



Aviation Investigation Final Report

Location:	Mankato, Kansas	Accident Number:	CEN20LA267
Date & Time:	July 6, 2020, 07:55 Local	Registration:	N900WH
Aircraft:	Titan TORNADO	Aircraft Damage:	Substantial
Defining Event:	Unknown or undetermined	Injuries:	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

A witness saw the airplane taxi to the runway for takeoff. He was inside his hangar when he heard the airplane take off and the sound of the engine change then quit. He went outside and saw the airplane descending below the tree line. The witness went to the accident site, and the pilot reported to him that the engine shook “real bad” before it lost power.

Numerous attempts to schedule an engine examination with a local mechanic were unsuccessful. The reason for the loss of engine power could not be determined.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

A total loss of engine power for reasons that could not be determined based on available information.

Findings

Aircraft	(general) - Unknown/Not determined
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Factual Information

History of Flight

Takeoff	Unknown or undetermined (Defining event)
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On July 6, 2020, about 0755 central daylight time, a Titan Tornado II airplane, N900WH, was substantially damaged when it was involved in an accident near Mankato, Kansas. The non-certificated pilot was seriously injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

According to a witness at the airport, about 0750, he saw the pilot taxi the airplane to runway 17. Shortly after, the airplane took off. The witness heard the engine's noise change and it sounded like the engine stopped running. He went outside his hangar to look at the airplane and saw it as it descended behind trees. The airplane impacted the terrain along a tree line that bordered the east side of the runway. When he responded to the accident site, the witness was told by the pilot that the engine started shaking "real bad" just before it quit. The pilot thought that the propeller had broken. According to the witness, the propeller was intact except for a portion that was damaged when the airplane flipped over; he found pieces of the propeller near the wreckage site. The fuselage and both wings sustained substantial damage.

A Federal Aviation Administration inspector responded to the accident site and collected additional information. The airplane had come to rest inverted and was leaking fuel, so it was turned upright. A visual inspection did not detect any anomalies. The airplane was moved to the pilot's hangar.

The pilot was reported to be a student training for his sport pilot certificate.

Over several weeks following the accident, numerous attempts were made to coordinate an engine examination. The FAA inspector contacted a local Airframe and Powerplants mechanic who was willing to do the work and had performed the previous condition inspection on the airplane. However, due to the mechanic's limited availability and the need for FAA oversight because the mechanic had done the condition inspection, the examination was not completed. Further attempts to coordinate an engine examination with the mechanic were unsuccessful; hence, an engine examination was not accomplished.

Pilot Information

Certificate:	None	Age:	64, Male
Airplane Rating(s):	None	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	None	Last FAA Medical Exam:	
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	(Estimated)		

Aircraft and Owner/Operator Information

Aircraft Make:	Titan	Registration:	N900WH
Model/Series:	TORNADO II	Aircraft Category:	Airplane
Year of Manufacture:	1999	Amateur Built:	Yes
Airworthiness Certificate:	Experimental light sport (Special)	Serial Number:	D99912SOHK0334
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	Condition	Certified Max Gross Wt.:	1000 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Jabiru
ELT:		Engine Model/Series:	2200A
Registered Owner:	PIERCE MATTHEW L	Rated Power:	85 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:	KCNK,1484 ft msl	Distance from Accident Site:	30 Nautical Miles
Observation Time:	07:55 Local	Direction from Accident Site:	120°
Lowest Cloud Condition:		Visibility	10 miles
Lowest Ceiling:	Broken / 6000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	60°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.02 inches Hg	Temperature/Dew Point:	27°C / 22°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Mankato, KS	Type of Flight Plan Filed:	
Destination:	Mankato, KS	Type of Clearance:	None
Departure Time:		Type of Airspace:	

Airport Information

Airport:	Mankato TKO	Runway Surface Type:	Asphalt
Airport Elevation:	1859 ft msl	Runway Surface Condition:	Dry
Runway Used:	17	IFR Approach:	None
Runway Length/Width:	3450 ft / 50 ft	VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	39.802667,-98.219596(est)

Administrative Information

Investigator In Charge (IIC):	Aguilera, Jason
Additional Participating Persons:	Robert Nash; FAA FSDO; Wichita, KS
Original Publish Date:	October 12, 2022
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=101553

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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](#).