
Contained engine failure on a Douglas DC-9-32 on climbout from Dallas-Fort-Worth, December 12, 1995.

Micro-summary: A contained failure of the #2 engine occurred on this Douglas DC-9-32 on climb.


Event Date: 1995-12-12 at 903 CST


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


Investigative Body's Web Site: <http://www.nts.gov/>

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		NTSB ID: FTW96IA066		Aircraft Registration Number: N930VV	
		Occurrence Date: 12/12/1995		Most Critical Injury: None	
		Occurrence Type: Incident		Investigated By: NTSB	
Location/Time					
Nearest City/Place DFW AIRPORT	State TX	Zip Code 75261	Local Time 0903	Time Zone CST	
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer McDonnell Douglas		Model/Series DC-9-32		Type of Aircraft Airplane	
Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
<p>Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:</p> <p>On December 12, 1995, at 0903 central standard time, a Douglas DC-9-32, N930VV, registered and operated by ValuJet Airlines Inc., as Flight 224 under the provisions of Title 14 CFR Part 121 on a regularly scheduled domestic flight, experienced a contained failure of the number 2 engine during initial takeoff climb from the Dallas/Ft. Worth International Airport. Visual meteorological conditions prevailed at the time of the incident and an IFR flight plan was in effect. The airplane was not damaged and there were no injuries to the 54 passengers and 5 crewmembers aboard the airplane. The flight's intended destination was Atlanta, Georgia.</p> <p>According to the flight crew, the airplane was passing through 5,000 feet during the initial takeoff climb, when a loud bang was heard, followed by a moderate vibration. The captain retarded the number 2 engine to flight idle and the vibration continued. The flight crew secured the engine, declared an emergency, and the airplane returned to DFW where a landing was made on Runway 17L at 0930 without further incident.</p> <p>Initial examination of the Pratt & Whitney JT8D-9A turbofan engine confirmed that the failure was contained and no evidence of internal or external fire was found. A preliminary boroscope inspection by contract maintenance personnel revealed that a first stage turbine blade failed. The airplane was released to the operator and the engine retained for further examination and teardown at a contract engine facility operated by Air New Zealand, in New Zealand.</p> <p>Examination and teardown of the engine revealed that a blade (part number 823201) in the first stage high pressure turbine assembly (part number 587501, serial number 8B2545) failed due to leading edge fatigue. Since the last overhaul, the turbine disk had accumulated 2,794 hours and 2,329 cycles. Markings on the failed blade identified the vendor as Chromalloy Southwest. The teardown was observed by members of the Transport Accident Investigation Commission in Wellington, New Zealand. A written report was not rendered.</p> <p>Total time on the airplane was 41,206 hours/33,846 cycles. The number two engine, serial number 667136 was manufactured on April 28, 1975, and had accumulated a total of 32,028 hours/25,603 cycles. Total time since last overhaul/installation was 2,794 hours/2,329 cycles.</p> <p>Aircraft serial number 47723 (N930VV) was purchased by ValuJet from Turk Hava Yollari (THY), Turkish Airlines, on October 3, 1994, as part of a formal sales agreement for the purchase of nine DC-9-32 airplanes, five spare engines, and approximately 4,400 spare parts. A review of the maintenance documentation by the FAA inspector did not reveal any anomalies or uncorrected defects prior to the flight.</p> <p>Aircraft serial number 47723 was the first of nine DC-9s to be flight delivered to ValuJet. Engine serial number 667136 was installed on the right (number 2) position as specified in the sales contract. The engine remained in that position until the time of this incident.</p>					
FACTUAL REPORT - AVIATION					
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 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: FTW96IA066			
		Occurrence Date: 12/12/1995			
		Occurrence Type: Incident			
Landing Facility/Approach Information					
Airport Name	Airport ID:	Airport Elevation Ft. MSL	Runway Used 0	Runway Length	Runway Width
Runway Surface Type:					
Runway Surface Condition:					
Type Instrument Approach:					
VFR Approach/Landing:					
Aircraft Information					
Aircraft Manufacturer McDonnell Douglas		Model/Series DC-9-32		Serial Number 47723	
Airworthiness Certificate(s): Transport					
Landing Gear Type: Retractable - Tricycle					
Homebuilt Aircraft? No	Number of Seats: 115	Certified Max Gross Wt.	105000 LBS	Number of Engines: 2	
Engine Type: Turbo Jet	Engine Manufacturer: P&W	Model/Series: JT8D-9A	Rated Power: 14500 LBS		
- Aircraft Inspection Information					
Type of Last Inspection Continuous Airworthiness	Date of Last Inspection 12/1995	Time Since Last Inspection 20 Hours	Airframe Total Time 41199 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed? No	ELT Operated?	ELT Aided in Locating Accident Site?			
Owner/Operator Information					
Registered Aircraft Owner VALUJET AIRLINES		Street Address 1800 PHOENIX BOULEVARD #126			
		City ATLANTA	State GA	Zip Code 30349	
Operator of Aircraft Same as Reg'd Aircraft Owner		Street Address Same as Reg'd Aircraft Owner			
		City	State	Zip Code	
Operator Does Business As:			Operator Designator Code: VJ6A		
- Type of U.S. Certificate(s) Held:					
Air Carrier Operating Certificate(s): Flag Carrier/Domestic					
Operating Certificate:			Operator Certificate:		
Regulation Flight Conducted Under: Part 121: Air Carrier					
Type of Flight Operation Conducted: Scheduled; Domestic; Passenger Only					
FACTUAL REPORT - AVIATION					

