



Aviation Investigation Factual Report

Location:	Littlefield, Texas	Accident Number:	CEN14LA192
Date & Time:	April 9, 2014, 08:30 Local	Registration:	N678TW
Aircraft:	AEROTRIKE SAFARI	Aircraft Damage:	Substantial
Defining Event:	Loss of control in flight	Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Factual Information

HISTORY OF FLIGHT

On April 9, 2014, about 0830 central daylight time, an Aerotrike Safari experimental light sport aircraft, N678TW, was substantially damaged when it impacted terrain after takeoff from runway 19 (4,021 feet by 60 feet, asphalt) at the Littlefield Taylor Brown Municipal Airport (LIU), Littlefield, Texas. The pilot sustained fatal injuries. The aircraft was registered to and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Day visual meteorological conditions prevailed for the flight, which was operated without a flight plan. The local flight was originating at the time of the accident.

The LIU airport manager stated he found the aircraft about 0850 shortly after he had arrived at the airport that morning. He did not observe any portion of the accident flight and was uncertain of the exact time of the accident. There were no known witnesses to the accident flight.

PERSONNEL INFORMATION

Federal Aviation Administration (FAA) records contained no record of the accident pilot ever applying for or being issued any pilot or medical certificates. In addition, there was no record of the accident pilot ever applying for or being issued a mechanic or repairman certificate.

An individual who shared a hangar with the accident pilot noted the accident pilot had been interested in "trikes" for years. The accident pilot reportedly did not have any "hands on" training; however, he was planning to obtain some flight training. A few days before the accident, the pilot was observed taxiing the accident aircraft up and down the runway.

AIRCRAFT INFORMATION

The accident aircraft was a weight shift control, two place, light sport Aerotrike. The aircraft was issued an experimental light sport airworthiness certificate in August 2007. The application for the airworthiness certificate indicated the manufactured/build year as 2001. It noted a total airframe flight time of 104 hours had accumulated at the time of application. The operating limitations issued with the airworthiness certificate required the pilot in command to hold a properly endorsed student pilot certificate, or a sport or recreational pilot certificate with the appropriate ratings. (FAA regulations do not require a pilot to hold a medical certificate in order to operate a light sport aircraft.)

The accident pilot reportedly purchased the aircraft about three weeks before the accident flight. However, FAA records did not include any documentation of the transfer of ownership.

No maintenance records were obtained by the NTSB during the course of the investigation.

The individual who shared a hangar with the accident pilot reported that he had personally flown the accident aircraft. He noted that the aircraft did not lift off at the speeds he expected, but "popped" off the ground at a somewhat higher speed. He flew around the traffic pattern and landed safely. However, he noted the aircraft was not easy to fly in his opinion, and informed the accident pilot that he should not fly the aircraft. He reported that the engine performed normally at that time.

METEOROLOGICAL INFORMATION

Weather conditions recorded by the Lubbock Preston Smith International Airport (LBB) Automated Surface Observing System (ASOS), located about 33 miles southeast of the accident site, at 0853, were: few clouds at 30,000 feet above ground level, wind from 240 degrees at 7 knots, temperature 13 degrees Celsius, dew point -3 degrees Celsius, altimeter 30.16 inches of mercury.

WRECKAGE AND IMPACT INFORMATION

The accident aircraft came to rest about 200 feet off the left side of runway 19, in an area of grass and low brush. It came to rest upright. The cart structural tubing was deformed and separated consistent with impact forces. The wing remained attached to the cart pivot support. The wing structure was deformed at the cart attachment, but appeared to be otherwise intact. The wing fabric also appeared to be intact. The engine and propeller assembly remained secured to the airframe and appeared undamaged.

A postaccident examination conducted by FAA inspectors did not reveal any anomalies consistent with a preimpact failure or malfunction.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy of the pilot was performed on April 10, 2014. The pilot's death was attributed to injuries sustained as a result of the accident. The autopsy report noted scarring of the heart muscle on the posterior left ventricular wall (myocardial scarring), mild coronary artery disease with 20-percent or less occlusion of the major arteries, and an enlarged heart (cardiomegaly). Microscopic examination related to the myocardial scarring did not reveal any evidence of acute or subacute inflammation.

The FAA Civil Aerospace Medical Institute forensic toxicology report stated:

No CARBON MONOXIDE detected in Blood;
No ETHANOL detected in Vitreous;
Cyclobenzaprine detected in Liver;
0.019 (ug/mL, ug/g) Cyclobenzaprine detected in Blood;
0.048 (ug/mL, ug/g) Dihydrocodeine detected in Urine;
Dihydrocodeine NOT detected in Blood;
0.223 (ug/mL, ug/g) Hydrocodone detected in Urine;
Hydrocodone NOT detected in Blood;
0.033 (ug/mL, ug/g) Hydromorphone detected in Urine;
Hydromorphone NOT detected in Blood;
Metoprolol detected in Liver;
Metoprolol detected in Blood;
Norcyclobenzaprine detected in Liver;
0.011 (ug/mL, ug/g) Norcyclobenzaprine detected in Blood.

Cyclobenzaprine is commonly used to treat muscle spasms. Hydrocodone is a narcotic analgesic. Both medications can have sedating effects. Metoprolol is commonly prescribed to treat high blood pressure, angina, or heart arrhythmias.

Pilot Information

Certificate:	None	Age:	52
Airplane Rating(s):	None	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	Lap only
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	None	Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	1 hours (Total, all aircraft), 1 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	AEROTRIKE	Registration:	N678TW
Model/Series:	SAFARI	Aircraft Category:	Weight-shift
Year of Manufacture:	2001	Amateur Built:	
Airworthiness Certificate:	Experimental light sport (Special)	Serial Number:	TWAEROTRIKE2000
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	950 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	ROTAX
ELT:	Not installed	Engine Model/Series:	503 DCDI
Registered Owner:	On file	Rated Power:	50 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	LBB,3282 ft msl	Distance from Accident Site:	32 Nautical Miles
Observation Time:	08:53 Local	Direction from Accident Site:	119°
Lowest Cloud Condition:	Few / 30000 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	7 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	240°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.15 inches Hg	Temperature/Dew Point:	13°C / -3°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Littlefield, TX (LIU)	Type of Flight Plan Filed:	None
Destination:	Littlefield, TX (LIU)	Type of Clearance:	None
Departure Time:	08:30 Local	Type of Airspace:	

Airport Information

Airport:	Littlefield Taylor Brown Muni LIU	Runway Surface Type:	Asphalt
Airport Elevation:	3616 ft msl	Runway Surface Condition:	Dry
Runway Used:	19	IFR Approach:	None
Runway Length/Width:	4021 ft / 60 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	33.910251,-102.330375(est)

Administrative Information

Investigator In Charge (IIC): Sorensen, Timothy

Additional Participating Persons: Daniel J Vengen; FAA – Lubbock Flight Standards; Lubbock, TX

Report Date: November 10, 2014

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=89034>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).