

National Transportation Safety Board  
Washington, DC 20594

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Brief of Accident

Adopted 04/24/1990

DCA88MA052 File No. 401	04/15/1988	SEATTLE ,WA	Aircraft Reg No. N819PH	Time (Local): 18:32 PDT	
Make/Model: De Havilland/DHC-8			Fatal	Serious	Minor/None
Engine Make/Model: P&W / PW120A			Crew 0	0	3
Aircraft Damage: Destroyed			Pass 0	4	33
Number of Engines: 2					
Operating Certificate(s): Flag Carrier/Domestic					
Name of Carrier: HORIZON AIR					
Type of Flight Operation: Scheduled; Domestic; Passenger Only					
Reg. Flight Conducted Under: Part 121: Air Carrier					
Last Depart. Point: Same as Accident/Incident Location			Condition of Light: Day		
Destination: SPOKANE, WA			Weather Info Src: Weather Observation Facility		
Airport Proximity: On Airport/Airstrip			Basic Weather: Visual Conditions		
Airport Name: SEATTLE-TACOMA INTL			Lowest Ceiling: 2800 Ft. AGL, Overcast		
Runway Identification: 16L			Visibility: 7.00 SM		
Runway Length/Width (Ft): 11400 / 150			Wind Dir/Speed: 240 / 008 kts		
Runway Surface: Asphalt			Temperature (°C): Unk/Nr		
Runway Surface Condition: Dry			Precip/Obscuration:		
Pilot-in-Command	Age: 38		Flight Time (Hours)		
Certificate(s)/Rating(s)			Total All Aircraft: 9328		
Airline Transport; Commercial; Multi-engine Land; Single-engine Land			Last 90 Days: Unk/Nr		
Instrument Ratings			Total Make/Model: 981		
Airplane			Total Instrument Time: Unk/Nr		

\*\*\* Note: NTSB investigators traveled in support of this investigation and used data obtained from various sources to prepare this aircraft accident report. \*\*\*

SHORTLY AFTER TKOF FROM SEATTLE-TACOMA INTL AIRPORT, THE CREW NOTED A RT ENG POWER LOSS AND DECIDED TO RETURN FOR A PRECAUTIONARY LNDG. AFTER LOWERING THE LNDG GEAR, A MASSIVE FIRE WAS DISCOVERED IN THE RT ENG NACELLE. AFTER LNDG, DIRECTIONAL CONTROL AND ALL BRAKING WAS LOST. THE ACFT DEPARTED THE LEFT SIDE OF THE RWY 16L AFTER THE LEFT POWER LEVER WAS MOVED TO FLT IDLE. THE F/O ADVISED TWR THAT THE ACFT WAS OUT OF CONTROL. THE ACFT ROLLED ONTO THE RAMP AREA WHERE IT STRUCK A RWY DESIGNATOR SIGN, GROUND EQUIPMENT, AND JETWAYS B7 AND B9. THE ACFT WAS SUBSEQUENTLY DESTROYED BY FIRE. INVESTIGATION REVEALED THAT DURING OVERHAUL THE HIGH PRESSURE FUEL FILTER COVER WAS IMPROPERLY INSTALLED ON THE ENG AND THE IMPROPER INSTALLATION WAS NOT DISCOVERED DRG COMPANY INSTALLATION OF THE ENG ON THE ACFT. THIS LED TO A MASSIVE FUELLEAK AND THE NACELLE FIRE. THE FIRE/EXPLOSION CAUSED THE LOSS OF THE ENG PANELS, REDUCING THE EFFECTIVENESS OF THE FIRE SUPPRESSION SYSTEM AND ALLOWING OTHER SYSTEMS TO BE DAMAGED. (FOR FURTHER INFORMATION-SEE NTSB/AAR-89/02.)

Brief of Accident (Continued)

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Occurrence #1: FIRE/EXPLOSION

Phase of Operation: CLIMB - TO CRUISE

Findings

1. (C) FUEL SYSTEM,FILTER - LEAK
  2. (C) MAINTENANCE,INSTALLATION - IMPROPER - MANUFACTURER
  3. (C) MAINTENANCE,INSPECTION - IMPROPER - MANUFACTURER
  4. (C) MAINTENANCE,INSPECTION - IMPROPER - COMPANY MAINTENANCE PERSONNEL
  5. (F) DOOR,INSPECTION - UNLATCHED
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Occurrence #2: FIRE

Phase of Operation: APPROACH - VFR PATTERN - BASE LEG/BASE TO FINAL

Findings

6. (F) FIRE EXTINGUISHER,POWERPLANT - DISABLED
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Occurrence #3: LOSS OF ENGINE POWER

Phase of Operation: APPROACH - VFR PATTERN - BASE LEG/BASE TO FINAL

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Occurrence #4: LOSS OF CONTROL - ON GROUND/WATER

Phase of Operation: LANDING - ROLL

Findings

7. HYDRAULIC SYSTEM,LINE - BURNED
  8. ELECTRICAL SYSTEM,ELECTRIC WIRING - BURNED
  9. HYDRAULIC SYSTEM - FAILURE,TOTAL
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Occurrence #5: ON GROUND/WATER COLLISION WITH OBJECT

Phase of Operation: LANDING - ROLL

Findings

10. OBJECT - AIRPORT FACILITY

Findings Legend: (C) = Cause, (F) = Factor