Aviation Investigation Final Report

Location:	Fort Worth, Texas	**Accident Number:**	CEN14LA290
Date & Time:	June 4, 2014, 18:00 Local	**Registration:**	N8DT
Aircraft:	TEUNIS STARDUSTER TOO SA300	**Aircraft Damage:**	Substantial
Defining Event:	Fuel exhaustion	**Injuries:**	2 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Shortly after takeoff, the airplane's engine lost power. The pilot attempted to return to the runway but was unable to reach it so he attempted to land on a 1/4-mile-long driveway that paralleled the runway, but the airplane struck a tree and impacted the driveway. Postaccident examination revealed that the airplane's propeller and spinner had separated from the engine and had sustained minimal impact damage: there were no signatures of rotational damage consistent with the engine developing power at the time of impact. The airplane's fuel tanks were examined and no fuel was observed. The fuel tanks were not breached during the impact, and there was no evidence of fuel leaks or fuel stains at the accident site. The pilot was not a registered pilot and did not hold a Federal Aviation Administration medical certificate. The pilot's flight experience is unknown.

Probable Cause and Findings

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

The non-certificated pilot's inadequate preflight planning, which resulted in a loss of engine power during takeoff due to fuel exhaustion.

Findings

Aircraft	Fuel - Fluid level
Aircraft	Fuel - Inadequate inspection
Personnel issues	Fuel planning - Pilot
Personnel issues	Qualification/certification - Pilot

Factual Information

History of Flight

Takeoff	Fuel exhaustion (Defining event)
Takeoff	Loss of engine power (total)
Takeoff	Collision with terr/obj (non-CFIT)

On June 4, 2014, about 1800 central daylight time, an experimental, amateur-built Tuenis Starduster TOO SA300, N8DT, sustained substantial damage when it impacted tress and terrain after a loss of engine power during takeoff from the Flying Oaks Airport (2TE2), Fort Worth, Texas. The non-certificated pilot and passenger received serious injuries. The airplane was registered to and operated by the pilot individual under the provisions of the 14 Code of Federal Regulations Part 91 as a personal flight. Visual meteorological conditions prevailed at the time of the accident, and no flight plan was filed. The airplane was departing 2TE2 about 1800.

The airplane departed runway 15 (2,800 feet by 150 feet, turf). Shortly after takeoff, the engine lost power and the pilot turned the airplane 180 degrees. He was unable to return to the runway, and the pilot attempted to land on a 1/4 mile long driveway that paralleled the runway. During the forced landing, the airplane struck a tree, and then impacted the driveway about 65 feet from the tree impact, and came to rest about 131 feet from the initial tree impact. A witness reported that she heard the engine sputter and lose power before it impacted the ground. The passenger was able to free himself from the wreckage, but the pilot in the rear seat had to be extricated by first responders who separated the fuselage aft of the pilot's seat.

A Federal Aviation Administration inspector arrived at the accident site about 4 hours after the accident. The examination of the accident site revealed that the airplane's propeller and spinner had separated from the engine. There was minimal impact damage to the propeller blades and spinner, and there were no signatures of rotational damage consistent with an engine developing power. He observed no evidence of a fuel spill or fuel odor in the debris path. He removed the top wing fuel tank cap and there was no evidence of fuel. He checked the fuselage fuel tank for fuel and none was observed. There was no evidence of fuel leaks or fuel staining. He reported that the fuel tanks were intact and not breached. The following morning he returned to the accident site and checked the fuel tanks again with an inspection camera and confirmed that there was no fuel in the fuel tanks. The wreckage was moved with a tractor and the ground was checked for evidence of fuel, but none was observed within the wreckage area.

The airplane was registered to the pilot. A bill of sale indicated that he purchased the airplane on January 27, 2014. Maintenance records indicated that the last conditional inspection of the airplane was conducted on December 9, 2013, with a reading tachometer time of 406.71 hours. The recording tachometer time at the accident site was 421.46 hours.

The pilot was not a registered pilot and he did not hold a FAA medical certificate. The pilot's flight experience is unknown. The airplane's recording tachometer indicated that it had flown about 15 hours since the last conditional maintenance inspection.

The pilot did not provide the National Transportation Safety Board (NTSB) a completed NTSB Accident Form 6120.1.

Pilot Information

Certificate:	None	**Age:**	42
Airplane Rating(s):	None	**Seat Occupied:**	Front
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	None	**Last FAA Medical Exam:**	
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	15 hours (Total, all aircraft), 15 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	TEUNIS	**Registration:**	N8DT
Model/Series:	STARDUSTER TOO SA300	**Aircraft Category:**	Airplane
Year of Manufacture:	1975	**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	TST1
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	December 9, 2013 Condition	**Certified Max Gross Wt.:**	
Time Since Last Inspection:	15 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	406 Hrs as of last inspection	**Engine Manufacturer:**	LYCOMING
ELT:	Installed	**Engine Model/Series:**	0-340-A1A
Registered Owner:	CARTER ROBERT E	**Rated Power:**	170 Horsepower
Operator:	CARTER ROBERT E	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	AFW,722 ft msl	**Distance from Accident Site:**	14 Nautical Miles
Observation Time:	18:53 Local	**Direction from Accident Site:**	45°
Lowest Cloud Condition:	Few / 300 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	15 knots / 22 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	160°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.76 inches Hg	**Temperature/Dew Point:**	32°C / 19°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Fort Worth, TX (2TE2)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	18:00 Local	**Type of Airspace:**	

Airport Information

Airport:	Flying Oaks Airport 2TE2	**Runway Surface Type:**	Grass/turf
Airport Elevation:	720 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	15	**IFR Approach:**	None
Runway Length/Width:	2800 ft / 150 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Serious	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Serious	**Latitude, Longitude:**	32.829166,-97.535003(est)

Administrative Information

Investigator In Charge (IIC):	Silliman, James
Additional Participating Persons:	Gary Watson; FAA North Texas FSDO; Irving , TX
Original Publish Date:	January 14, 2015
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=89445