

**Brief of Accident**

**Adopted 12/03/2004**

SEA03FA024 File No. 16787	01/08/2003	Medford, OR	Aircraft Reg No. N409QX	Time (Local): 18:15 PST
Make/Model: Bombardier / DHC-8-401	Engine Make/Model: Pratt & Whitney / PW 150-A	Aircraft Damage: Substantial	Crew	Fatal 0      Serious 1      Minor/None 2
Number of Engines: 2	Operating Certificate(s): Flag Carrier/Domestic		Pass	0      0      29
Name of Carrier: HORIZON AIR INDUSTRIES INC	Type of Flight Operation: Scheduled; Domestic; Passenger Only			
Reg. Flight Conducted Under: Part 121: Air Carrier				
Last Depart. Point: Seattle, WA	Destination: Same as Accident/Incident Location	Airport Proximity: Off Airport/Airstrip	Condition of Light: Night/Bright	Weather Info Src: Pilot
			Basic Weather: Visual Conditions	Lowest Ceiling: None
			Visibility: 20.00 SM	Wind Dir/Speed: Calm
			Temperature (°C): 7	Precip/Obscuration:
Pilot-in-Command	Age: 54		Flight Time (Hours)	
Certificate(s)/Rating(s)			Total All Aircraft: 18662	
Airline Transport; Flight Instructor; Multi-engine Land; Single-engine Land			Last 90 Days: Unk/Nr	
Instrument Ratings			Total Make/Model: 4922	
Airplane			Total Instrument Time: UnK/Nr	

The aircraft, which was on a downwind for a night visual approach, impacted a flock of Lesser Scaups (diving ducks). The nose structure of the aircraft and the windshield directly in front of the captain received multiple bird strikes. Some of the birds penetrated the aircraft's skin, but there was no direct penetration of the windshield. Although the windshield was not penetrated, hundreds of small pieces of glass were ejected from the most inner of the windshield's three panes, and approximately 70 of these pieces imbedded themselves in the face, forehead, and scalp of the captain. The first officer ultimately completed a successful landing, while using backup flight instruments. The investigation determined that the windshield certification process defined in Part 25 of the Federal Aviation Regulations and the Canadian Aviation Regulations does not take into account the effects of multiple bird strikes on the same windshield.

Brief of Accident (Continued)

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Occurrence #1: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: APPROACH - VFR PATTERN - DOWNWIND

Findings

1. (C) WINDOW,FLIGHT COMPARTMENT WINDOW/WINDSHIELD - FRACTURED
2. (C) WINDOW,FLIGHT COMPARTMENT WINDOW/WINDSHIELD - OVERLOAD
3. (F) OBJECT - BIRD(S)
4. (F) LIGHT CONDITION - DARK NIGHT

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

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The National Transportation Safety Board determines the probable cause(s) of this accident as follows.

The fracture and spalling of the inner-most pane of the aircraft's port side windshield while on a downwind for a night visual approach due to an imposed load beyond that required for windshield certification (multiple bird strikes). Factors include a dark night, and a flock of ducks (Lesser Scaups) flying in the location of the visual traffic pattern.