
Separation of engine cowling, Douglas DC-8-62F, April 27, 2000

Micro-summary: This Douglas DC-8-62F was damaged when the #2 engine cowling separated from the airplane when in cruise near Denver.


Event Date: 2000-04-27 at 2130 MDT


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


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

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		NTSB ID: DEN00FA078		Aircraft Registration Number: N990CF	
		Occurrence Date: 04/27/2000		Most Critical Injury: None	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place DENVER		State CO	Zip Code 80249	Local Time 2130	Time Zone MDT
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer Douglas		Model/Series DC-8-62F		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 April 27, 2000, at 2130 mountain daylight time, a Douglas DC-8-62F, N990CF, was substantially damaged when the number two engine cowling departed the airplane near Denver, Colorado. The airline transport captain and first officer, the commercial pilot flight engineer, and two passengers were not injured. The airplane was owned by Fleet National Bank of Hartford, Connecticut, and was being operated by Emery Worldwide Airlines, Vandalia, Ohio, under Title 14 CFR Part 121. Visual meteorological conditions prevailed for the night cross-country flight, which originated from Seattle, Washington, 2 hours 48 minutes before the accident. An IFR flight plan had been filed for the cargo flight that was en route to Dayton, Ohio.</p> <p>The captain said that they were in cruise flight at 37,000 feet mean sea level (msl). He said that they heard a loud bang and the airplane shook, and they immediately began to lose cabin pressurization. The engine instruments went dead on number two- engine, and they pulled the number two emergency "T" handle. He said that they donned their oxygen masks, began descending, and diverted to Denver. Their landing was uneventful.</p> <p>Postlanding examination, by the NTSB Investigator-In-Charge and an FAA Inspector, of the number two-engine nacelle revealed that the inboard and outboard main engine cowlings had separated from the aircraft. An 18x6 inch hole was found half way up the fuselage (pressure bulkhead), just aft of the left wing; the left horizontal stabilator was also damaged. Further examination of the engine revealed that the 4 inch-diameter high pressure bleed air duct had separated from the high-pressure relief valve, and the connecting clamp was missing. The clamp was never located.</p> <p>The wire bundle, which transmitted the number two engine monitoring data to the cockpit, was found cut. There was no evidence of engine fire, or fire in the nacelle cavity.</p> <p>According to the operator: "when the clamp assembly failed, high pressure bleed air from the 4 inch diameter duct dumped into the area inside of the engine cowlings. The sudden over-pressurization probably expanded the main engine cowlings into the air stream, leading to the loss of the cowlings. The amount of airflow from the high pressurization bleed air duct far exceeds the air discharge capacities of the cowling blowout panels."</p>					
FACTUAL REPORT - AVIATION					
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 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: DEN00FA078			
		Occurrence Date: 04/27/2000			
		Occurrence Type: Accident			
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 Douglas		Model/Series DC-8-62F		Serial Number 46068	
Airworthiness Certificate(s): Transport					
Landing Gear Type: Retractable - Tricycle					
Homebuilt Aircraft? No	Number of Seats: 7	Certified Max Gross Wt.	350000 LBS	Number of Engines: 4	
Engine Type: Turbo Fan	Engine Manufacturer: P&W	Model/Series: JT3D-7	Rated Power: 19000 LBS		
- Aircraft Inspection Information					
Type of Last Inspection Continuous Airworthiness	Date of Last Inspection 04/2000	Time Since Last Inspection 74 Hours	Airframe Total Time 51844 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed? No	ELT Operated?	ELT Aided in Locating Accident Site?			
Owner/Operator Information					
Registered Aircraft Owner FLEET NATIONAL BANK		Street Address 777 MAIN ST.			
		City HARTFORD	State CT	Zip Code 06115	
Operator of Aircraft EMERY WORLDWIDE AIRLINES		Street Address 1 EMERY PLAZA			
		City VANDALIA	State OH	Zip Code 45377	
Operator Does Business As:			Operator Designator Code: RRXA		
- 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: Non-scheduled; Domestic; Cargo					

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: DEN00FA078
	Occurrence Date: 04/27/2000
	Occurrence Type: Accident

First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 52
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Sex: M	Seat Occupied: Left	Principal Profession: Civilian Pilot	Certificate Number: On File
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Certificate(s): Airline Transport; Commercial; Flight Engineer

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

Rotorcraft/Glider/LTA: Helicopter

Instrument Rating(s): Airplane

Instructor Rating(s): None

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: 03/1999
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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	11000	5100								
Pilot In Command(PIC)										
Instructor										
Last 90 Days		165								
Last 30 Days		74								
Last 24 Hours	4	4		4						

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

Departure Point SEATTLE	State WA	Airport Identifier SEA	Departure Time 1933	Time Zone MDT
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Destination DAYTON	State OH	Airport Identifier DAY	
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Type of Clearance: IFR

Type of Airspace: Class A

Weather Information

Source of Briefing: Company; Flight Service Station; TV/Radio Weather

Method of Briefing:

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Weather Information					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
MLS	2056	MDT	2628 Ft. MSL	0 NM	0 Deg. Mag.
Sky/Lowest Cloud Condition: Thin Broken			8000 Ft. AGL	Condition of Light: Night/Dark	
Lowest Ceiling: None		0 Ft. AGL	Visibility: 10	SM	Altimeter: 30.00 "Hg
Temperature: 15 °C	Dew Point: 0 °C	Wind Direction: 110		Density Altitude: Ft.	
Wind Speed: 8	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: Substantial	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				1	1
Cabin Attendants					
Other Crew					
Passengers				2	2
- TOTAL ABOARD -				5	5
Other Ground	0	0	0		0
- GRAND TOTAL -	0	0	0	5	5

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National Transportation Safety Board

FACTUAL REPORT

AVIATION



NTSB ID: DEN00FA078

Occurrence Date: 04/27/2000

Occurrence Type: Accident

Administrative Information

Investigator-In-Charge (IIC)

JAMES F. STRUHSAKER

Additional Persons Participating in This Accident/Incident Investigation:

RICK HOSKER
FAA FSDO
DENVER, CO 80249