan				Engine Manufacturer: Model/Series:								Rate	d Power:
- Aircraft Inspection Information													
Type of Last Inspection	Date of Last Inspection Time Sir				nce Last Inspection				me To	tal Time			
Unknown		Hours									Hours		
- Emergency Locator Transmitter (ELT) Information										•		
ELT Installed? ELT Operated?				ELT Aided in Locating Accident Site?									
Owner/Operator Information													
Registered Aircraft Owner			Street	Addr	ess								
			City	City.									7in Codo
				City State Zip									Zip Code
	Street Address												
Operator of Aircraft											Sta	. 1	
ATLAS AIR INC				City								te	Zip Code
Operator Does Business As: Operator Designator Code: UIEA													
- Type of U.S. Certificate(s) Held:													
Air Carrier Operating Certificate(s)	Flag Carrier/Don	nestic											
Operating Certificate: Operator Certificate:													
Regulation Flight Conducted Under: Part 121: Air Carrier													
Type of Flight Operation Conducted			ational: C	argo	,								
7, 1 3 3 1 2 F 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2													
	FACTUAL REPORT - AVIATION Page 2												

National Transportation Safety Board

FACTUAL REPORT

AVIATION

NTSB ID: DCA00RA036

Occurrence Date: 04/02/2000

AVIATI ETY BO	Occurrence Type: Accident												
First Pilot Information													
Name	City					Stat	te C	Date of Birth	Age				
Sex: U Seat Occupied	: Unknown	Prir	ncipal Profes	wn	Certificate Number:								
Certificate(s):													
Airplane Rating(s):													
Rotorcraft/Glider/LTA:													
Instrument Rating(s):													
Instructor Rating(s):													
Type Rating/Endorsement for	or Accident/In	ncident Aircra	ft?			С	urrent E	Biennia	al Flight R	eview	v?		
Medical Cert.: Unknown	Medica	al Cert. Status	: Unknown	1		-			Date of La	st Me	edical Ex	am:	
- Flight Time Matrix All A/C This Make and Model Single Engine Mult-Engine						light Actual		Instrument Simulated			Rotorcraft	Glider	Lighter Than Air
Total Time	al Time												
Pilot In Command(PIC)	ilot In Command(PIC)									_			
Instructor										+			
Last 90 Days										_			
Last 30 Days Last 24 Hours	Last 30 Days									+		+	
Seatbelt Used?	Chau	Idor Horocco	Llood?		<u> </u>	ovice	l ology Pe	orforma	nd2		900	I cond Pilot?	
Sealbeil Osed?	Snou	llder Harness	Useu?			OXICC	nogy Fe	511011116	cu:		360	CONG PROCE	
Flight Plan/Itinerary													
Type of Flight Plan Filed: U	nknown												
Departure Point						State		Airport Identifier Departure Time			ure Time	Time Zone	
Same as Accident/Incide				1			0000						
Destination						State		Airpor	t Identifie	r			
MIAMI	F	FL											
Type of Clearance:													
Type of Airspace:													
Weather Information													
Source of Briefing:													
Method of Briefing:													
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National Transportation Safety Board
FACTUAL REPORT
AVIATION

NTSB ID: DCA00RA036

Occurrence Date: 04/02/2000

AVIATION			Od	Occurrence Type: Accident									
Weather Information													
WOF ID	Observation Time	Time Zone	Time Zone WOF Elevation WOF Distance From A				om Acci	ccident Site Direction From Accid			cident Site		
	0000			0 Ft.	MSL				0 NM			0 Deg. Mag.	
Sky/Lowes		Ft. AGL					Condition of Light: Not Reported						
Lowest Ceiling: Unknown				Ft.	AGL	Visib	ility:	0	SM Altimeter:		meter:	"Hg	
Temperatu	Temperature: °C Dew Point:					°C Wind Direction: Density Altitude:							
Wind Spee	ed:	Gusts:		Weather Condtions at Accident Site:									
Visibility (R	RVR): 0 Ft.	Visibility	(RVV)	0	SM	Intensity	y of Precip	itation:					
Restriction	Restrictions to Visibility:												
Type of Pre	Type of Precipitation:												
Accident Information													
Aircraft Damage: Substantial				craft Fire				Aircraft Exp	olosio	n			
Classificati	ion: U.S. Registered/Fo	oreign Soil											
- Injury Su	mmary Matrix	Fatal	Serious	Mino	r	None	TOTAL						
First Pi	ilot					1		1					
Second	d Pilot					1		1					
Studen	nt Pilot							7					
Flight I	Flight Instructor												
Check	Pilot							7					
Flight E	Engineer					1		1					
Cabin /	Attendants							7					
Other C	Crew							7					
Passen	ngers			†	\neg			7					
- TOTAL /	ABOARD -			†		3		3					
Other G	Ground	0	C		0			0					
- GRANE	O TOTAL -	0	C)	0	3 3							

National Transportation Safety Board

NTSB ID: DCA00RA036

Transmar Transportation Safety Board										
FACTUAL REPORT AVIATION	Occurrence Date: 04/02/2000									
AYLATION	Occurrence Type: Accident									
Administrative Information										
Investigator-In-Charge (IIC)										
FRANK HILLDRUP										
Additional Persons Participating in This Accident/Incident Investigation:										