



National Transportation Safety Board Aviation Accident Final Report

Location:	Blakely Island, WA	Accident Number:	SEA04LA001
Date & Time:	10/02/2003, 1600 PDT	Registration:	N2695S
Aircraft:	Cessna 340	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 Minor
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

When the pilot took off from Roche Harbor, the ceiling was about 700 feet above the ground (AGL), and remained so along his route. When he got to Blakely Island, he found the area near the north end of the runway was covered with low-level stratus clouds. Although he desired to land on runway 19, since the clouds were near the north end of the runway, he elected to proceed to the south end of the airport and land to the north. While on short final for runway 01, the aircraft encountered an area of downdrafts. Although the pilot added power and tried to adjust the sink rate, his remedial actions were insufficient to keep the aircraft from landing very hard just off the end of the paved surface. When the aircraft contacted the terrain, the landing gear collapsed, the wings were bent upwards, and the aircraft slid onto the paved runway surface and ultimately came to a stop. According to the pilot, there did not seem to be any problems with the aircraft's engines or flight control systems. The pilot further stated that because of the known turbulent air and downdrafts off the south end of the runway, of the "several hundred" landings he has made at Blakely Island, only a few have been on runway 01.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadequate compensation for downdrafts on final approach resulting in an excessive descent rate on short final. Factors include downdrafts off the approach end of the selected runway, and low clouds/fog.

Findings

Occurrence #1: HARD LANDING

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

1. (C) COMPENSATION FOR WIND CONDITIONS - INADEQUATE - PILOT IN COMMAND
2. (F) WEATHER CONDITION - DOWNDRAFT
3. (C) DESCENT - EXCESSIVE - PILOT IN COMMAND
4. (F) WEATHER CONDITION - CLOUDS

Occurrence #2: GEAR COLLAPSED

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Factual Information

On October 2, 2003, approximately 1600 Pacific daylight time, a Cessna 340, N2695S, landed hard about 30 feet short of the approach end of runway 01 at Blakely Island, Washington. The private pilot and his passenger received minor injuries, and the aircraft, which is owned and operated by the pilot, sustained substantial damage. The 14 CFR Part 91 personal pleasure flight, which departed Roche Harbor Airport, Roche Harbor, Washington, about 30 minutes earlier, was being operated in visual meteorological conditions in an area of occasional low clouds and fog. No flight plan had been filed.

According to the pilot, when he took off from Roche Harbor, the ceiling was about 700 feet above the ground (AGL), and remained so along his route. When he got to Blakely Island, he found the area near the north end of the runway was covered with low-level stratus clouds. Although he desired to land on runway 19, since the clouds were near the north end of the runway, he elected to proceed to the south end of the airport and land to the north. Reportedly, while on short final to runway 01, the aircraft encountered an area of downdrafts. Although the pilot added power and tried to adjust the sink rate, the aircraft landed very hard just off the end of the paved surface. When the aircraft contacted the terrain, the landing gear collapsed, the wings were bent upwards, and the aircraft slid onto the paved runway surface and ultimately came to a stop.

According to the pilot, there did not seem to be any problems with the aircraft's engines or flight control systems.

The pilot further stated that because of the known turbulent air and downdrafts off the south end of the runway, of the "several hundred" landings he has made at Blakely Island, only a few have been on runway 01.

Pilot Information

Certificate:	Private	Age:	66, 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:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	01/04/2002
Occupational Pilot:		Last Flight Review or Equivalent:	01/04/2002
Flight Time:	6500 hours (Total, all aircraft), 3500 hours (Total, this make and model), 45 hours (Last 90 days, all aircraft), 30 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N26955
Model/Series:	340	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	340A-0772
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	06/06/2003, Annual	Certified Max Gross Wt.:	6300 lbs
Time Since Last Inspection:	40 Hours	Engines:	2 Reciprocating
Airframe Total Time:	3800 Hours at time of accident	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	TSIO-520NB
Registered Owner:	Lawrence M. Elliam	Rated Power:	325 hp
Operator:	Lawrence M. Elliam	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:		Visibility	1.5 Miles
Lowest Ceiling:	Overcast / 700 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	10 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	150°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	16° C
Precipitation and Obscuration:			
Departure Point:	Roche Harbor, WA (W39)	Type of Flight Plan Filed:	None
Destination:	Blakely Island, WA (38WA)	Type of Clearance:	None
Departure Time:	1530 PDT	Type of Airspace:	Class G

Airport Information

Airport:	Blakely Island (38WA)	Runway Surface Type:	Asphalt
Airport Elevation:	50 ft	Runway Surface Condition:	Dry
Runway Used:	01	IFR Approach:	None
Runway Length/Width:	2200 ft / 50 ft	VFR Approach/Landing:	Full Stop

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor	Latitude, Longitude:	48.578889, -122.826389

Administrative Information

Investigator In Charge (IIC):	Orrin K Anderson	Report Date:	12/30/2003
Additional Participating Persons:	Bob Archibald; SEA FSDO		
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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