



Aviation Investigation Final Report

Location:	Oakdale, Louisiana	Accident Number:	CEN15LA301
Date & Time:	July 8, 2015, 15:15 Local	Registration:	N3949K
Aircraft:	Piper PA 28-140	Aircraft Damage:	Substantial
Defining Event:	Loss of lift	Injuries:	2 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that he checked the windsock at his private airfield before takeoff and that it was hanging down, not moving. As he became airborne during takeoff, he experienced a 10 to 15 knot tail wind and began to lose altitude. He advanced the throttle to full power to gain altitude. The engine responded but the airplane continued to settle. The trees off the departure end of the runway were located about 1,655 ft away. Given the effects of density altitude, clearing the 40-ft trees would have required about 1,640 ft on a prepared surface; however, taking off on an unprepared surface and with the lack of lift due to the tailwind, the airplane hit trees and came to rest inverted on the ground. Had the pilot done proper preflight planning he would have realized he did not have adequate airplane performance to clear the trees.

Probable Cause and Findings

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

The pilot's inadequate preflight planning resulting in the airplane not having adequate performance to climb and clear the trees off the end of the dirt runway.

Findings

Personnel issues	Weather planning - Pilot
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Factual Information

History of Flight

Takeoff	Loss of lift (Defining event)
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****This report was modified on 10/5/2018. Please see the public docket for this accident to view the original report.****

On July 08, 2015, about 1515 central daylight time, a Piper PA-28-140 airplane, N3949K, sustained substantial damage following a collision with an embankment and trees during takeoff from a private airstrip in Oakdale, Louisiana. The private pilot, who was the registered owner, and passenger were seriously injured. Visual meteorological conditions prevailed at the time of the accident. The flight was being operated in accordance with 14 *Code of Federal Regulations* Part 91 as a personal flight and an instrument flight plan had not been filed. The intended destination for the flight was the Livingston Municipal Airport (00R), Livingston, Texas.

The pilot departed on runway 05. The dirt runway was about 1,130 ft in length with trees approximately 525 ft from the departure end of runway 05. According to the *Piper Cherokee 140 Owner's Manual*, at a density altitude of about 2,500 ft, the takeoff distance needed would be about 1,000 ft ground roll, and 2,050 ft to clear a 50-ft obstacle. Clearing a 40-ft obstacle would require a takeoff distance of about 1,640 ft. Takeoff distances without calculating for density altitude would have been about 700 ft for ground roll, and 1,500 ft to clear a 50-ft obstacle.

The weather conditions reported at Allen Parish Airport, located about 10 miles south-southwest of the accident site, were winds from 200 degrees at 7 kts. With a departure on runway 5, the pilot would have experienced a left quartering tailwind.

The pilot reported a loss of engine power at 40 feet above ground level (agl) and the airplane settled back to the ground about 2,000 ft from the beginning of the takeoff roll. He reported that his grandson, who was watching, stated "the takeoff was normal and then it sounded like the engine quit running." The pilot also reported his neighbor was sitting outside and saw the airplane "lift off the ground for several feet as normal and it sounded as if [the pilot] let off the gas."

A Federal Aviation Administration (FAA) inspector interviewed the pilot the day after the accident. The pilot reported he looked at the wind sock prior to take off and noticed it was hanging down and not moving. He proceeded to takeoff to the north as he typically liked to do because of the height of the trees on the south end of the airstrip. As the airplane became airborne, about 40 ft agl, he realized he had a 10 to 15 knot tail wind and the aircraft began to lose altitude. He advanced the throttle to full power. The FAA inspector asked the pilot if the engine was producing power and the pilot confirmed it was. The inspector reported the pilot stated, "it was at that moment he realized he had messed up." The airplane hit trees, became inverted and hit the ground. The pilot added that his grandson told him he looked at the windsock during takeoff and noticed "a gust of wind had filled the windsock in the direction of departure." The pilot

remarked the next time he flew he was going to get wind direction in his local area from the weather service.

Pilot Information

Certificate:	Private	Age:	64, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Unknown
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	May 21, 2015
Occupational Pilot:	No	Last Flight Review or Equivalent:	June 29, 2015
Flight Time:	144 hours (Total, all aircraft), 89 hours (Total, this make and model), 144 hours (Pilot In Command, all aircraft), 29.7 hours (Last 90 days, all aircraft), 12.8 hours (Last 30 days, all aircraft)		

Passenger Information

Certificate:		Age:	
Airplane Rating(s):		Seat Occupied:	Right
Other Aircraft Rating(s):		Restraint Used:	Lap only
Instrument Rating(s):		Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N3949K
Model/Series:	PA 28-140 140	Aircraft Category:	Airplane
Year of Manufacture:	1967	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	28-23826
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	November 14, 2014 Annual	Certified Max Gross Wt.:	2150 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	4842 Hrs as of last inspection	Engine Manufacturer:	LYCOMING
ELT:		Engine Model/Series:	O-320 SERIES
Registered Owner:	On file	Rated Power:	160 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:	KACP, 107 ft msl	Distance from Accident Site:	10 Nautical Miles
Observation Time:	20:35 Local	Direction from Accident Site:	191°
Lowest Cloud Condition:		Visibility	10 miles
Lowest Ceiling:	Broken / 1200 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	7 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	200°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.05 inches Hg	Temperature/Dew Point:	34°C / 24°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Oakdale, LA (6LA4)	Type of Flight Plan Filed:	None
Destination:	LIVINGSTON, TX (00R)	Type of Clearance:	VFR
Departure Time:	15:50 Local	Type of Airspace:	Class E

Airport Information

Airport:	Private	Runway Surface Type:	Grass/turf
Airport Elevation:		Runway Surface Condition:	Unknown
Runway Used:		IFR Approach:	None
Runway Length/Width:	1850 ft / 75 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:	30.906944,-92.652496

Administrative Information

Investigator In Charge (IIC):	Liedler, Courtney
Additional Participating Persons:	James Layton; FAA; Baton Rouge, LA
Original Publish Date:	November 15, 2018
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=91530

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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](#).