



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	MAIZE, KS	<b>Accident Number:</b>	CHI99LA172
<b>Date &amp; Time:</b>	06/03/1999, 1007 CDT	<b>Registration:</b>	N9393
<b>Aircraft:</b>	de Havilland TIGER MOTH DH82A	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 Minor, 1 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

He stated the local winds were gusty and alternating between east and southeast, and he used runway 17 for takeoff. He stated engine power was normal, but he was unable to maintain a climb when he reached the south end of the runway which was bordered by trees. The airplane began a descent near the end of the runway. The lower right wing contacted a tree just south of a highway which bordered the south end of the airport. The pilot stated that after the accident he noted the winds at the south side of the airport were out of the south and the wind sock at the north end of the airport was indicating winds from the northeast.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's inability to maintain a climb after takeoff as a result of wind shear. Factors associated with the accident were the variable, gusty wind conditions, and the tree which was contacted.

## Findings

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Occurrence #1: LOSS OF CONTROL - IN FLIGHT  
Phase of Operation: TAKEOFF - INITIAL CLIMB

### Findings

1. (F) WEATHER CONDITION - VARIABLE WIND
  2. (F) WEATHER CONDITION - GUSTS
  3. (C) WEATHER CONDITION - WINDSHEAR
  4. (C) CLIMB - NOT POSSIBLE - PILOT IN COMMAND
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Occurrence #2: IN FLIGHT COLLISION WITH OBJECT  
Phase of Operation: TAKEOFF - INITIAL CLIMB

### Findings

5. (F) OBJECT - TREE(S)
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Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: DESCENT - UNCONTROLLED

## Factual Information

On June 3, 1999, at 1007 central daylight time, a DeHavilland Tiger Moth DH 82A, N9393, operated by a private pilot settled into trees during an initial takeoff climb from the Maize Airport, Maize, Kansas. The pilot received minor injuries and the sole passenger was not injured. The airplane was substantially damaged. The 14 CFR Part 91 personal flight was operating in visual meteorological conditions without a flight plan. The flight was originating when the accident occurred and the intended destination was Bartlesville, Oklahoma.

The pilot stated that he received a weather briefing prior to taking off. He stated the local winds were gusty and alternating between east and southeast. The pilot reported that the winds being reported at Wichita, 9 statute miles south of the Maize Airport, were from 150 degrees at 14 knots. The takeoff was being made on runway 17 (2,000' x 70', grass).

The pilot stated that engine power was 2,100 rpm and oil pressure was normal during the takeoff. He reported, "As the tail came up, the airplane quickly lifted off and rolled slightly to the right - I added more left aileron, which rolled the airplane back level - the power of the gusts surprised me, as this was not the case before takeoff and at the north end of the field. The airplane seemed initially to climb well." The pilot stated the runway had trees along the left side and he was looking out of the cockpit to assure clearance with them. The pilot stated that as they reached the south end of the runway, which is lined on both sides by trees, the airplane seemed as though it would not climb. He stated he looked at the tachometer and the needle was bouncing between 2,100 rpm and 2,200 rpm so he applied full throttle.

The pilot stated he maintained just enough back pressure to keep the airplane airborne. The pilot stated, "As we approached the area of trees south of the runway and across the highway, the airplane simply had gained no altitude, and was continuing a slight descent." The right lower wing on the airplane contacted an 8-inch diameter tree about 20 yards south of highway K-96, which borders the south end of the runway. The airplane rotated to the right and descended to impact with the terrain.

The pilot stated that after the accident, while standing south of the airport, the wind was from the south. He noticed the wind sock at the north end of the runway at this same time and it was indicating that the wind in that location was out of the northeast.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	51, Male
<b>Airplane Rating(s):</b>	Single-engine Land	<b>Seat Occupied:</b>	Rear
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	05/06/1999
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	1614 hours (Total, all aircraft), 25 hours (Total, this make and model), 1459 hours (Pilot In Command, all aircraft), 32 hours (Last 90 days, all aircraft), 17 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	de Havilland	<b>Registration:</b>	N9393
<b>Model/Series:</b>	TIGER MOTH DH82A TIGER MOTH	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	82461
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	09/25/1998, Annual	<b>Certified Max Gross Wt.:</b>	1825 lbs
<b>Time Since Last Inspection:</b>	6 Hours	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	4770 Hours	<b>Engine Manufacturer:</b>	Rolls-Royce
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	GYPSY MJR 1Z
<b>Registered Owner:</b>	RONALD P. WILLIAMS	<b>Rated Power:</b>	145 hp
<b>Operator:</b>	RONALD P. WILLIAMS	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Unknown	Condition of Light:	Day
Observation Facility, Elevation:	ICT, 1332 ft msl	Distance from Accident Site:	9 Nautical Miles
Observation Time:	0956 CDT	Direction from Accident Site:	180°
Lowest Cloud Condition:	Scattered / 5000 ft agl	Visibility	10 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	14 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	150°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	22° C / 18° C
Precipitation and Obscuration:			
Departure Point:	(70K)	Type of Flight Plan Filed:	None
Destination:	BARTLESVILLE, OK (BVO)	Type of Clearance:	None
Departure Time:	0000	Type of Airspace:	Class E

## Airport Information

Airport:	MAIZE AIRPORT (70K)	Runway Surface Type:	Grass/turf
Airport Elevation:	1320 ft	Runway Surface Condition:	Dry
Runway Used:	17	IFR Approach:	None
Runway Length/Width:	200 ft / 70 ft	VFR Approach/Landing:	

## Wreckage and Impact Information

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

## Administrative Information

Investigator In Charge (IIC):	PAMELA S SULLIVAN	Report Date:	09/28/2000
Additional Participating Persons:	HANK ROCHON; WICHITA, KS		
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 <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).