



National Transportation Safety Board Aviation Accident Final Report

Location:	SHAVER LAKE, CA	Accident Number:	LAX88FA215
Date & Time:	05/28/1988, 1910 PDT	Registration:	N98683
Aircraft:	CESSNA 421C	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	4 Fatal

Flight Conducted Under: Part 91: General Aviation - Personal

Analysis

THE PLT BOUGHT THE ACFT ABOUT 1 MONTH PRIOR TO THE ACCIDENT. HE HAD LIMITED EXP IN THE ACFT, AND LIMITED EXP WITH HIGH ALT FLT AND ITS WX PHENOMONA. THE PLT OBTAINED TWO WX BREIFINGS FOR THE FLT. DURING BOTH, HE WAS ADVISED OF THE FORECAST AND PLT REPORTED CONDITIONS OF MODERATE TO SEVERE MIXED ICING AND TURBULENCE ASSOCIATED WITH A MTN WAVE ON THE EASTERN SIDE OF THE SIERRA NEVADA MTNS. INSTEAD OF FLYING ALONG HIS INTENDED ROUTE ON THE WESTERN SIDE OF THE MTNS, HE CHOSE A DIRECT ROUTE, WHICH PLACED THE ACFT ON THE EASTERN SIDE OF THE MTNS. THE TRACK OF THE ACFT WAS ESTABLISHED BY RECORDED RADAR DATA. THE DATA SHOWED THE ACFT IN CRUISE AT 16,500 FT UNTIL ABOUT 1 MIN PRIOR TO THE ACCIDENT. THE ACFT WAS SHOWN TO CLIMB TO 17,200 FEET BEFORE IT DISAPPEARED. THE LAST RADAR TARGET WAS OBSERVED ABOUT 2 MILES FROM THE IMPACT LOCATION. THE ACFT IMPACTED IN A STEEP NOSE DOWN DESCENT.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: INFLIGHT ENCOUNTER WITH FORCASTED SEVERE ICING AND TURBULENCE BEYOND THE CAPABILITY OF EITHER THE AIRCRAFT OR THE PILOT , WHICH LED TO AN INFLGIHT LOSS OF CONTROL. FACTORS IN THE ACCIDENT WERE THE PILOTS LACK OF UNDERSTANDING OF HIGH ALTITUDE FLIGHT ASPECTS AND METEROLOGICAL PHENOMENA.

Findings

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

Findings

1. (F) WEATHER CONDITION - ICING CONDITIONS
2. (F) WEATHER CONDITION - MOUNTAIN WAVE
3. (F) WEATHER CONDITION - TURBULENCE
4. PREFLIGHT BRIEFING SERVICE - ISSUED - NWS PERSONNEL
5. (F) LACK OF TOTAL EXPERIENCE IN TYPE OPERATION - PILOT IN COMMAND
6. (C) WEATHER EVALUATION - NOT UNDERSTOOD - PILOT IN COMMAND
7. (C) FLIGHT INTO KNOWN ADVERSE WEATHER - ATTEMPTED - PILOT IN COMMAND
8. (F) IN-FLIGHT PLANNING/DECISION - POOR - PILOT IN COMMAND

Occurrence #2: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: CRUISE - NORMAL

Findings

9. (C) AIRCRAFT PERFORMANCE - EXCEEDED
10. (C) AIRCRAFT CONTROL - INADEQUATE - PILOT IN COMMAND
11. (C) STALL/SPIN - INADVERTENT - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

Pilot Information

Certificate:	Private	Age:	47, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	10/18/1986
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	3060 hours (Total, all aircraft), 15 hours (Total, this make and model), 2950 hours (Pilot In Command, all aircraft), 25 hours (Last 90 days, all aircraft), 15 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N98683
Model/Series:	421C 421C	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	421C0209
Landing Gear Type:	Retractable - Tricycle	Seats:	7
Date/Type of Last Inspection:	09/21/1987, Annual	Certified Max Gross Wt.:	7450 lbs
Time Since Last Inspection:	35 Hours	Engines:	2 Reciprocating
Airframe Total Time:	2575 Hours	Engine Manufacturer:	CONTINENTAL
ELT:	Installed, not activated	Engine Model/Series:	GTS10-520L
Registered Owner:	BROOKS PRODUCTS, INC.	Rated Power:	375 hp
Operator:	JOHN D. MAC DONALD	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Dusk
Observation Facility, Elevation:	MMH, 7128 ft msl	Distance from Accident Site:	15 Nautical Miles
Observation Time:	1750 PDT	Direction from Accident Site:	43°
Lowest Cloud Condition:	Scattered / 1500 ft agl	Visibility	50 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	35 knots / 45 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	200°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	16 °C
Precipitation and Obscuration:			
Departure Point:	RIALTO, CA (L67)	Type of Flight Plan Filed:	None
Destination:	TRUCKEE, CA (TRK)	Type of Clearance:	None
Departure Time:	1800 PDT	Type of Airspace:	Class E

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	3 Fatal	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 Fatal	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	JEFF RICH	Report Date:	07/09/1990
Additional Participating Persons:	DONALD MORRIS; FRESNO, CA		
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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