Aviation Investigation Final Report

Location:	LAKELAND, Florida	**Accident Number:**	MIA00LA234
Date & Time:	August 8, 2000, 08:50 Local	**Registration:**	N355DE
Aircraft:	EACHON TIME WARP SPITFIRE 9	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

This was the first flight of this airplane after being built. The airplane was seen departing from runway 9, climb at a steep nose high attitude to an altitude of about 150 to 200 feet above the ground; fall flat to the ground, impacting right side up, and flat. Videotape, made by a relative of the pilot, revealed that the pilot was heard saying he was having difficulty in getting the tail up. He told the people present, '...it's a bugger back there,' referring to the tail coming up. In addition, he said, '...I should have more elevator authority.' He said that he had the speed up to 70 knots, the stick full forward, the tail would not come up, and '...that the aircraft may need a larger horizontal stabilizer and elevator to attain sufficient elevator authority.' No work to correct this problem was accomplished prior to the attempted flight. The videotape indicated that the airplane might have been overweight or tail heavy, or perhaps both. Inspection of the wreckage revealed no apparent airframe failure. The control surfaces were heavily coated with bondo to smooth them out. A piece of bondo was chipped from the aileron that measured 3/16 of an inch thick. The listed empty weight was 1,300 pounds, and the gross weight was 2,000 pounds. The actual weight shown for certification was empty weight 1,779 pounds, and gross weight 2,400 pounds. Continuity was established through the elevator cables, but the tail section and cables were cut to extract the pilot from the wreckage. Control continuity was established to all the flight controls.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: a loss of control which resulted in an inadvertent stall at too low an altitude to allow recovery. Factors in this accident were, the pilot/owner did not verify that the airplane was balanced before the flight, and he did not perform any weight or balance checks.

Findings

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

Findings
1. FLT CONTROL SYST,ELEVATOR CONTROL - OVERSIZE
2. (F) MAINTENANCE,BALANCING - NOT VERIFIED - OWNER/BUILDER
3. (F) AIRCRAFT WEIGHT AND BALANCE - NOT PERFORMED - OWNER/PILOT MECHANIC
4. (C) STALL - INADVERTENT - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: CLIMB

Findings
5. TERRAIN CONDITION - RUNWAY

Factual Information

On August 8, 2000, about 0850 eastern daylight time, a homebuilt Eachon Time Warp Spitfire 9, N355DE, registered to a private individual, impacted with the ground during takeoff from Lakeland Linder Regional Airport, Lakeland, Florida. Visual meteorological conditions prevailed at the time, and no flight plan was filed for the 14 CFR Part 91 personal flight. The airplane was destroyed. The commercial-rated pilot was fatally injured. The flight was originating at the time.

This was the first flight of this airplane after being built, and was to be a test flight. Witnesses saw the airplane depart from runway 9, climb at a steep nose high attitude to an altitude of about 150 to 200 feet above the ground, fall flat to the ground, impacting right side up, and flat.

The NTSB investigator-in-charge reviewed videotape that was made by a relative of the pilot, and is being held as evidence by the Lakeland Police Department. The tape shows N355DE during a high-speed taxi test and then returning to the hangar area. Several people greeted the pilot when he returned to the hangar. In a conversation with the people at the hangar, the pilot said he was having difficulty in getting the tail up. He told the people present, "...it's a bugger back there," referring to the tail coming up. In addition he said, "...I should have more elevator authority."

According to the FAA inspector's statement, "...a review of all witness statements, and a...video tape...indicate that the subject aircraft may have been overweight or tail heavy, or perhaps both. Inspection of the wreckage revealed no apparent airframe failure. The control surfaces were heavily coated with bondo to smooth them out. A piece of bondo was chipped from the aileron that measured 3/16 of an inch thick. The flight controls were weighed...the right aileron weighed 20 pounds, the right elevator weighed 15 pounds, and the rudder weighed 27 pounds...the advertisement on the internet site listed the empty weight at 1,300 pounds...gross weight at 2,000 pounds. The actual weight shown for certification was empty weight 1,779 pounds...gross weight 2,400 pounds. It has not been determined how the [pilot/builder] established these numbers...the videotape...includes a sequence where the [pilot/builder] is interviewed after initial taxi tests...the [pilot/builder] states that he had the speed up to 70 knots and the stick full forward and the tail would not come up. When questioned about this, the [pilot/builder] stated that the aircraft may need a larger horizontal stabilizer and elevator to attain sufficient elevator authority. No work to correct this problem was accomplished prior to the attempted flight."

Continuity was established through the elevator cables, but the tail section and cables were cut to extract the pilot from the wreckage. Control continuity was established to all the flight controls.

MEDICAL AND PATHOLOGICAL INFORMATION

Dr. Alexander Melamud performed an autopsy on the pilot, on August 8, 2000, at the Polk County Medical Examiner's Office, Lakeland, Florida. According to the autopsy report, "...Cause of death: Multiple injuries. "

Toxicological tests were conducted at the Federal Aviation Administration, Research Laboratory, Oklahoma City, Oklahoma, and revealed, "No ethanol or drugs detected."

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	33,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Center
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane single-engine	**Toxicology Performed:**	Yes
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	March 23, 2000
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	1500 hours (Total, all aircraft), 1 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	EACHON	**Registration:**	N355DE
Model/Series:	TIME WARP SPITFIRE 9 TIME WARP	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	201
Landing Gear Type:	Retractable - Tailwheel	**Seats:**	1
Date/Type of Last Inspection:	Unknown	**Certified Max Gross Wt.:**	2400 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	1 Hrs	**Engine Manufacturer:**	Chevrolet
ELT:	Not installed	**Engine Model/Series:**	V8
Registered Owner:	DAVID R. EACHON	**Rated Power:**	400 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:	LAL ,142 ft msl	**Distance from Accident Site:**	
Observation Time:	08:54 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Scattered / 1000 ft AGL	**Visibility**	8 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	90°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	27°C / 25°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(LAL)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	08:50 Local	**Type of Airspace:**	

Airport Information

Airport:	LAKELAND LINDER REGIONAL LAL	**Runway Surface Type:**	Asphalt
Airport Elevation:	142 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	9	**IFR Approach:**	None
Runway Length/Width:	8500 ft / 150 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	28.039079,-81.89904(est)

Administrative Information

Investigator In Charge (IIC):	Yurman, Alan
Additional Participating Persons:	GARY VIDAK; ORLANDO , FL
Original Publish Date:	May 8, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=49922