



Aviation Investigation Final Report

Location:	Lake Hughes, California	Accident Number:	LAX07LA065
Date & Time:	December 27, 2006, 13:30 Local	Registration:	N4598S
Aircraft:	Beech A36	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Prior to flight, the pilot checked the weather and also received a weather briefing from a Flight Service Station. The briefing revealed high winds and mountain obscuration along his route of flight. In order to avoid the adverse weather, the pilot departed on a westerly heading and climbed to 12,500 feet rather than his usual altitude of 8,500 feet, on a northwesterly heading across mountainous terrain. Thirty minutes into the flight he encountered strong downdrafts and wind shear on the lee side of the mountains. He applied full power, and initiated a 180-degree turn but was unable to maintain altitude. The airplane descended into a cloud layer, and continued to experience severe turbulence; the airplane subsequently stalled and entered a spin. The pilot recovered from the spin momentarily, before the airplane again stalled and entered a second spin. The airplane then exited the clouds at approximately 500 feet agl. The pilot then force landed the airplane into rising terrain.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadequate preflight planning/preparation and attempted flight into known adverse weather during cruise, and his failure to maintain an adequate airspeed margin that resulted in a stall/spin. Turbulence was a factor.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: CRUISE

Findings

1. (F) TERRAIN CONDITION - MOUNTAINOUS/HILLY
2. (F) WEATHER CONDITION - TURBULENCE, TERRAIN INDUCED
3. (C) FLIGHT INTO KNOWN ADVERSE WEATHER - ATTEMPTED - PILOT IN COMMAND
4. (C) PREFLIGHT PLANNING/PREPARATION - INADEQUATE - PILOT IN COMMAND

Occurrence #2: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: MANEUVERING - TURN TO REVERSE DIRECTION

Findings

5. WEATHER CONDITION - CLOUDS
6. (C) AIRSPEED - INADEQUATE - PILOT IN COMMAND
7. (C) STALL/SPIN - ENCOUNTERED - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: EMERGENCY LANDING

Findings

8. TERRAIN CONDITION - BLIND/BOX CANYON

Factual Information

HISTORY OF FLIGHT

On December 27, 2006, about 1330 Pacific standard time, a Beech A36, N4598S, collided with terrain after encountering severe turbulence near Lake Hughes, California. The pilot/owner was operating the airplane under the provisions of 14 Code of Federal Regulations Part 91. The private pilot sustained serious injuries; the airplane sustained substantial damage. The cross-country personal flight departed General William J. Fox Airfield (WJF), Lancaster, California, about 1300, with a planned destination of Chico Municipal Airport, Chico, California. Visual meteorological conditions prevailed, and a visual flight rules (VFR) flight plan had been filed.

In a written statement, the pilot reported that on the morning of the flight he checked the weather via the computer, and he also called a Flight Service Station for a weather briefing. The briefing revealed high winds and mountain obscuration along the route of flight. During the preflight inspection, the pilot noted dark clouds in the Tehachapi Pass area, and clear skies to the west. He stated that his usual flight path would take him on a northwesterly heading at an altitude of 8,500 feet. To avoid the weather, he decided to depart on a westerly heading, and climb to 12,500 feet mean sea level (msl) over the Lake Hughes area. Once he had attained his cruise altitude, he observed clear skies, and estimated that he was approximately 5,000 feet above the cloud tops. He then encountered "a strong downdraft/windshear of huge proportions." He applied full power, and initiated a 180-degree turn, but was unable to maintain altitude. The airplane descended into the cloud layer. While in the clouds, the pilot experienced heavy turbulence; the airplane stalled, and entered a spin. The pilot recovered from the spin momentarily before the airplane again stalled, and entered a second spin. The airplane then exited the clouds at approximately 500 feet above ground level (agl). The pilot reported he was "boxed in" and unable to escape rising terrain without entering the clouds. The pilot then found an upsloping hill, slowly bled off airspeed, and performed a "pancake" landing.

METEOROLOGICAL INFORMATION

The closest official weather observation station was WJF, which was 24 nautical miles east of the accident site. An aviation routine weather report (METAR) for WJF was issued at 1256. It stated: winds from 250 degrees at 27 knots, gusting to 31 knots; visibility 10 miles; light rain; few clouds 3,000 feet, 4,200 feet overcast; temperature 10 degrees Celsius; dew point -1 degree Celsius; altimeter 29.78 inches of mercury.

AIRMETS for mountain obscuration, turbulence and low level wind shear, as well as SIGMETS for occasional severe turbulence below 15,000 feet, were all issued for California, including

portions of the airplane's route of flight.

Around the time of the accident, pilot weather reports from Southern California indicated widespread moderate to severe turbulence, at altitudes ranging between 3,000 and 37,000 feet.

Pilot Information

Certificate:	Private	Age:	61, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	June 1, 2006
Occupational Pilot:	No	Last Flight Review or Equivalent:	June 1, 2006
Flight Time:	1606 hours (Total, all aircraft), 1544 hours (Total, this make and model), 29 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	Registration:	N4598S
Model/Series:	A36	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Utility	Serial Number:	E-761
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	June 1, 2006 Annual	Certified Max Gross Wt.:	3600 lbs
Time Since Last Inspection:	45 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	3370 Hrs	Engine Manufacturer:	Lycoming
ELT:	Installed, activated, aided in locating accident	Engine Model/Series:	IO-520
Registered Owner:	Robert N. Ryan	Rated Power:	285 Horsepower
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	WJF,2351 ft msl	Distance from Accident Site:	24 Nautical Miles
Observation Time:	12:56 Local	Direction from Accident Site:	92°
Lowest Cloud Condition:	Few / 3000 ft AGL	Visibility	10 miles
Lowest Ceiling:	Overcast / 4200 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	27 knots / 31 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	250°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.78 inches Hg	Temperature/Dew Point:	8°C / 1°C
Precipitation and Obscuration:	Light - None - Rain		
Departure Point:	LANCASTER, CA (WJF)	Type of Flight Plan Filed:	VFR
Destination:	CHICO, CA (CIC)	Type of Clearance:	VFR
Departure Time:	13:00 Local	Type of Airspace:	

Airport Information

Airport:	GENERAL WM J FOX AIRFIELD WJF	Runway Surface Type:	Asphalt
Airport Elevation:	2351 ft msl	Runway Surface Condition:	Dry
Runway Used:	24	IFR Approach:	None
Runway Length/Width:	7201 ft / 150 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	34.751945,-118.656112

Administrative Information

Investigator In Charge (IIC):	Plagens, Howard
Additional Participating Persons:	David Voelker; Federal Aviation Administration FSDO; Van Nuys, CA
Original Publish Date:	March 31, 2008
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=65085

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).