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: FTW961A066
	Occurrence Date: 12/12/1995
	Occurrence Type: Incident

First Pilot Information				
Name On File	City On File	State On File	Date of Birth On File	Age 52

Sex: M	Seat Occupied: Left	Principal Profession: Civilian Pilot	Certificate Number: On File
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Certificate(s): Airline Transport

Airplane Rating(s): Multi-engine Land; Single-engine Land

Rotorcraft/Glider/LTA: None

Instrument Rating(s): Airplane

Instructor Rating(s): Airplane Multi-engine

Type Rating/Endorsement for Accident/Incident Aircraft? Yes	Current Biennial Flight Review?
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Medical Cert.: Class 1	Medical Cert. Status: Valid Medical--w/ waivers/lim.	Date of Last Medical Exam: 09/1995
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- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	7880	2025								
Pilot In Command(PIC)	4280	1750								
Instructor										
Last 90 Days	228	228								
Last 30 Days	72	72								
Last 24 Hours	1	1								

Seatbelt Used? Yes	Shoulder Harness Used? Yes	Toxicology Performed? No	Second Pilot? Yes
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Flight Plan/Itinerary

Type of Flight Plan Filed: IFR	
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Departure Point Same as Accident/Incident Location	State	Airport Identifier	Departure Time 0905	Time Zone CST
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Destination ATLANTA	State GA	Airport Identifier ATL	
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Type of Clearance: IFR

Type of Airspace: Class B

Weather Information

Source of Briefing:
Company

Method of Briefing:

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: FTW96IA066
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Weather Information					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
	0000		0 Ft. MSL	0 NM	0 Deg. Mag.
Sky/Lowest Cloud Condition: Clear			0 Ft. AGL	Condition of Light: Day	
Lowest Ceiling: None		0 Ft. AGL		Visibility: 10 SM	Altimeter: "Hg
Temperature: 16 °C	Dew Point: 7 °C	Wind Direction: 180		Density Altitude: Ft.	
Wind Speed: 10	Gusts:	Weather Conditions at Accident Site: Visual Conditions			
Visibility (RVR): 0 Ft.	Visibility (RVV) 0 SM	Intensity of Precipitation: Unknown			
Restrictions to Visibility: None					
Type of Precipitation: None					

Accident Information		
Aircraft Damage: None	Aircraft Fire: None	Aircraft Explosion: None

Classification: U.S. Registered/U.S. Soil					
- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot				1	1
Second Pilot				1	1
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants				3	3
Other Crew					
Passengers				54	54
- TOTAL ABOARD -				59	59
Other Ground	0	0	0		0
- GRAND TOTAL -	0	0	0	59	59

National Transportation Safety Board

FACTUAL REPORT

AVIATION



NTSB ID: FTW96IA066

Occurrence Date: 12/12/1995

Occurrence Type: Incident

Administrative Information

Investigator-In-Charge (IIC)

HECTOR R. CASANOVA

Additional Persons Participating in This Accident/Incident Investigation:

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