



National Transportation Safety Board Aviation Accident Final Report

Location:	WINDSOR LOCKS, CT	Accident Number:	NYC91FA125
Date & Time:	05/03/1991, 0553 EDT	Registration:	N425EX
Aircraft:	BOEING 727-100QC	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	3 None
Flight Conducted Under:	Part 121: Air Carrier - Non-scheduled		

Analysis

N425EX WAS ON THE TAKEOFF ROLL WHEN THE FLIGHTCREW EXPERIENCED A 'THUMP' THAT RESOUNDED THROUGH THE AIRPLANE. THEY ALSO OBSERVED ERRATIC ENGINE INDICATIONS FROM THE NO.3 ENGINE. THE CAPTAIN ABORTED THE TAKEOFF AND STOPPED THE AIRPLANE ON THE RUNWAY. THE FIRE WARNING SYSTEM ACTIVATED ON THE NO.3 ENGINE AFTER THE AIRPLANE CAME TO REST. THE CREW ATTEMPTED TO EXTINGUISH THE FIRE WITH THE AIRPLANE'S FIRE EXTINGUISHING SYSTEM; HOWEVER, THEY WERE UNSUCCESSFUL. THE POST ACCIDENT EXAMINATION OF THE NO.3 ENGINE REVEALED THE HIGH PRESSURE COMPRESSOR DISK HAD FAILED DUE TO A FATIGUE CRACK THAT ORIGINATED FROM A CORROSION PIT. THE SHRAPNEL FROM THE DISK PENETRATED THE ENGINE NACELLE AND SEVERED THE MAIN FUEL LINE FOR THE ENGINE. THE FUEL IGNITED AND BURNED INTO THE FUSELAGE, IGNITING THE 12,600 LBS OF CARGO (U.S. MAIL).

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:
A CATASTROPHIC AND UNCONTAINED FAILURE OF THE NO.3 ENGINE WHICH RESULTED IN A FUEL FED FIRE.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION

Phase of Operation: TAKEOFF - ROLL/RUN

Findings

1. (C) 1 ENGINE - FAILURE,TOTAL
2. (C) COMPRESSOR ASSEMBLY,ROTOR DISC - FAILURE,TOTAL

Occurrence #2: FIRE

Phase of Operation: TAKEOFF - ABORTED

Findings

3. FUEL SYSTEM,LINE - PENETRATED
4. FLUID,FUEL - LEAK

Factual Information

Pilot Information

Certificate:	Airline Transport; Flight Instructor; Commercial; Flight Engineer	Age:	56, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane Single-engine	Toxicology Performed:	Yes
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	02/22/1991
Occupational Pilot:	Last Flight Review or Equivalent:		
Flight Time:	8500 hours (Total, all aircraft), 3600 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	BOEING	Registration:	N425EX
Model/Series:	727-100QC 727-100QC	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Transport	Serial Number:	19095
Landing Gear Type:	Retractable - Tricycle	Seats:	5
Date/Type of Last Inspection:	03/18/1991, Continuous Airworthiness	Certified Max Gross Wt.:	169500 lbs
Time Since Last Inspection:	151 Hours	Engines:	3 Turbo Jet
Airframe Total Time:	46981 Hours	Engine Manufacturer:	P&W
ELT:	Not installed	Engine Model/Series:	JT8D-7B
Registered Owner:	FIRST SECURITY BANK OF UTAH	Rated Power:	15000 lbs
Operator:	RYAN INTERNATIONAL AIRLINES	Operating Certificate(s) Held:	Supplemental

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Dawn
Observation Facility, Elevation:	BDL, 174 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	0450 EDT	Direction from Accident Site:	1°
Lowest Cloud Condition:	Scattered / 5000 ft agl	Visibility	25 Miles
Lowest Ceiling:	Broken / 7500 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	9 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	320°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	8° C / -1° C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	IFR
Destination:	BOSTON, MA (BOS)	Type of Clearance:	IFR
Departure Time:	0550 EDT	Type of Airspace:	Class E

Airport Information

Airport:	BRADLEY INTERNATIONAL (BDL)	Runway Surface Type:	Asphalt
Airport Elevation:	174 ft	Runway Surface Condition:	Dry
Runway Used:	33	IFR Approach:	None
Runway Length/Width:	6846 ft / 200 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	3 None	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	Gregory A Feith	Report Date:	03/31/1993
Additional Participating Persons:	ANTHONY S JANCO; HARTFORD, CT DAVID J MICHAUD; HARTFORD, CT MICHAEL L YOUNG; HARTFORD, CT J.L. INSCOE; SEATTLE, WA		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinquiry@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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