



Aviation Investigation Final Report

Location:	Edgewater, Florida	Accident Number:	ERA18LA096
Date & Time:	March 6, 2018, 10:05 Local	Registration:	N6764W
Aircraft:	Piper PA 28	Aircraft Damage:	Substantial
Defining Event:	Collision during takeoff/land	Injuries:	2 Serious
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The flight instructor and a student pilot were practicing pattern work at the airport. Due to their injuries, they did not recall any events before the accident. A witness reported that during a landing just before the accident, the airplane was "low" on the final leg of the traffic pattern, appeared to have increased engine power to clear the tree line, and then continued on the approach. The witness did not observe the accident sequence. Examination of the accident site and wreckage revealed that the airplane struck trees before impacting the ground about 750 ft before the runway. Examination of the airplane revealed no evidence of preimpact mechanical malfunctions or failures that would have precluded normal engine operation. Given the available information, it is likely that the flight instructor allowed the airplane to descend below a normal approach path to the runway, as seen on a previous approach, which resulted in the collision with trees and terrain.

Probable Cause and Findings

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

The flight instructor's failure to maintain the appropriate glidepath to the runway, which resulted in a collision with trees and terrain during final approach.

Findings

Personnel issues	Aircraft control - Instructor/check pilot
Aircraft	Descent/approach/glide path - Not attained/maintained
Environmental issues	Tree(s) - Contributed to outcome

Factual Information

History of Flight

Approach-VFR pattern final

Collision during takeoff/land (Defining event)

On March 6, 2018, about 1005 eastern standard time, a Piper PA-28-140, N6764W, was substantially damaged when it impacted terrain while on approach to Massey Ranch Airpark (X50), Edgewater, Florida. The flight instructor and student pilot were seriously injured. The airplane was privately owned and operated as a Title 14 *Code of Federal Regulations* Part 91 instructional flight. Visual meteorological conditions prevailed at the time of the accident and no flight plan was filed for the local flight.

According to a witness, who was also a pilot, the airplane was on the final approach leg of the airport traffic pattern at "low" altitudes on the previous landing while doing pattern work. The airplane descended below the treeline, the witness perceived that the airplane's engine power increased before it cleared the treeline prior to continuing the final approach. The witness then left the airport and did not witness the accident sequence.

The pilot and passenger reported to a Federal Aviation Administration (FAA) inspector that due to the injuries they sustained during the accident, they had no recollection of the events preceding the accident.

Examination of the airplane by the FAA inspector revealed that it impacted the ground in a nose down attitude about 750 ft prior to the threshold of runway 18. The top section of a tree was separated and located beneath the wreckage. In addition, there were several small branches with 45° cuts in them. The inboard section of the left wing was impact crushed aft and the left-wing tip was impact crushed. The outboard section of the right wing was impact crushed aft. The empennage was buckled and the horizontal stabilator and rudder remained undamaged. A total of 25 gallons of aviation fuel was noted in the wing fuel tanks during recovery.

An examination of the engine by an NTSB investigator revealed that it remained attached to the engine mounts. Thumb compression was obtained on all cylinders and crankshaft and valve train continuity were confirmed through the engine and accessories by rotating the propeller through 360° of rotation. The left and right magnetos produced spark on all ignition towers during hand rotation. The propeller remained attached to the engine and chordwise scratching was noted on the blades. The oil suction screen was free of debris and about 4.5 quarts of oil were noted in the engine per the oil dipstick. The carburetor inlet screen and the main fuel strainer were examined and free of debris.

A review of the airframe revealed that flight control continuity was confirmed from the flight controls to the respective flight control surfaces. The fuel selector was tested with low pressure air and no anomalies were noted.

There were no anomalies noted with the airplane that would have precluded normal operation prior to the accident.

Flight instructor Information

Certificate:	Commercial; Flight instructor	Age:	23, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	Helicopter	Restraint Used:	Unknown
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine	Toxicology Performed:	No
Medical Certification:	Class 1	Last FAA Medical Exam:	December 18, 2017
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	850 hours (Total, all aircraft)		

Student pilot Information

Certificate:	Student	Age:	20, Female
Airplane Rating(s):	None	Seat Occupied:	Unknown
Other Aircraft Rating(s):	None	Restraint Used:	Unknown
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	August 15, 2017
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	2 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N6764W
Model/Series:	PA 28 140	Aircraft Category:	Airplane
Year of Manufacture:	1965	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	28-20890
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	March 15, 2017 Annual	Certified Max Gross Wt.:	
Time Since Last Inspection:	15 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	3605.53 Hrs at time of accident	Engine Manufacturer:	LYCOMING
ELT:	C91A installed	Engine Model/Series:	O-320 SERIES
Registered Owner:		Rated Power:	150 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:	EVB,10 ft msl	Distance from Accident Site:	4 Nautical Miles
Observation Time:	15:47 Local	Direction from Accident Site:	344°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	11 knots / 15 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	200°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.03 inches Hg	Temperature/Dew Point:	23°C / 10°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Edgewater, FL (X50)	Type of Flight Plan Filed:	None
Destination:	Edgewater, FL (X50)	Type of Clearance:	None
Departure Time:		Type of Airspace:	

Airport Information

Airport:	MASSEY RANCH AIRPARK X50	Runway Surface Type:	Asphalt
Airport Elevation:	10 ft msl	Runway Surface Condition:	Unknown
Runway Used:	18	IFR Approach:	None
Runway Length/Width:	4360 ft / 60 ft	VFR Approach/Landing:	Traffic pattern

Wreckage and Impact Information

Crew Injuries:	2 Serious	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Serious	Latitude, Longitude:	28.986944,-80.925834(est)

Administrative Information

Investigator In Charge (IIC):	Kemner, Heidi
Additional Participating Persons:	Marco A Grillo; FAA/FSDO; Orlando, FL Mike Childers; Lycoming Engines; Atlanta, GA Damian Galbraith; Piper Aircraft; Vero Beach, FL
Original Publish Date:	June 3, 2020
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=96826

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