



Aviation Investigation Final Report

Location:	LAKE VILLAGE, Arkansas	Accident Number:	MKC84LA109
Date & Time:	March 22, 1984, 15:45 Local	Registration:	N9541J
Aircraft:	CESSNA 188B	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

AS THE ACFT BEGAN TO ROTATE DURING TAKEOFF ONE PROPELLER BLADE WAS THROWN 1000 FT BEHIND THE ACFT. THE REMAINING BLADE AND HUB BECAME UNBALANCED, TWISTING THE ENGINE AT A 45 DEGREE ANGLE. PLT SHUT DOWN THE ENGINE. ACFT TRAVELED OFF THE LEFT SIDE OF THE RWY AND CARTWHEELED. INSPECTION REVEALED PROPELLER BLADE BROKE APRX 2 INCHES OUTBOARD OF THE HUB. METALLURGICAL TESTS REVEALED NUMEROUS FATIGUE ORIGANS ON BOTH THE BLADE BUTT ENDS AT ITS SEPARATION POINTS AND IN THE PROPELLER ATTACHMENT ON THE FACE OF THE HUB. THE PROPELLER BLADE MOUNTING WHICH ATTACHES TO THE ENGINE HAD BROKEN OUT BETWEEN TWO STUD HOLES. THIS AREA SHOWS FATIGUE AS WELL AS DEFORMATION OF THE MOUNTING SURFACE.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: TAKEOFF - ROLL/RUN

Findings

1. (C) PROPELLER SYSTEM/ACCESSORIES, BLADE - FATIGUE

2. (C) PROPELLER SYSTEM/ACCESSORIES,HUB - FATIGUE

Occurrence #2: LOSS OF CONTROL - ON GROUND/WATER

Phase of Operation: TAKEOFF - ROLL/RUN

Findings

3. DIRECTIONAL CONTROL - NOT POSSIBLE - PILOT IN COMMAND

Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER

Phase of Operation: TAKEOFF - ROLL/RUN

Findings

4. TERRAIN CONDITION - NONE SUITABLE

Factual Information

Pilot Information

Certificate:	Commercial	Age:	29, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Center
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	April 4, 1983
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	3100 hours (Total, all aircraft), 2300 hours (Total, this make and model), 3100 hours (Pilot In Command, all aircraft), 96 hours (Last 90 days, all aircraft), 8 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N9541J
Model/Series:	188B 188B	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	18803819T
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	January 9, 1984 Annual	Certified Max Gross Wt.:	3300 lbs
Time Since Last Inspection:	63 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	1300 Hrs	Engine Manufacturer:	CONTINENTAL
ELT:	Not installed	Engine Model/Series:	IO-520-D
Registered Owner:	STANDRIDGE FLYING SERVICE, INC	Rated Power:	300 Horsepower
Operator:		Operating Certificate(s) Held:	
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	15 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	90°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	15:45 Local	Type of Airspace:	Class E

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	Dry
Runway Used:	18	IFR Approach:	None
Runway Length/Width:	2600 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	33.31932,-91.27919(est)

Administrative Information

Investigator In Charge (IIC):	Thorpe, Clint
Additional Participating Persons:	KEN CADEY / FAA GADO #6; LITTLE ROCK , AR
Original Publish Date:	
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=33657

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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](#).