



National Transportation Safety Board Aviation Accident Final Report

Location:	LAKE JACKSON, TX	Accident Number:	FTW97LA209
Date & Time:	06/01/1997, 0830 CDT	Registration:	N1200M
Aircraft:	Giertz VMAX PROBE	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Fatal

Flight Conducted Under: Part 91: General Aviation -

Analysis

The pilot designed, and built the aircraft. He was conducting the aircraft's initial test flight and was not wearing a helmet. Witnesses reported that immediately after takeoff it appeared that the 'aircraft was being over controlled until it was halfway down the runway.' Downwind the pilot reported by radio he had 'good control,' the engine's temperature was 230 degrees Fahrenheit, and he was returning to land. Witnesses observed the aircraft turn final approach to runway 35 in a stable attitude and in a descent. Approximately 5 to 20 feet above the runway, the 'aircraft lost directional stability in yaw mode then pitched abruptly toward the ground.' The aircraft impacted the runway, 'bounced up and went knife edge to the ground.' The aircraft impacted the runway about 625 feet from the initial impact point, and slid 625 feet to a stop inverted. Examination of the flight controls revealed no discontinuity that may have existed prior to the aircraft impacting the ground. The 63 year old pilot became qualified as a private pilot on January 9, 1982. According to his pilot log book he had a total flight time of 261.0 hours, and he had logged 8 hours within the last 90 days.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain aircraft control during an approach to landing. A related factor was the pilot's lack of experience in make and model of aircraft.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings

1. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
2. (F) LACK OF TOTAL EXPERIENCE IN TYPE OF AIRCRAFT - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

On June 1, 1997, approximately 0830 central daylight time, a Giertz Vmax Probe experimental aircraft, N1200M, owned and operated by the pilot as a Title 14 CFR Part 91 test flight, was substantially damaged during landing at the Brazoria County Airport, near Lake Jackson, Texas. Visual meteorological conditions prevailed and a flight plan was not filed for the local flight. The private pilot, sole occupant of the airplane, was fatally injured. The flight originated from the Brazoria County Airport, about 5 minutes before the accident.

The 63 year old pilot became qualified as a private pilot on January 9, 1982. According to his pilot log book he had a total flight time of 261.0 hours, and he had logged 8 hours within the last 90 days in a Glasair airplane. There were no biennial flight review entries in the pilot's log book.

The pilot was the owner of Western Composite, where he designed, and built the aircraft. He was conducting the prototype aircraft's initial test flight at the time of the accident and was not wearing a helmet.

The Vmax Probe aircraft is a single place, low wing airplane, with an airframe constructed primarily of composite materials. It was powered by a 808cc, 2-stroke, liquid cooled, 100 HP engine. The canopy and nose exterior skin of the aircraft had to be removed for the pilot to enter or exit.

Witnesses reported to the FAA inspector that the pilot did not complete any high speed taxi tests prior to the accident flight; however, he did do "rudimentary" low speed taxi tests. Witnesses further reported that "immediately" after takeoff from runway 35, it appeared that the "aircraft was being over controlled until it was halfway down the runway." Downwind the pilot reported by radio he had "good control." He also reported that the engine's temperature was 230 degrees Fahrenheit, and he was returning to land.

Witnesses observed the aircraft turning final approach to runway 35 in a "stable" attitude and in a descent. Approximately 5 to 20 feet above the runway, the "aircraft lost directional stability in yaw mode then pitched abruptly toward the ground." The aircraft impacted the runway, "bounced up and went knife edge to the ground." Subsequently, the aircraft impacted the runway about 625 feet from the initial impact point, and slid 625 feet to a stop. The aircraft came to rest inverted approximately 2,535 feet beyond the approach end of the runway and 15 feet left of the centerline.

Examination of the aircraft wreckage by the FAA inspector revealed that the lower vertical fin/rudder and landing gear were separated from the fuselage. The wooden propeller was shattered. The right wing's outboard leading edge was damaged. Further examination of the flight controls revealed "no discontinuity that may have existed prior to the aircraft impacting the ground." A visual examination of the engine did not disclose any mechanical problems that would account for the high operating temperature reported by the pilot.

The pilot restraint system separated at the right hand lap belt attachment point. During the process of preparation for flight tests, the builder/pilot determined that an unacceptable amount of lost motion existed in the flight control system. In order to gain access to the components to be altered, a large section of the structural console on the right hand side of the cockpit was removed. It is through this structure that the right hand lap portion of the pilot restraint system was attached. The original structure was purported to have been calculated as

sufficient to meet industry standards for the installation of the restraint system. Subsequent to completion of the alteration of the flight controls a replacement section of console was fabricated to provide closure of the access that was created. That closure consisted of a panel of lesser thickness and markedly different finish than that of the original structure. In addition, this thinner, structural panel was bonded into position over an irregular painted surface of the original console. The right hand lap portion of the pilot restraint system was attached to this replacement panel.

An autopsy was performed at the University of Texas Medical Branch, Galveston, Texas. According to Dr. Soper, Civil Aeromedical Institute, Oklahoma City, Oklahoma, the Atropine and Lidocaine detected in blood and urine were most likely administered during life-saving efforts.

Pilot Information

Certificate:	Private	Age:	63, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Center
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	03/04/1997
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	261 hours (Total, all aircraft), 8 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Giertz	Registration:	N1200M
Model/Series:	VMAX PROBE VMAX PROBE	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental	Serial Number:	2
Landing Gear Type:	Tailwheel	Seats:	
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	AMW
ELT:		Engine Model/Series:	808
Registered Owner:	LARS M. GIERTZ	Rated Power:	100 hp
Operator:	LARS M. GIERTZ	Operating Certificate(s) Held:	None
Operator Does Business As:	WESTERN COMPOSITE	Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	GLS, 7 ft msl	Distance from Accident Site:	33 Nautical Miles
Observation Time:	0852 CDT	Direction from Accident Site:	30°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	10 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	10°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	24° C / 16° C
Precipitation and Obscuration:			
Departure Point:	(LBX)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	0825 CDT	Type of Airspace:	Class E

Airport Information

Airport:	BRAZORIA COUNTY (LBX)	Runway Surface Type:	Asphalt
Airport Elevation:	25 ft	Runway Surface Condition:	Dry
Runway Used:	35	IFR Approach:	None
Runway Length/Width:	7000 ft / 100 ft	VFR Approach/Landing:	Full Stop; Traffic Pattern

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	DOUGLAS D WIGINGTON	Report Date:	06/26/1998
Additional Participating Persons:	FRED H MAUPIN; HOUSTON, TX		
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 pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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](#).