



Aviation Investigation Final Report

Location:	HARBOR SPRINGS, Michigan	Accident Number:	CHI99LA225
Date & Time:	July 4, 1999, 12:08 Local	Registration:	N201HG
Aircraft:	Mooney M20J	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane contacted the top of a tree while on final approach. The pilot was able to continue the approach and land the airplane in the grass alongside the runway. The pilot reported the airplane encountered wind shear approximately 1,000 feet from the end of the runway. He reported winds issued over the Unicom were from 270 degrees at 10 to 12 knots. Reported winds 12 miles northeast of the airport were from 240 degrees at 12 knots gusting to 22 knots.

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 the wind conditions and his failure to maintain clearance with the trees. Factors associated with the accident were the gusty winds, wind shear, and the trees.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings

1. (F) WEATHER CONDITION - GUSTS
2. (F) WEATHER CONDITION - WINDSHEAR
3. (C) COMPENSATION FOR WIND CONDITIONS - INADEQUATE - PILOT IN COMMAND

4. (F) OBJECT - TREE(S)
5. (C) CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND

Factual Information

On July 4, 1999, at 1208 eastern daylight time, a Mooney M20J, N201HG, collided with trees and the terrain while on final approach to land on runway 28 at the Harbor Springs Airport, Harbor Springs, Michigan. The pilot and passenger were not injured. The airplane was substantially damaged. The 14 CFR Part 91 personal flight was operating in visual meteorological conditions and no flight plan was filed. The flight originated from Wheeling, Illinois, at 0908 central daylight time.

The pilot reported that he was informed by the Harbor Springs Unicom that the winds were from 270 degrees at 10 to 12 knots. He stated he flew the traffic pattern to land on runway 28. The pilot reported that the airplane was "buffeted" by winds while on final approach at an airspeed of 74 knots with full flaps extended. He continued to report, "At about 1,000 feet from the end of the runway we were hit by a wind shear (like a wall). The aircraft immediately dropped and moved to the left. I applied power and brought the nose up a little when all of a sudden we hit something (later saw it to be the top of a pine tree)." This resulted in the airplane traveling to the left of the extended centerline. He reported he reduced power and landed straight ahead in the grass off the left side of the runway. A short time later the pilot taxied the airplane to the ramp area.

Winds reported at Pellston, Michigan (12 miles northeast of Harbor Springs) at 1152 edt, were from 240 degrees at 12 knots gusting to 22 knots.

Pilot Information

Certificate:	Private	Age:	63, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
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 3 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	May 12, 1998
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	3029 hours (Total, all aircraft), 225 hours (Total, this make and model), 3024 hours (Pilot In Command, all aircraft), 24 hours (Last 90 days, all aircraft), 6 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Mooney	Registration:	N201HG
Model/Series:	M20J M20J	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	24-0232
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	April 16, 1999 Annual	Certified Max Gross Wt.:	2740 lbs
Time Since Last Inspection:	24 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	3508 Hrs	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	IO-360
Registered Owner:	ARTHUR B. MULLIGAN	Rated Power:	200 Horsepower
Operator:		Operating Certificate(s) Held:	None
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:	PLN ,720 ft msl	Distance from Accident Site:	12 Nautical Miles
Observation Time:	11:52 Local	Direction from Accident Site:	40°
Lowest Cloud Condition:	Scattered / 5000 ft AGL	Visibility	8 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	12 knots / 22 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	240°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	28°C / 23°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	WHEELING , IL (PWK)	Type of Flight Plan Filed:	None
Destination:	(D87)	Type of Clearance:	None
Departure Time:	09:08 Local	Type of Airspace:	Class E

Airport Information

Airport:	HARBOR SPRINGS D87	Runway Surface Type:	Asphalt
Airport Elevation:	686 ft msl	Runway Surface Condition:	Dry
Runway Used:	28	IFR Approach:	
Runway Length/Width:	4157 ft / 75 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	45.43058,-84.980781(est)

Administrative Information

Investigator In Charge (IIC):	Sullivan, Pamela
Additional Participating Persons:	BILL NAYMICK; GRAND RAPIDS , MI
Original Publish Date:	June 22, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=46761

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